

Millets Genetic Resources Management (2021-2022)

Contents

1. Augmentation	11
1.1. Facilitating SMTA:	11
2. Characterization of Sorghum germplasm during Rabi 2020-21	11
2.1: Characterization of 260 acc. of Sorghum germplasm under CRP-AB during 2020-21 at ICAR-IIMR-HYD	11
3. Characterization of Small millet germplasm during Kharif 2021	12
3.1: Characterization of 645 acc. of Proso millet germplasm under Institute Project (IIMR/CI/2021-2026/150) at ICAR-IIMR-Hyderabad during Kharif 2021	12
3.2: Characterization of 553 acc. of Barnyard millet germplasm under Institute Project (IIMR/CI/2021-2026/150) at ICAR-IIMR-Hyderabad during Kharif 2021	21
4. Multi-location evaluation of millets genetic resources during Kharif 2021	30
4.1: Screening of finger millet germplasm for leaf, neck and finger blast resistance under CRP-AB	30
4.2: Multi-location evaluation of Indigenous finger millet germplasm	37
4.3: Multi-location evaluation of multi-world finger millet germplasm	38
4.4: Multi-location evaluation of Indigenous foxtail millet germplasm	39
4.5: Multi-location evaluation of Indigenous little millet germplasm	40
4.6: Multi-location evaluation of kharif sorghum landraces	41
5. Conservation of millets genetic resources at Millets Genebank (MGB), ICAR-IIMR	41
6. Multiplication of millets genetic resources	42
7. Distribution of millets genetic resources	42
8. Submission of millets genetic resources for issuance of IC Number by ICAR-NBPGR	45
8.1: Germplasm issued Indigenous Collection (IC) Numbers	45
9. Registration of millets genetic stocks for registration with ICAR-NBPGR, New Delhi	45
9.1: Millets genetic stocks registered with ICAR-NBPGR-New Delhi during 2021-2022	45
9.2: Millets genetic stocks registered with ICAR-NBPGR-New Delhi during 1998-2022	46
10. International / National Trainings / Webinars Organized	46
10.1.1: ICAR-IIMR Coordinated International Virtual Workshop on "Digital Field Book - Paperless Data Collection [Android Application]" with Annamalai University on 15 th Sep 2021	46
10.2.1: Virtual Webinar on "This Too Will Pass by Shri Arun Tiwari" on 27 th May 2021	47
10.2.2: ICAR-IIMR Coordinated Training on Data Digitalization with ICAR-IISR-Calicut during 22-24 th Feb 2022	47
10.2.3: Online Training on "Data Management" during 3-5 th March 2022	47
10.2.4: Online Training on "Genotype to Genomics and advanced laboratory tools" during 28-30 th March 2022	47
11. National Events / Meetings Organized	48
11.1: ICAR-IIMR Meeting with "A Dialogue" on 26 th April 2021	48
11.2: 6 th Institute Germplasm Identification Committee (IGIC) meeting on 17 th June 2021	48
11.3: First Dr NGP Rao Memorial Lecture and Dr NGP Rao Lifetime Achievement Awards on 5 th Sep 2021	48

11.4: Azadi ka Amrit Mahotsav – Week-long Celebrations under the Theme on “National Campaign on Nutricereals and Tree Plantation” (12-17 th Sep 2021)	49
12. Germplasm Field Days Organized.....	52
13. Awards and Recognitions	52
13.1: International (3)	52
13.2: National (5)	53
14. Publications.....	53
14.1: Journal papers (7)	53
14.2: Conference presentation/paper/abstract/poster (18).....	53
14.3: Book chapters (1)	55
14.4: Books / Technical bulletins (4)	55
14.5: Technical/Popular articles (2).....	55
14.6: Compilations and documentations (2)	56
14.7: Resource person / Lectures / Seminars (20).....	56
15. Trainings	57
15.1: Training attended (1).....	57
15.2: Training organized (6)	57
16. Workshop/Seminar/Symposia/Conferences/Group Meetings	57
16.1: Workshop/Seminar/Symposia/Conferences/Group Meetings organized (4)	57
16.2: Workshop/Seminar/Symposia/Conferences/Group Meetings attended (18)	58
17. Institutional activities	59
18. Annexures	59



Millets Genetic Resources Management (2021-2022)

EXECUTIVE SUMMARY

ICAR-Indian Institute of Millets Research (IIMR) is one of the National Active Germplasm Sites (NAGS) with the responsibility to collect, conserve, evaluate, document, and distribute the millets genetic resources to the bonafied user within the country. The following progress has been made during the reporting period 2021–2022.

1. Augmentation

- A total of 2759 accessions of millets genetic resources augmented from other national and international centers.
- A total of 2759 accessions of millets genetic resources augmented from other national and international centers. In which, 1744 acc. received from ICAR-NBPGR-New Delhi, 975 acc. from ICRISAT-Patancheru and 40 acc. from Sahaja Samrudha. The maximum of 1742 acc. of Sorghum followed by Pearl millet (671), Finger millet (344) and Foxtail millet (2).

2. Characterization of Sorghum germplasm under CRP-AB

2.1: Characterization of 260 acc. of Sorghum germplasm under CRP-AB during 2020-21

- A total of 260 acc. of sorghum germplasm under CRP-AB are characterized at ICAR-IIMR-Hyderabad during Rabi 2020-21 for different morpho-agronomic traits (22 traits), which includes 9 quantitative and 13 qualitative traits. The plant height was the most variable trait followed by grain weight, leaf length, etc.,
- 61 trait-specific germplasm identified. IC 290836 for Early flowering (<63.00 days) and More number of leaves (>16.00); IC 344689 and IC 352458 for Higher grain yield (>100.00 g/plant) and More 100-Seed weight (>4.00 g); IC 352622 for Wider ear head (>8.00 cm) and Higher grain yield (>100.00 g/plant); EC 532787 for Longer ear head (>50.00 cm) and More 100-Seed weight (>4.00 g); EC 533127 for Higher grain yield (>100.00 g/plant) and Taller plant (>270.00 cm) etc.,

3. Characterization of Small millet germplasm during Kharif 2021

3.1: Characterization of 645 acc. of Proso millet germplasm under Institute Project during Kharif 2021

- A total of 645 acc. of proso millet germplasm are characterized along with four checks viz., GPUP 8, TNAU 145, TNAU 164 and TNAU 202 in Augmented Block Design under Institute Project (IIMR/CI/2021-2026/150) at ICAR-IIMR-Hyderabad during Kharif 2021 for 23 agro-morphological traits, which includes 11 quantitative and 12 qualitative traits. The plant height was the most variable trait followed by date of maturing, days to 50% flowering etc.,
- There are 442 acc. of trait specific proso millet germplasm identified. In which, 82 acc. are multi-trait specific germplasm for multi-trait specific germplasm for 2-6 traits.

3.2: Characterization of 553 acc. of Barnyard millet germplasm under Institute Project during Kharif 2021

- A total of 553 acc. of Barnyard millet germplasm are characterized along with four checks viz., DHBM 93-3, VL 207, VL 172 and PRJ 1 in Augmented Block Design under Institute Project (IIMR/CI/2021-2026/150) at ICAR-IIMR-Hyderabad during Kharif 2021 for 25 agro-morphological traits, which includes 12 quantitative and 13 qualitative traits. The plant height was the most variable trait followed by days to maturity, days to 50% flowering, grain yield/plant etc.,
- There are 411 acc. of trait-specific Barnyard millet germplasm identified. In which, 92 acc. are multi-trait specific germplasm for multi-trait specific germplasm for 2-5 traits.

4. Multi-location evaluation of millets genetic resources during Kharif 2021

4.1: Screening of finger millet germplasm for leaf, neck and finger blast resistance

- Multi-locational screening of Finger millet germplasm for leaf, stem and neck blast under CRP-AB on Small millets was conducted during Kharif 2021. A total of 2500 acc. of finger millet germplasm under CRP-AB were screened at Mandya, Vijayanagaram and Almora for all the three blast, 6 agro-morphological traits along with two resistant checks (GE 4449 and KMR 204) and Two susceptible checks (KMR 301 and Uduru Mallige) in ABD. Data for 1375 accessions with complete data were used for analysis.
- Four accessions viz., IC0476211, IC0473761, IC0473797, IC0473851 were resistant to leaf blast with less than ≤ 3.0 score at all three locations (Vizhianagaram, Mandya and Almora).
- The neck blast screening of accessions revealed that, 35 acc., were resistant (≤ 10 score) at all 3 locations.
- With respect to Finger blast a set of 71 acc. were showing resistant reaction (≤ 10 score) at all three locations.

- The two accessions, IC0473761 and IC0473797 were showing resistance to both leaf blast and finger blast while, the accession, IC0476530 was resistant against both neck and finger blast.

4.2: Multi-location evaluation of Indigenous finger millet germplasm

- Multi-locational evaluation of indigenous finger millet germplasm for 9 agro-morphological traits under Institute Project (IIMR/CI/2021-2026/150) was conducted during Kharif 2021. A total of 200 acc. of finger millet germplasm were evaluated at Vizianagaram, Waghai, Bengaluru, Mandya, Athiyandal, Hagari and Perumallepally (7) along with four checks (GPU 48, GPU 67, VL 376 and PR 202) in ABD. Data for 74 accessions with complete data were used for analysis.
- The range of diversity observed in days to 50% flowering (64 – 88 days), plant height (78 – 149 cm), grain yield (1624 – 3105 kg/ha), fodder yield (4105 – 7766 kg/ha), number of productive tillers (2.8 – 4.7), number of fingers (4.9 – 8.1), finger length (5.7 – 9.8 cm) and days to maturity (99 – 122 days).
- Five accessions viz., ER 37, ER 41, IC0476095, IC0478181 and IC0478935 were identified as early flowering (>68 days). Eight accessions viz., ER 37, ER 41, IC0474816, IC0476095, IC0476587, IC0478181, IC0478543 and IC0478935 were identified as early maturing (105 days). Five accessions viz., EN 96, IC0007953, IC0007954, IC0478640 and IC0478746 were identified as higher grain yield (>2800 kg/ha). Four accessions viz., IC0007953, IC00622089, IC0066140 and IC0478746 were identified as higher fodder yield (>7000 kg/ha).
- Six accessions viz., IC00622057, IC00622073, IC047388, IC0475125, IC0478442; and IC0624939 were identified as leaf blast (<3 score) resistant at three locations. Three accessions viz., ER 53, IC00622041 and IC0624941 were identified as finger blast (<2 score) resistant at two locations. Six accessions viz., E 326, ER 53, ER 55, IC00622069, IC0475125 and IC0627127 were identified as neck blast (<10% blasted florets) resistant at three locations.

4.3: Multi-location evaluation of multi-world finger millet germplasm

- Multi-locational evaluation multi-world finger millet germplasm for 8 agro-morphological traits under Institute Project (IIMR/CI/2021-2026/150) was conducted during Kharif 2021. A total of 57 acc. of finger millet germplasm were evaluated at Vizianagaram, Waghai, Bengaluru, Mandya and Athiyandal along with four checks (GPU 48, GPU 67, VL 376 and PR 202) in ABD. Data for 51 accessions with complete data were used for analysis.
- The range of diversity observed in days to 50% flowering (68 – 82 days), days to maturity (103 – 117 days), plant height (99 – 119 cm), grain yield (1582 – 2419 kg/ha), fodder yield (4397 – 6177 kg/ha). Number of productive tillers (3.6 – 4.7), number of fingers (6.5 – 8.0) and finger length (6.2 – 7.6 cm).
- Three accessions viz., IC0308859, IC0473493 and IC0478862 were identified as early flowering (>70 days). Four accessions viz., IC0308859, IC0403728, IC0473493 and IC0478543 were identified as early maturing (>105 days). Eleven accessions viz., IC0283758, IC0283853, IC0312325, IC0326825, IC0331680, IC0344972, IC0474052, IC0474306, IC0474345, IC0478640 and IC0478808 were identified with higher grain yield (<2100 kg/ha). Six accessions viz., IC0045854, IC0071335, IC0283822, IC0308860, IC0331688 and IC0478640 were identified with higher fodder yield (<6000 kg/ha).

4.4: Multi-location evaluation of Indigenous foxtail millet germplasm

- Multi-locational evaluation Indigenous foxtail millet germplasm for 8 agro-morphological traits under Institute Project (IIMR/CI/2021-2026/150) was conducted during Kharif 2021. A total of 100 acc. of foxtail millet germplasm were evaluated at Vizianagaram, Bengaluru, Mandya, Athiyandal, Hagari, Nandyal, Sholapur and Dholi along with five checks (DHFT 109-3, SiA 3156, SiA 3222, SiA 326 and Suryanandi) in ABD. Data for 73 accessions with complete data were used for analysis.
- The range of diversity observed in days to 50% flowering (45 - 56 days), days to maturity (75 - 91 days) plant height (96 – 123cm), grain yield (1293 – 3088 kg/ha), fodder yield (3053 - 4825 kg/ha), number of tillers (2.6 – 6.2), panicle length (14.5 – 20.9 cm) and 1000-seed weight (2.1 – 3.2 g).
- Nine accessions viz., IC0403787, IC0403742, IC0413273, IC0480653, IC0403860, IC0120235, IC0403900, IC0547316 and IC0610531 were identified as early maturing (>45 days). Ten accessions viz., IC0403787, IC0404094, IC0479633, IC0403487, IC0413273, IC0403860, IC0403900, IC0403859, IC0022180 and IC0547316 were identified as early maturing (>80 days). Fifteen accessions viz., IC0404094, IC0480820, IC0022179, IC0404216, IC0283925, IC0345126, IC0479349, IC0403440, IC0283926, IC0479977, IC0479719, IC0345124, IC0479445, IC0479860 and IC0120213 were identified as higher grain yield (<2400kg/ha). Ten accessions viz., IC0480820, IC0479605, IC0404216, IC0529794, IC0479349, IC0283926, IC0479719, IC0345124, IC0479445 and IC0479860 were identified with higher fodder yield (<4200 kg/ha). Eight accessions viz., IC0403787, IC0404094, IC0479647, IC0480820, IC0479633, IC0403564, IC0480946 and IC0022179 were identified with higher 1000-seed weight.

- Two accessions, IC0403487, IC0610536 were resistant to brown spot disease at three centres (Athiandal, Bengaluru and Vizianagaram). Ten accessions (IC0022180; IC0257888; IC0324333; IC0345124; IC0403956; IC0479605; IC0479644; IC0479647; IC0480408; IC0610450) were resistant to rust at two locations (Athiandal, Bengaluru). One accession (IC0479445) was resistant to leaf blast at all three tested locations (Athiandal, Bengaluru and Vizianagaram). When resistance for multiple diseases were studied together, IC0403487 and IC0610536 were resistant to both brown spot and leaf blast.

4.5: Multi-location evaluation of Indigenous little millet germplasm

- Multi-locational evaluation indigenous little millet germplasm for 9 agro-morphological traits under Institute Project (IIMR/CI/2021-2026/150) was conducted during Kharif 2021. A total of 196 acc. of little millet germplasm were screened at Vizianagaram, Waghai, Bengaluru, Athiandal, Hagari, Kolhapur and Dindori along with three checks (OLM 203, BL 6 and CLMV 1) in ABD. Data for 36 accessions with complete data were used for analysis.
- There was a severe germination problem in all the locations due to less quantity of seed. Trials at Kolhapur and Hagari centres failed due to weather vagaries and data from Bengaluru and Dindori centres were not presented due to many missing values. The range of diversity observed in days to 50% flowering (42 - 72 days), plant height (94 - 146 cm), number of productive tillers (4.9 - 9.6), grain yield (1148 - 2436 kg/ha) and fodder yield (3246 - 9459 kg/ha).
- Twelve accession viz., EN 05, EN 09, EN 14, EN 42, EN 45, EN 50, ER 47, ER 57, ER 66, EUK 08, EUK 14 and IC0628931 were identified for early flowering (>50 days). Six accessions viz., EN 07, EN 27, EN 82, EUK 14, IC0404844 and IC0622048 were identified as higher grain yield (>2000 kg/ha). Five accessions viz., E 264, EN 03, IC0404849, IC0622048 and IC0628937 were identified with higher fodder yield (>8000 kg/ha).
- It has been observed that 7 acc. at Waghai and Vijayanagaram for resistance to leaf blight, 127 acc. at Waghai for resistance to banded blight, 195 acc. at Waghai for resistance to grain smut and 55 acc. at Waghai and Athiandal for resistance to shoot fly.

4.6: Multi-location evaluation of kharif sorghum landraces

- Multi-locational evaluation kharif sorghum landraces for 7 agro-morphological traits under Institute Project (IIMR/CI/2021-2026/150) was conducted during Kharif 2021. A total of 115 kharif landraces of sorghum were evaluated at Akola, Dharwad, Udiapur, Indore and Coimbatore along with two checks (CSV 17 and CSV 27) in Augmented Block Design (RBD). Data for 23 landraces with complete data were used for analysis.
- The range of diversity observed in days to 50% flowering (62 - 91 days), ear head length (8.8 - 39.1 cm), plant height (132 - 335 cm), grain yield (2215 - 5873 kg/ha), fodder yield (16451 - 56713 kg/ha), 100-seed weight (1.6 - 2.7 g), and days to maturity (99 - 133 days).
- Six accessions viz., E159, GGUB 54, GGUB 55, IC0409424, IC0409485 and IC0409487 were identified for early flowering (>70 days). Four accessions viz., E 220, EB 2, EUK 28 and GGUB 57 were identified with longer ear head (>25 cm). Four accessions viz., E 220, EJN 73, EUK 28 and IC0409487 were identified with higher grain yield (>4500 kg/ha). Four accessions viz., E 1, EB 1, EG 24, GGUB 50 and GGUB 57 were identified with higher fodder yield (>50000 kg/ha). Two accessions viz, EB 1 and GGUB 51 were identified with more 100 seed weight (>2.5 g). Three accessions viz., GGUB 54, GGUB 55 and IC0409485 were identified with early maturing (<110 days).

5. Conservation of millets genetic resources

- As on 31st March 2022, a total of 48,462 accessions of millets in bulk are being conserved in the Millets Genebank (MGB). Sorghum was maximum with 27,366 acc. followed by Finger millet (8057), Pearl millet (4765), Foxtail millet (4575) etc.

6. Multiplication of millets genetic resources

- A total of 1,808 acc. of millets germplasm are multiplied during 2021-22. Which includes, Proso millet (685 acc.), Barnyard (563), Sorghum (344), Finger millet (89) etc., In which, 1524 acc. are germplasm, 150 acc. of elite breeding stocks and 134 acc. of wild relatives.

7. Distribution of millets genetic resources

- During 2021-2022, a total of 19,466 acc. of millets genetic resources are distributed to the bonafied users in the country. The distribution of genetic resources was done through 145 Material Transfer Agreements (MTAs).
- This includes 11,458 acc. of finger millet, 3,560 acc. of, sorghum, 2,381 acc. little millet, 1,832 acc. of foxtail millet etc.
- AICRP on Small millets - Vizianagaram received maximum of 3,349 acc. followed by AICRP on Small millets - Mandya (3,063), ICAR-VPKAS, Almora (2,500), AICRP on Small millets - Bengaluru (1,358) etc.,

- In the utilization / purpose-wise distribution, screening finger millet germplasm for blast resistance under CRP-AB-SM received maximum of 7,500 acc. followed by Indigenous and high grain yielding little millet germplasm (2,156), Indigenous and high grain yielding finger millet germplasm (1,600) etc.,
- In the category-wise material received, AICRP on Small millet received maximum of 11,380 acc. followed by other ICAR institutes (2,694), AICRP on Sorghum (2,325), ICAR-IIMR (1,145) etc.
- Dr TSSK Patro received a maximum of 3,602 acc. for utilization followed by Dr CA Deepak (3,063), Dr Dinesh Chandra Joshi (2,500) etc.

8. Submission of millets genetic resources to National Genebank (NGB), ICAR-NBPGR, New Delhi

- We have received IC no. for 34 acc. millets collected from Tamil Nadu during 2018.

9. Registration of millets genetic stocks for registration with ICAR-NBPGR, New Delhi

- During 2021-22, 18 millets genetic stocks were registered with ICAR-NBPGR in which, Barnyard millet (2): Highly resistant to grain smut disease (PRB 903), Glumeless mutant line (DHBM93-3 Little millet (1): Early flowering (47 days), Early maturity (71 days) (VS 25); Finger millet (8): Neck blast resistance and Finger blast resistance (VR 1070), Neck blast resistance and Finger blast resistance (VR 1067), Early flowering & Early maturity, Red grain & High yielding (WN 585), Banded blight resistant (VR 1141), Finger blast resistance (VR 1122), Neck blast resistance (VR 1128), White color, bold grains, Multi finger, long fingers, High grain yielding (WWN 55), Longer finger (GPU28-2081); Sorghum (7): More number of leaves, More leaf:stem ratio and Low HCN (SPV 2804), Taller plant height, Longer leaves and More number of leaves per plant (SPV 2805), High fresh stalk yield and High biomass (SPV 2596), - High oil content and Hard seed with bigger germ size (IS 1212-4-1-1), High oil content and Very bold seed with medium hardness and small germ size (IS 31714-2-1-1), High in-vitro true digestibility of dry matter, Organic dry matter, and Metabolisable energy, Low acid detergent fiber and Acid detergent lignin content (SPV 2017), Early flowering, Early maturing and Higher brix and total sugars (SPV 2595).

10. International / National Trainings / Webinars Organized

10.1: International

10.1.1: ICAR-IIMR Coordinated International Virtual Workshop on “Digital Field Book - Paperless Data Collection [Android Application]” with Annamalai University on 15th Sep 2021

- The Department of Genetics and Plant Breeding, Faculty of Agriculture, Annamalai University has organized International Virtual Workshop on "Digital Field book - Paperless Data Collection [Android Application]" on 15th September 2021.
- There were 320 participants from across India and 4 from abroad (Japan, Taiwan, Korea and Sri Lanka). The participants include Scientists, Asst./Asso./Professor, Research Scholars, MSc (Agri.) Students etc., Scientists from IIMR, NBPGR, IIWBR, NBFGR, CRIDA, IIOR, IIHR, IIFSR, NBAIR etc., also participated the workshop.

10.2: National

10.2.1: Virtual Webinar on “This Too Will Pass by Shri Arun Tiwari” on 27th May 2021

- Virtual webinar under the COVID 19 Management series on the topic “*This too will pass*” by the eminent writer, philosopher and close associate of Dr APJ Abdul Kalam, Former President of India was organized by ICAR-Indian Institute of Millets Research in collaboration with Karnataka Agri-Professionals Association on 27th May, 2021.
- The webinar was attended by 160 participants from ICAR-IIMR, AICRP on Sorghum and Small millets Centre's and Agri-Professionals of KAPA.

10.2.2: ICAR-IIMR Coordinated Training on Data Digitalization with ICAR-IISR-Calicut during 22-24th Feb 2022

- Online Training on Data Digitalization and Visualization with ICAR-Indian Institute of Spices Research (IISR), Calicut and AICRP on Spices during 22-24 February 2022.
- There were 81 participants attended the training programme from ICAR-IISR and AICRP on Spices.

10.2.3: Online Training on “Data Management” during 3-5th March 2022

- Online training on Data Management during 3-5th March 2022.
- The training was attended by 130 participants from All-Indian Coordinated Research Project on Sorghum and Small millets, ICAR-IIMR-Hyderabad-Solapur, ICAR-NBPGR-RS-Hyderabad and other Universities and Colleges by Scientists, Technical, Research Fellows and Research Scholars.

10.2.4: Online Training on “Genotype to Genomics and advanced laboratory tools” during 28-30th March 2022

- Training on “Genotype to Genomics and advanced laboratory tools” during 28-30th Mar 2022.
- The training was attended by 40 participants of Scientists and Technical staffs of ICAR-IIMR-Hyderabad, AICRP on Sorghum and Small millets.

11. National Events / Meetings Organized**11.1: ICAR-IIMR Meeting with “A Dialogue” on 26th April 2021**

- Meeting with A Dialogue on 26th April 2021 to discuss about the branding and positioning of millets for a wider global market and Mapping of biodiversity loss across local regions in India and plan a comprehensive strategy to document, revive it in local regions.

11.2: 6th Institute Germplasm Identification Committee (IGIC) meeting on 17th June 2021

- The virtual meeting of the 6th Institute Germplasm Identification Committee (IGIC) was held on 17th June 2021.
- A total of 16 new applications screened for registration which includes Sorghum (4), Finger millet (8), Little millet (2), Foxtail millet (1) and Barnyard millet (1). In which, 10 are recommended without any modifications / additions, 5 applications are suggested for registration after modification/addition of relevant data and one application is rejected. .

11.3: First Dr NGP Rao Memorial Lecture and Dr NGP Rao Lifetime Achievement Awards on 5th Sep 2021

- The First Dr. NGP Rao Memorial Lecture and Dr NGP Rao Memorial Life-time Achievement Award ceremony was organized at ICAR-Indian Institute of Millets Research, Hyderabad on Teacher's Day – 5th September, 2021 on his Birthday.
- The first ever virtual award ceremony was organized on 5th Spetmebr, 2021 at ICAR-Indian Institute of Millets Research.
- ICAR-IIMR also dedicated the newly constructed “Crop Work Area” Facility at IIMR as “NGP RAO Crop Improvement Centre”. Dr RS Paroda delivered the First Dr NGP Rao memorial lecture on “Future of Sorghum and Millets
- This year “Award Selection Committee” declared the First Dr NGP Rao Memorial Award to the following Researchers: Dr. Bhanwar Singh Rana, Former Director, NRC-Sorghum–Hyderabad and Former Project Coordinator – AICSIP, Hyderabad, Dr. Annada Seetharam, Former Project Coordinator – AICSMIP, Bengaluru and Dr. Kedar Nath Rai, Principal Breeder, ICRISAT, Hyderabad.
- Dr Tilak Raj Sharma, DDG (CS), ICAR in his Co-Chairman's remark suggested to develop an Action Points viz., utilization of germplasm, pre-breeding using the wild and local landraces for trait-specific flagship programme; avoiding the utilization of same parental lines in the AICRP programmes; Dr Jacqueline Hughes, DG, ICRISAT in her Chairman's address emphasized the need for discussion on the emerging areas; priority research areas of NARS; Private and Government collaboration; malnutrition, HRD etc. She finally quoted that millets are better than Quinoa and Sorghum and millets are the future crops.

11.4: Azadi ka Amrit Mahotsav – Week-long Celebrations under the Theme on “National Campaign on Nutricereals and Tree Plantation” (12-17th Sep 2021)

- **11.4.1: Diversifying Agriculture and Cropping Systems with Millets on 12th Sep 2021:** There were 100 participations including 50 farmers from various parts of the country. Dr Gangaiah, Principal Scientist (Agronomy) delivered the lecture under the sub-theme with detailed millets based cropping system, millet crop diversification, modern farming, agro-tourism, millets in rice fallow, sorghum biofuel etc., Dr K Hariprasanna presented an outlook on local and improved varieties performance in Karnataka. Farmers from Pradhan group lead by Mrs Anita Shil, Farmers from Kodo Bazar Fed FPO Limited, Jivan marshal Fed FPOs, Mr Jogi Naidu, SVDS interacted with the Scientists of ICAR-IIMR.
- **11.4.2: Enabling Farmer Producer Organizations (FPOs) to enhance production, productivity of Millets on 13th Sep 2021:** There were 120 participations including Farmer Producing Organizations (FPO) from various parts of the country. Dr Divakar, Tech Lead, Centre for Agrarian Studies, NIRD&PR delivered the lecture on Case Studies of Model FPOs with video presentation on Tamara (Turmeric), floriculture etc., He has also explained the 4 C Approach to FPOs viz., Conservation, Cultivation, Consumption and Commerce; FPO Board meeting agenda structures; Best practices for successful FPOs etc., He also answered several queries about the formation of new FPOs, strengthening the FPOs etc.,
- **11.4.3: Millets Biodiversity Conservation on 14th Sep 2021:** There were 50 participations from ICAR-IIMR, ICAR-NBPGR, AICRP on Sorghum and Small millets, Other ICAR Institutes, RRA Network, WASSAN etc., The programme

was Chaired by Dr KS Varaprasad, Former Director, ICAR-IOR and Dr Prabhakar, Former Project Coordinator (Small millets) as special guest. There were 5 presentations made viz., Status of Millets Germplasm at National Genebank; Status of Millets Germplasm at Dr RS Paroda Genebank, ICRISAT; Millets Diversity; Traditional Millet Varieties and Use and Promotion of millets diversity through seed centres.

- **11.4.4: Millet processing and value addition on 15th Sep 2021:** There were 50 participations including ICAR-IIMR, AICRP on Sorghum and Small Millets Scientists, FPO, Students etc., from various parts of the country. Dr P Hemashankari, Scientist (SS) (AS&PE) delivered the lecture on "Primary and secondary processing of machineries for millets"
- **11.4.5: Cooking with Millets on 16th Sep 2021:** There were 50 participations including ICAR-IIMR, AICRP on Sorghum and Small millets centre Scientists, FPO, Students etc., from various parts of the country. Dr Sujatha, Mrs Vijayalakshmi and Dr V Ravikumar made the live demonstration videos of Millet recipes viz., Multi Millet stuffed Idly, Foxtail Bisibele bath, Pearl Millet Bun, Little Millet Payasam and Pearl Millet Dora Cake.
- **11.4.6: Inauguration of National Campaign on Nutricereals and Tree Plantation on 17th Sep 2021:** Shri Narendra Sing Tomar, Hon'ble Union Minister for Agriculture & Farmers Welfare inaugurated the National Campaign on Nutricereals and Tree Plantation at ICAR-IIMR, Hyderabad on 17th September 2021 and inaugurated the exhibition stall. The diversity of 10 different millets were exhibited from IIMR to showcase the panicle/ear head diversity, seed colour diversity and wild relative of millets in a live sample and poster forms. The millets diversity stall was visited by many famers and FPOs to know the diversity of millets available globally. He also visited all the stalls exhibited millets value added products by the Farmers Producing Companies and interacted with them.

11.5: IIMR Participated in the National Consultation on 22nd Oct 2021

- Dr Vilas A Tonapi and Dr M Elangovan participated in the National Consultation on Plant-based Local Food System for Health and Nutrition - a side event of 2nd International Agrobiodiversity Congress organized by Alliance of Bioversity International and International Centre for Tropical Agriculture (CIAT), Indian Society of Plant Genetic Resources (ISPGR), International Crops Research for Semi-Arid Tropics (ICRISAT) and Trust for Advancement for Agricultural Sciences (TAAS) on 22nd October 2021. Dr Vilas A Tonapi has presented the topic on "Millets and Other Nutri-cereals" under the theme on Status and Strategies for the Future of Local Food Systems along with the action points needed to promote the local food system.

11.6: Genebank Team, ICRISAT Visited Millets Genebank, ICAR-IIMR on 25th Oct 2021

- Dr Kuldeep Singh, Head Genebank (Consultant) and Dr M Vetriventhan, Senior Scientist (Genetic Resources) visited Millets Genebank, ICAR-IIMR on 25th October 2021. They appreciated the efforts on documentation and publication of pedigree database, potential genotypes identified and distribution of millets germplasm at ICAR-IIMR.

11.7: ICAR-IIMR Scientists Participated in the ICRISAT Germplasm Field Day on 15th Nov 2021

- Scientists of ICAR-IIMR and AICRP on Small millets participated in the Millets Germplasm Field Day at International Crops Research Institute for Semi-Arid Tropics (ICRISAT), Patancheru, 15th November 2021.
- We visually observed an enormous diversity of small millets and selected around 1000 accessions of trait-specific and diverse germplasm for utilization in millet improvement program. The genebank seed processing facility with all the machineries for threshing, winnowing and packing is worth visiting. We also visited Dr RS Paroda Genebank, wild species garden etc.,

11.8: School Children's Visited IIMR on the eve of 'National Campaign on Agriculture and Environment-Citizen Face' on 26th Nov 2021

- ICAR-IIMR has organized a visit of School children to experimental fields, value addition, food laboratories and genebank on the eve of 'National Campaign on Agriculture and Environment-Citizen Face' on 26th November 2021.
- There were 100 children from 5 different schools from Rajendranagar participated in the program. During the event children were actively participated to know different millet crops and their health benefits, nutrient richness, value addition, processing machineries etc. They also visited the millet gene bank and witnessed the live panicles of all millets for the first time. Three different competitions were organized during these children's visit to IIMR. All the three competitions were focused on the theme of "Agriculture and Environment".

11.9: 7th Institute Germplasm Identification Committee (IGIC) meeting held on 9th December 2021

- The virtual meeting of the 7th Institute Germplasm Identification Committee (IGIC) was held on 9th December 2021 in the presence of Dr. Vilas A Tonapi. Director, ICAR-IIMR.

- In which, 13 applications were recommended for registration with suggested modifications at ICAR-NBPGR-New Delhi. Early flowering, early maturity, high grain oil content, leaf blight disease resistance, neck blast, finger blast, fodder digestibility traits, plant height, mutants for disease resistance and absence of glumes were the important trait-specific genotypes identified in combination with grain yield during the meeting for registration. These applications were thoroughly screened to select or reject or to know the requirement of any modifications in the applications from applicants.

11.10: 8th Institute Germplasm Identification Committee (IGIC) meeting held on 28th Jan 2022

- The meeting of the 8th Institute Germplasm Identification Committee (IGIC) was held on 28th January 2022 in the presence of Dr. Vilas A Tonapi, Director, ICAR-IIMR.
- A total of 8 new applications were screened for registration. In which, 3 applications were recommended for registration without any changes, 4 applications were suggested modifications and one application was suggested to resubmit with more data. High dry biomass, grain iron content, number of leaves, leaf length, leaf:stem ratio in Sorghum; neck blast, finger blast, banded leaf blight diseases, finger number and finger length in Finger millet were the important trait-specific genotypes identified in combination with grain yield during the meeting for registration.

11.11: Exposure to Innovations Visit by Women's College under Institution's Innovation Council an Initiate of Ministry of Education on 15th Feb 2022

- Forty-seven B. Com Second year students from Raja Bahadur Venkat Rama Reddy Women's College, Hyderabad visited ICAR-IIMR on 15th February 2022 as an exposure to innovations in various agriculture fields under the Institution's Innovation Council, an initiative of Ministry of Education.
- During the visit the students visited the Millets Genebank to know about the conservation of local varieties, Agricultural Entomology lab to see the basic research in pest resistance, Biotechnology laboratory to know about status of molecular characterization and transgenic research in millets, NUTRIHB to know the link between idea-innovation-incubation-entrepreneur, CoE for diversified millet value added food products, machineries and processing units. They also visited the millets experimental fields to know how to grow millets.

11.12: Engineering Students Visited IIMR on the Occasion of National Science Day on 28th Feb 2022

- On the occasion of National Science Day on 28th February 2022, 30 first to third year Engineering College students from Kommuri Pratap Reddy Institute of Technology visited today on 28th February 2022 to ICAR-IIMR-Hyderabad.
- Most of them are studying data science. They were facilitated to visit millets genebank to see the conservation and utilization of local landraces, biochemistry laboratory to know nutritional benefits of millets, NUTRIHUB for business opportunities, CoE for diverse millet products and Value Addition Processing Units for machineries and experimental fields to see different millet crop cultivation. This visit was sponsored by Samskruti Foundation and M/s MIDHANI Ltd, Hyderabad.

12. Germplasm Field Days Organized

12.1: Sorghum Germplasm Field Day Organized on 3rd Mar 2022

- ICAR-IIMR-Hyderabad organized Sorghum Germplasm Field Day on 3rd March 2022 in collaboration with ICAR-NBPGR-RS-Hyderabad under the Consortium Research Platform on Agrobiodiversity (CRP-AB).
- There were 40 participants from ICAR-NBPGR and ICAR-IIMR visited 1549 acc. of sorghum under CRP-AB and 4064 acc. under Institute project.

13. Awards and Recognitions

13.1: International (3)

1. **Certificate of Appreciation:** International Virtual Workshop on Digital Field book- Paperless Data Collection [Android Application]" organized jointly by Department of Genetics and Plant Breeding, Faculty of Agriculture, Annamalai University and ICAR-Indian Institute of Millets Research (IIMR) on 15th September 2021. (Coordinator: Drs **M Elangovan** and Sunil Kumar)
2. **Best Oral Presentation:** Ganapathy, KN., TSSK Patro, KB Palanna, IK Das, K Hariprasanna, **M Elangovan**, TE Nagaraja, B Amasiddha, Prashant and Vilas A Tonapi, 2022. Development of gamma mutants with improved grain yield with blast resistance in finger millet. In: International conference on Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and Prospects Proceedings, Eds. TE Nagaraja, CA Deepak, YG Shadakshari, Vilas A Tonapi and S Rajendra Prasad, Excel India Publishers, ISBN: 978-93-91355-32-6, pp. 4.
3. **Best Poster Presentation:** Ganapathy, KN., **M Elangovan**, K Venkatesh and Vilas A Tonapi, 2022. Genetic diversification of cultivated gene pool of Finger millet using inter-specific hybridization. In: International conference on

Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and Prospects
Proceedings, Eds. TE Nagaraja, CA Deepak, YG Shadakshari, Vilas A Tonapi and S Rajendra Prasad, Excel India
Publishers, ISBN: 978-93-91355-32-6, pp. 25.

13.2: National (5)

1. **Certificate of Appreciation:** Azadi ka Amrit Mahotsav, Theme: National Campaign on Nutricereals and Poshan Vatika Maha Abhiyan and Nutri-Cereal Multi-Stakeholder Convention 3.0, Sub-theme: Millets Biodiversity Conservation at ICAR-Indian Institute of Millets Research (IIMR), Hyderabad on 14th September 2021.
2. **Invited lecture:** National Webinar on Nutri-cereals Genetic Resources Management, School of Agricultural Sciences, Bharath Institute of Higher Education and Research, Chennai, Tamil Nadu, 11th October 2021. (150 participants)
3. **Invited lecture:** Elangovan, M., 2021. Digital Field Book – Paperless Data Collection. In: National Seminar on Barnyard millet - A Promising Crop for Future Needs organized by Agricultural College & Research Institute (AC&RI), Tamil Nadu Agricultural University (TNAU), Madurai, Tamil Nadu on 10th November 2021 (200 participants).
4. **Best Oral Presentation:** Amasiddha B, M. Elangovan, KN Ganapathy, C Deepika, R Swarna, and C Sangappa, 2021. Selection of Barnyard millet Genotypes under Moisture Deficit Stress Condition using Multi-trait Genotype-Ideotype Distance Index. In: National Seminar on Barnyard millet - A Promising Crop for Future Needs organized by Agricultural College & Research Institute (AC&RI), Tamil Nadu Agricultural University (TNAU), Madurai, Tamil Nadu on 10th November 2021.
5. **Invited lecture:** M. Elangovan, 2021. Nutri-cereals Research and Development during the DIT-TNSCST FUNDED Three days training Program on "Processing of Millet grains and development of value added products from millets for the enrichment of livelihood of rural women and farmers" in the Department of Food Processing and Preservation Technology, School of Engineering, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore on 24th November 2021 (150 participants).

14. Publications

- International journal paper (2) and National journal papers (5)
- International Conference presentation/paper/abstract/poster (16) and National Conference presentation/paper/abstract/poster (2)
- Book Chapters (1) and Books /Technical bulletins (4)
- Technical/Popular articles (2) and Compilations and documentations (2)
- International Resource person / Lectures (1) and National Resource person / Lectures (19)
- National Training Attended (1), International Training Organized (1) and National Training Organized (5)
- Workshop/Seminar/Symposia/Conferences/Group Meetings organized (4)
- International Workshop/Seminar/Symposia/Conferences/Group Meetings attended (6)
- National Workshop/Seminar/Symposia/Conferences/Group Meetings organized (12)

Millets Genetic Resources Management (2021-2022)

Detailed report

1. Augmentation

ICAR-Indian Institute of Millets Research (IIMR) has initiated the millets genetic resources augmentation programme from various national and international centres to strengthen the Millets Genebank (MGB) at ICAR-IIMR. During 2021-2022. A total of 2759 accessions of millets genetic resources augmented from other national and international centers. In which, 1744 acc. received from ICAR-NBPGR-New Delhi, 975 acc. from ICRISAT-Patancheru and 40 acc. from Sahaja Samrudha. The maximum of 1742 acc. of Sorghum followed by Pearl millet (671), Finger millet (344) and Foxtail millet (2).

1.1. Facilitating SMTA:

We have facilitated 1 SMTAs to augment 975 acc. of millets viz., Pearl millet (671) and Finger millet (316).

2. Characterization of Sorghum germplasm during Rabi 2020-21

2.1: Characterization of 260 acc. of Sorghum germplasm under CRP-AB during 2020-21 at ICAR-IIMR-HYD

A total of 260 acc. of sorghum germplasm under CRP-AB are characterized at ICAR-IIMR-Hyderabad during Rabi 2020-21 for different morpho-agronomic traits (22 traits). Which includes 9 quantitative and 13 qualitative traits. The plant height was the most variable trait followed by grain weight, leaf length, etc., The descriptive statistics on 9 quantitative traits are presented in Table 1.

Table 1: Summary statistics of quantitative traits of 260 acc. of sorghum germplasm characterized at ICAR-IIMR-Hyderabad under CRP-Agro-biodiversity during Rabi 2020-21

S.No	Traits	Count	Min	Max	Range	Mean	SD	SE	Variance	CV (5%)
1	Days to 50% flowering (days)	249.00	63.00	123.00	60.00	88.36	9.86	0.62	97.21	1.23
2	Number of leaves	249.00	4.00	17.00	13.00	7.54	1.79	0.11	3.21	0.22
3	Leaf length (cm)	249.00	18.03	97.30	79.27	66.79	10.35	0.66	107.14	1.29
4	Leaf width (cm)	249.00	0.50	11.40	10.90	6.74	1.47	0.09	2.16	0.18
5	Plant height (cm)	246.00	71.67	290.00	218.33	189.38	37.60	2.40	1414.10	4.72
6	Ear head length (cm)	194.00	9.23	51.40	42.17	23.88	8.33	0.60	69.40	1.18
7	Ear head width (cm)	194.00	2.07	9.80	7.73	4.80	1.30	0.09	1.68	0.18
8	Grain yield (g/plant)	206.00	6.70	158.90	152.20	47.65	27.68	1.93	766.27	3.80
9	100-Seed weight (g)	205.00	0.74	4.97	4.23	2.48	0.89	0.06	0.79	0.12

In the qualitative data, light green leaf colour is the most frequent in 233 acc., tan leaf sheath pigmentation in 216 acc., drooping leaf orientation in 254 acc., green midrib colour in 165 acc., semi compact ear head compactness in 39 acc., caudatum race in 72 acc., oblong ear head shape in 81 acc., brown glume colour in 35 acc., 25% and 50% glume coverage of the grain in 30 acc. each, absence of awns in 118 acc., white colour grain colour in 31 acc., medium ovate grain shape in 34 acc., medium grain size in 87 acc., and non-lustrous grain in 95 acc.

Potential germplasm identified: 61 trait-specific germplasm identified. EC 485230 identified for Longer ear head (>50.00 cm), Longer leaves (>80.00 cm) and Taller plant (>270.00 cm); IC 290836 for Early flowering (<63.00 days) and More number of leaves (>16.00); IC 344689 and IC 352458 for Higher grain yield (>100.00 g/plant) and More 100-Seed weight (>4.00 g); IC 352622 for Wider ear head (>8.00 cm) and Higher grain yield (>100.00 g/plant); EC 485191 for Longer leaves (>80.00 cm) and More 100-Seed weight (>4.00 g); EC 485239 for Longer ear head (>50.00 cm) and Taller plant (>270.00 cm); EC 511848 for Wider leaves (>10.00 cm) and Taller plant (>270.00 cm); EC 532787 for Longer ear head (>50.00 cm) and More 100-Seed weight (>4.00 g); EC 533058 for Longer leaves (>80.00 cm) and More 100-Seed weight (>4.00 g); EC 533127 for Higher grain yield (>100.00 g/plant) and Taller plant (>270.00 cm); IC 290837-X for Early flowering (<63.00 days) and More number of leaves (>16.00). The list of

potential germplasm identified from 260 acc. of sorghum germplasm characterization under CRP-AB during Rabi 2020-21 is presented in Table 2.

Table 2: Potential sorghum germplasm identified under CRP-AB during Rabi 2020-21 from 260 acc. characterized

S. No	IC /EC No	Trait	Data	S. No	IC /EC No	Trait	Data
1	IC 249032	More 100-Seed weight (>4.00 g)	4.35	28	EC 485191	More 100-Seed weight (>4.00 g)	4.03
2	IC 290589	Wider ear head (>8.00 cm)	9.80	29	EC 485230	Longer ear head (>50.00 cm)	45.43
3	IC 290621	Early flowering (<63.00 days)	65.00	29	EC 485230	Longer leaves (>80.00 cm)	89.30
4	IC 290645	Wider ear head (>8.00 cm)	8.53	29	EC 485230	Taller plant (>270.00 cm)	270.00
5	IC 290716	Wider ear head (>8.00 cm)	8.30	31	EC 485239	Longer ear head (>50.00 cm)	44.80
6	IC 290725	More 100-Seed weight (>4.00 g)	4.20	31	EC 485239	Taller plant (>270.00 cm)	270.00
7	IC 290726	Longer ear head (>50.00 cm)	49.07	32	EC 485261	Longer ear head (>50.00 cm)	43.20
8	IC 290728	Wider ear head (>8.00 cm)	8.23	33	EC 485262	Taller plant (>270.00 cm)	286.67
9	IC 290785	Higher grain yield (>100.00 g/plant)	104.10	34	EC 485274	Longer ear head (>50.00 cm)	41.63
10	IC 290836	Early flowering (<63.00 days)	63.00	35	EC 511827	Early flowering (<63.00 days)	63.00
10	IC 290836	More number of leaves (>16.00)	16.33	36	EC 511848	Wider leaves (>10.00 cm)	10.20
11	IC 290869	Longer ear head (>50.00 cm)	40.90	36	EC 511848	Taller plant (>270.00 cm)	290.00
12	IC 290892	Longer leaves (>80.00 cm)	87.13	37	EC 511860	Early flowering (<63.00 days)	63.00
13	IC 290898	Longer leaves (>80.00 cm)	86.83	38	EC 532772	More 100-Seed weight (>4.00 g)	4.74
14	IC 290915	Wider leaves (>10.00 cm)	10.30	39	EC 532787	Longer ear head (>50.00 cm)	51.40
15	IC 290922	Wider leaves (>10.00 cm)	10.30	39	EC 532787	More 100-Seed weight (>4.00 g)	4.24
16	IC 305890	More 100-Seed weight (>4.00 g)	4.41	40	EC 532789	More 100-Seed weight (>4.00 g)	4.11
17	IC -344689	Higher grain yield (>100.00 g/plant)	107.10	41	EC 532827	Taller plant (>270.00 cm)	270.00
17	IC -344689	More 100-Seed weight (>4.00 g)	4.97	42	EC 532860	Higher grain yield (>100.00 g/plant)	107.90
18	IC -344758	Higher grain yield (>100.00 g/plant)	108.80	43	EC 532919	Higher grain yield (>100.00 g/plant)	122.10
19	IC 352458	Higher grain yield (>100.00 g/plant)	134.50	44	EC 533058	Longer leaves (>80.00 cm)	85.40
19	IC 352458	More 100-Seed weight (>4.00 g)	4.14	44	EC 533058	More 100-Seed weight (>4.00 g)	4.07
20	IC 352574	Wider leaves (>10.00 cm)	10.20	45	EC 533108	Taller plant (>270.00 cm)	290.00
21	IC 352622	Wider ear head (>8.00 cm)	8.20	46	EC 533127	Higher grain yield (>100.00 g/plant)	158.90
21	IC 352622	Higher grain yield (>100.00 g/plant)	129.30	46	EC 533127	Taller plant (>270.00 cm)	290.00
22	IC 352629	Wider leaves (>10.00 cm)	11.40	47	EC 533151	More 100-Seed weight (>4.00 g)	4.26
23	IC 352672	Higher grain yield (>100.00 g/plant)	109.35	48	EC 533165	Higher grain yield (>100.00 g/plant)	144.20
24	IC 352673	Higher grain yield (>100.00 g/plant)	124.10	49	IC 290837-X	Early flowering (<63.00 days)	63.00
25	IC 353598	Wider ear head (>8.00 cm)	8.60	49	IC 290837-X	More number of leaves (>16.00)	17.00
26	IC 392388	Early flowering (<63.00 days)	65.00				
27	EC 485169	More 100-Seed weight (>4.00 g)	4.35				
28	EC 485191	Longer leaves (>80.00 cm)	97.30				

3. Characterization of Small millet germplasm during Kharif 2021

3.1: Characterization of 645 acc. of Proso millet germplasm under Institute Project (IIMR/CI/2021-2026/150) at ICAR-IIMR-Hyderabad during Kharif 2021

A total of 645 acc. of proso millet germplasm are characterized along with four checks viz., GPUP 8, TNAU 145, TNAU 164 and TNAU 202 in Augmented Block Design under Institute Project (IIMR/CI/2021-2026/150) at ICAR-IIMR-Hyderabad during Kharif 2021 for 23 agro-morphological traits. Which includes 11 quantitative and 12 qualitative traits. The plant height was the most variable trait followed by date of maturing, days to 50% flowering etc., The descriptive statistics on 11 quantitative traits of 675 acc. of Proso millet germplasm characterized during Kharif 2021 is presented in Table 3.

Table 3: Summary statistics of quantitative traits of 675 acc. of Proso millet germplasm characterized at ICAR-IIMR-Hyderabad under Institute Project (IIMR/CI/2021-2026/150) during Kharif 2021

S.No	Traits	Count	Min.	Max.	Range	Mean	SD	SE	Variance
1	Number of basal tillers	684.00	1.00	24.00	23.00	6.92	3.31	0.13	11.00
2	Days to 50% flowering (days)	684.00	36.00	60.00	24.00	47.85	4.94	0.20	28.53
3	Flag leaf blade length (cm)	684.00	12.20	45.87	33.67	23.29	4.17	0.16	17.14
4	Flag leaf blade width (cm)	684.00	0.23	2.93	2.70	0.92	0.39	0.01	0.15
5	Peduncle length (cm)	684.00	5.30	15.77	10.47	8.14	1.36	0.05	1.71
6	Panicle length (cm)	684.00	12.30	46.70	34.40	25.97	4.33	0.16	17.83
7	Panicle width (cm)	684.00	1.10	7.03	5.93	3.31	0.95	0.03	0.82
8	Plant height (cm)	684.00	32.00	151.67	119.67	79.16	18.69	0.70	335.69
9	Date of maturing (days)	684.00	59.00	89.00	30.00	75.79	6.24	0.25	41.48

S.No	Traits	Count	Min.	Max.	Range	Mean	SD	SE	Variance
10	Grain yield (g/plant)	684.00	0.10	26.01	25.91	5.19	3.91	0.15	15.12
11	1000-Seed weight (g)	684.00	0.30	8.20	7.90	4.62	0.87	0.03	0.78

In the qualitative data, erect growth habit is the most frequent in 444 acc., absence of leaf sheath pigmentation in 630 acc., sparse of leaf sheath pubescence in 333 acc., absence of ligule pubescence in 639 acc., glabrous leaf blade pubescence in 559 acc., arched inflorescence shape in 443 acc., presence of culm branching in 378 acc., absence of lodging in 677 acc., absence of seed shattering in 661 acc., intermediate panicle compactness in 303 acc., golden yellow grain colour in 470 acc. and oval grain shape in 379 acc. The frequency distribution of qualitative traits of 675 acc. of proso millet germplasm characterized at ICAR-IIMR-Hyderabad under Institute Project (IIMR/CI/2021-2026/150) is presented in Table 4.

Table 4: The frequency distribution of qualitative traits of 675 acc. of Proso millet germplasm characterized under Institute Project (IIMR/CI/2021-2026/150) during Kharif 2021

S.No	Score/State	Plant growth habit
1	Erect	444
2	Decumbent	239
3	Prostrate	1
	Grand Total	684
S.No	Score/State	Leaf sheath pigmentation
1	Absent	630
2	Present	54
	Grand Total	684
S.No	Score/State	Leaf sheath pubescence
1	Sparse	333
2	Glabrous	248
3	Strong	103
	Grand Total	684
S.No	Score/State	Ligule pubescence
1	Absent	639
2	Present	45
	Grand Total	684
S.No	Score/State	Leaf blade pubescence
1	Glabrous	559
2	Sparse	107
3	Strong	18
	Grand Total	684
S.No	Score/State	Inflorescence shape
1	Arched	443
2	Diffused	214
3	Globose elliptic	27
	Grand Total	684
S.No	Score/State	Culm branching
1	Present	378

S.No	Score/State	Plant growth habit
2	Absent	306
	Grand Total	684
S.No	Score/State	Lodging
1	Absent	677
2	Present	7
	Grand Total	684
S.No	Score/State	Seed shattering
1	Absent	661
2	Present	23
	Grand Total	684
S.No	Score/State	Panicle compactness
1	Intermediate	303
2	Open	282
3	Compact	99
	Grand Total	684
S.No	Score/State	Grain colour
1	Golden yellow	470
2	Grey	140
3	Light Grey	35
4	Dark grey	23
5	Cream	15
6	Grey	1
	Grand Total	684
S.No	Score/State	Grain shape
1	Oval	379
2	Elliptical	305
	Grand Total	684

Potential germplasm identified: There are 442 acc. of trait specific proso millet germplasm identified. The list of trait-specific proso millet germplasm identified are given Table 5. In which, 82 acc. are multi-trait specific germplasm for multi-trait specific germplasm for 2-6 traits. The list of 21 acc. identified with multi-trait specific germplasm for 3-6 traits are given Table 6.

Table 5: Trait specific Proso millet germplasm identified under Institute Project (IIMR/CI/2021-2026/150) during Kharif 2021 from 675 acc. characterized

SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Number of basal tillers (>15.00)
1	PRO-K21-634	Proso millet	PRO 690		IC0484165	24.00
2	PRO-K21-365	Proso millet	PRO 359	TNPM 672		23.00
3	PRO-K21-602	Proso millet	PRO 661		IC0483868	22.50
4	PRO-K21-673	Proso millet	PRO 730		IC0484193	22.00
5	PRO-K21-650	Proso millet	PRO 706		IC0484167	21.00
6	PRO-K21-773	Proso millet	PRO 827		IC0483758	21.00
7	PRO-K21-817	Proso millet	PRO 873		IC0483808	19.33

8	PRO-K21-819	Proso millet	PRO 875		IC0483810	19.33
9	PRO-K21-750	Proso millet	PRO 804		IC0483733	19.00
10	PRO-K21-1054	Proso millet	PRO 1136		IC0484101	18.67
11	PRO-K21-539	Proso millet	PRO 595		IC0483578	18.00
12	PRO-K21-675	Proso millet	PRO 732		IC0484195	18.00
13	PRO-K21-725	Proso millet	GPUP 8	Check 1		18.00
14	PRO-K21-737	Proso millet	PRO 791		IC0483718	18.00
15	PRO-K21-772	Proso millet	PRO 826		IC0483757	18.00
16	PRO-K21-864	Proso millet	PRO 919		IC0483859	18.00
17	PRO-K21-1058	Proso millet	PRO 1140		IC0484105	18.00
18	PRO-K21-1085	Proso millet	PRO 1182		IC0484153	18.00
19	PRO-K21-1206	Proso millet	PRO 1417		IC0547530	18.00
20	PRO-K21-398	Proso millet	PRO 455		IC0483604	17.67
21	PRO-K21-175	Proso millet	PRO 174	TNPM 480		17.50
22	PRO-K21-603	Proso millet	PRO 662		IC0483879	17.00
23	PRO-K21-1194	Proso millet	PRO 1396		IC0344988	17.00
24	PRO-K21-1154	Proso millet	PRO 1286		IC0405187	16.33
25	PRO-K21-241	Proso millet	PRO 236	TNPM 544		16.00
26	PRO-K21-659	Proso millet	PRO 715		IC0484177	16.00
27	PRO-K21-1142	Proso millet	TNAU 145	Check 2		16.00
28	PRO-K21-394	Proso millet	PRO 451		IC0483565	15.33
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Days to 50% flowering (>40.00 days)
1	PRO-K21-336	Proso millet	PRO 330	TNPM 643		36.00
2	PRO-K21-337	Proso millet	PRO 331	TNPM 644		36.00
3	PRO-K21-022	Proso millet	PRO 24	TNPM 322		38.00
4	PRO-K21-035	Proso millet	PRO 37	TNPM 335		38.00
5	PRO-K21-036	Proso millet	PRO 38	TNPM 336		38.00
6	PRO-K21-041	Proso millet	PRO 43	TNPM 341		38.00
7	PRO-K21-047	Proso millet	PRO 49	TNPM 347		38.00
8	PRO-K21-048	Proso millet	PRO 50	TNPM 348		38.00
9	PRO-K21-106	Proso millet	PRO 104	TNPM 402		38.00
10	PRO-K21-109	Proso millet	PRO 107	TNPM 405		38.00
11	PRO-K21-117	Proso millet	PRO 115	TNPM 413		38.00
12	PRO-K21-174	Proso millet	PRO 173	TNPM 479		38.00
13	PRO-K21-305	Proso millet	PRO 302	TNPM 615		38.00
14	PRO-K21-331	Proso millet	PRO 325	TNPM 638		38.00
15	PRO-K21-362	Proso millet	PRO 356	TNPM 669		38.00
16	PRO-K21-537	Proso millet	PRO 593		IC0483576	38.00
17	PRO-K21-562	Proso millet	PRO 618		IC0483602	38.00
18	PRO-K21-598	Proso millet	PRO 656		IC0483824	38.00
19	PRO-K21-599	Proso millet	PRO 658		IC0483846	38.00
20	PRO-K21-601	Proso millet	PRO 660		IC0483867	38.00
21	PRO-K21-603	Proso millet	PRO 662		IC0483879	38.00
22	PRO-K21-614	Proso millet	PRO 674		IC0484011	38.00
23	PRO-K21-615	Proso millet	PRO 675		IC0484031	38.00
24	PRO-K21-616	Proso millet	PRO 676		IC0484042	38.00
25	PRO-K21-627	Proso millet	PRO 683		IC0484097	38.00
26	PRO-K21-635	Proso millet	PRO 691		IC0484166	38.00
27	PRO-K21-636	Proso millet	PRO 692		IC0484176	38.00
28	PRO-K21-648	Proso millet	PRO 704		IC0483665	38.00
29	PRO-K21-747	Proso millet	PRO 801		IC0483729	38.00
30	PRO-K21-774	Proso millet	PRO 828		IC0483761	38.00
31	PRO-K21-781	Proso millet	PRO 835		IC0483768	38.00
32	PRO-K21-789	Proso millet	PRO 843		IC0483776	38.00
33	PRO-K21-820	Proso millet	PRO 876		IC0483811	38.00
34	PRO-K21-824	Proso millet	PRO 881		IC0483817	38.00
35	PRO-K21-827	Proso millet	PRO 885		IC0483821	38.00
36	PRO-K21-833	Proso millet	PRO 887		IC0483823	38.00
37	PRO-K21-851	Proso millet	PRO 905		IC0483843	38.00
38	PRO-K21-852	Proso millet	PRO 906		IC0483844	38.00
39	PRO-K21-854	Proso millet	PRO 908		IC0483847	38.00
40	PRO-K21-855	Proso millet	PRO 910		IC0483849	38.00
41	PRO-K21-864	Proso millet	PRO 919		IC0483859	38.00
42	PRO-K21-866	Proso millet	PRO 922		IC0483862	38.00
43	PRO-K21-872	Proso millet	PRO 928		IC0483870	38.00
44	PRO-K21-873	Proso millet	PRO 929		IC0483871	38.00

45	PRO-K21-875	Proso millet	PRO 931		IC0483873	38.00
46	PRO-K21-877	Proso millet	PRO 933		IC0483875	38.00
47	PRO-K21-910	Proso millet	PRO 968		IC0483913	38.00
48	PRO-K21-1151	Proso millet	PRO 1283		IC0405184	38.00
49	PRO-K21-1152	Proso millet	PRO 1284		IC0405185	38.00
50	PRO-K21-1153	Proso millet	PRO 1285		IC0405186	38.00
51	PRO-K21-1154	Proso millet	PRO 1286		IC0405187	38.00
52	PRO-K21-1156	Proso millet	PRO 1288		IC0405189	38.00
53	PRO-K21-166	Proso millet	PRO 165	TNPM 471		39.00
54	PRO-K21-230	Proso millet	PRO 225	TNPM 533		39.00
55	PRO-K21-268	Proso millet	PRO 264	TNPM 576		39.00
56	PRO-K21-273	Proso millet	PRO 269	TNPM 581		39.00
57	PRO-K21-354	Proso millet	PRO 348	TNPM 661		39.00
58	PRO-K21-632	Proso millet	PRO 688		IC0484149	39.00
59	PRO-K21-694	Proso millet	PRO 751		IC0483673	39.00
60	PRO-K21-926	Proso millet	PRO 986		IC0483932	39.00
61	PRO-K21-1092	Proso millet	PRO 1193		IC0274489	39.00
62	PRO-K21-1155	Proso millet	PRO 1287		IC0405188	39.00
63	PRO-K21-1201	Proso millet	PRO 1407		IC0394832	39.00
64	PRO-K21-620	Proso millet	PRO 680		IC0484071	40.00
65	PRO-K21-1171	Proso millet	PRO 1326		IC0311963	40.00
66	PRO-K21-1205	Proso millet	PRO 1416		IC0449221	40.00
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Flag leaf blade length (>30.00 cm)
1	PRO-K21-927	Proso millet	PRO 987		IC0483934	45.87
2	PRO-K21-080	Proso millet	PRO 82	TNPM 380		34.73
3	PRO-K21-1090	Proso millet	PRO 1190		IC0484162	34.70
4	PRO-K21-634	Proso millet	PRO 690		IC0484165	33.80
5	PRO-K21-141	Proso millet	PRO 140	TNPM 439		33.77
6	PRO-K21-331	Proso millet	PRO 325	TNPM 638		33.40
7	PRO-K21-520	Proso millet	TNAU 202	Check 4		33.40
8	PRO-K21-005	Proso millet	PRO 7	TNPM 305		32.87
9	PRO-K21-725	Proso millet	GPUP 8	Check 1		32.63
10	PRO-K21-884	Proso millet	PRO 941		IC0483884	32.60
11	PRO-K21-511	Proso millet	PRO 571		IC0483553	32.53
12	PRO-K21-1113	Proso millet	PRO 1231		IC0041834	32.25
13	PRO-K21-058	Proso millet	PRO 60	TNPM 358		32.00
14	PRO-K21-874	Proso millet	PRO 930		IC0483872	31.80
15	PRO-K21-914	Proso millet	PRO 973		IC0483918	31.60
16	PRO-K21-881	Proso millet	PRO 937		IC0483880	31.57
17	PRO-K21-081	Proso millet	PRO 83	TNPM 381		31.40
18	PRO-K21-309	Proso millet	GPUP 8	Check 1		31.40
19	PRO-K21-067	Proso millet	PRO 69	TNPM 367		31.10
20	PRO-K21-537	Proso millet	PRO 593		IC0483576	31.07
21	PRO-K21-162	Proso millet	PRO 161	TNPM 460		30.80
22	PRO-K21-1088	Proso millet	PRO 1185		IC0484157	30.70
23	PRO-K21-933	Proso millet	GPUP 8	Check 1		30.60
24	PRO-K21-945	Proso millet	PRO 1002		IC0483950	30.50
25	PRO-K21-134	Proso millet	PRO 133	TNPM 432		30.40
26	PRO-K21-352	Proso millet	PRO 346	TNPM 659		30.40
27	PRO-K21-1196	Proso millet	PRO 1398		IC0344996	30.33
28	PRO-K21-1112	Proso millet	PRO 1230		EC0529871	30.23
29	PRO-K21-592	Proso millet	PRO 649		IC0483737	30.03
30	PRO-K21-890	Proso millet	PRO 947		IC0483890	30.03
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Flag leaf blade width (>2.00 cm)
1	PRO-K21-089	Proso millet	PRO 91	TNPM 389		2.93
2	PRO-K21-102	Proso millet	TNAU 145	Check 2		2.43
3	PRO-K21-1028	Proso millet	PRO 1109		IC0484069	2.23
4	PRO-K21-1088	Proso millet	PRO 1185		IC0484157	2.20
5	PRO-K21-059	Proso millet	PRO 61	TNPM 359		2.20
6	PRO-K21-414	Proso millet	TNAU 145	Check 2		2.17
7	PRO-K21-1142	Proso millet	TNAU 145	Check 2		2.10
8	PRO-K21-935	Proso millet	TNAU 164	Check 3		2.10
9	PRO-K21-726	Proso millet	TNAU 145	Check 2		2.07
10	PRO-K21-186	Proso millet	PRO 185	TNPM 493		2.03
11	PRO-K21-310	Proso millet	TNAU 145	Check 2		2.03
12	PRO-K21-1090	Proso millet	PRO 1190		IC0484162	2.03

13	PRO-K21-934	Proso millet	TNAU 145	Check 2		2.00
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Peduncle length (>11.00 cm)
1	PRO-K21-126	Proso millet	PRO 124	TNPM 423		15.77
2	PRO-K21-537	Proso millet	PRO 593		IC0483576	14.43
3	PRO-K21-085	Proso millet	PRO 87	TNPM 385		13.87
4	PRO-K21-081	Proso millet	PRO 83	TNPM 381		13.57
5	PRO-K21-922	Proso millet	PRO 982		IC0483928	13.43
6	PRO-K21-226	Proso millet	PRO 221	TNPM 529		12.80
7	PRO-K21-924	Proso millet	PRO 984		IC0483930	12.20
8	PRO-K21-1143	Proso millet	TNAU 164	Check 3		12.13
9	PRO-K21-921	Proso millet	PRO 981		IC0483927	12.07
10	PRO-K21-520	Proso millet	TNAU 202	Check 4		11.73
11	PRO-K21-831	Proso millet	TNAU 164	Check 3		11.70
12	PRO-K21-727	Proso millet	TNAU 164	Check 3		11.20
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Panicle length (>32.00 cm)
1	PRO-K21-1028	Proso millet	PRO 1109		IC0484069	46.70
2	PRO-K21-737	Proso millet	PRO 791		IC0483718	42.60
3	PRO-K21-831	Proso millet	TNAU 164	Check 3		41.73
4	PRO-K21-415	Proso millet	TNAU 164	Check 3		38.20
5	PRO-K21-213	Proso millet	PRO 208	TNPM 516		37.50
6	PRO-K21-727	Proso millet	TNAU 164	Check 3		37.23
7	PRO-K21-208	Proso millet	PRO 207	TNPM 515		36.90
8	PRO-K21-1040	Proso millet	TNAU 202	Check 4		36.40
9	PRO-K21-1143	Proso millet	TNAU 164	Check 3		36.23
10	PRO-K21-331	Proso millet	PRO 325	TNPM 638		35.80
11	PRO-K21-829	Proso millet	GPUP 8	Check 1		35.43
12	PRO-K21-750	Proso millet	PRO 804		IC0483733	35.30
13	PRO-K21-226	Proso millet	PRO 221	TNPM 529		35.20
14	PRO-K21-036	Proso millet	PRO 38	TNPM 336		35.17
15	PRO-K21-231	Proso millet	PRO 226	TNPM 534		34.77
16	PRO-K21-536	Proso millet	PRO 592		IC0483575	34.53
17	PRO-K21-206	Proso millet	PRO 205	TNPM 513		34.40
18	PRO-K21-051	Proso millet	PRO 53	TNPM 351		33.87
19	PRO-K21-634	Proso millet	PRO 690		IC0484165	33.80
20	PRO-K21-050	Proso millet	PRO 52	TNPM 350		33.77
21	PRO-K21-681	Proso millet	PRO 738		IC0484202	33.73
22	PRO-K21-592	Proso millet	PRO 649		IC0483737	33.47
23	PRO-K21-160	Proso millet	PRO 159	TNPM 458		33.43
24	PRO-K21-511	Proso millet	PRO 571		IC0483553	33.30
25	PRO-K21-703	Proso millet	PRO 760		IC0483683	33.30
26	PRO-K21-677	Proso millet	PRO 734		IC0484197	33.27
27	PRO-K21-712	Proso millet	PRO 769		IC0483693	33.27
28	PRO-K21-960	Proso millet	PRO 1019		IC0483971	33.20
29	PRO-K21-749	Proso millet	PRO 803		IC0483732	33.13
30	PRO-K21-593	Proso millet	PRO 650		IC0483748	33.10
31	PRO-K21-678	Proso millet	PRO 735		IC0484199	33.07
32	PRO-K21-659	Proso millet	PRO 715		IC0484177	33.03
33	PRO-K21-150	Proso millet	PRO 149	TNPM 448		33.00
34	PRO-K21-935	Proso millet	TNAU 164	Check 3		33.00
35	PRO-K21-101	Proso millet	GPUP 8	Check 1		32.93
36	PRO-K21-537	Proso millet	PRO 593		IC0483576	32.93
37	PRO-K21-698	Proso millet	PRO 755		IC0483678	32.53
38	PRO-K21-1088	Proso millet	PRO 1185		IC0484157	32.50
39	PRO-K21-830	Proso millet	TNAU 145	Check 2		32.40
40	PRO-K21-597	Proso millet	PRO 655		IC0483813	32.27
41	PRO-K21-133	Proso millet	PRO 132	TNPM 431		32.27
42	PRO-K21-832	Proso millet	TNAU 202	Check 4		32.27
43	PRO-K21-212	Proso millet	TNAU 202	Check 4		32.20
44	PRO-K21-517	Proso millet	GPUP 8	Check 1		32.10
45	PRO-K21-868	Proso millet	PRO 924		IC0483864	32.07
46	PRO-K21-225	Proso millet	PRO 220	TNPM 528		32.07
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Panicle width (>5.00 cm)
1	PRO-K21-048	Proso millet	PRO 50	TNPM 348		7.03
2	PRO-K21-816	Proso millet	PRO 872		IC0483807	6.83
3	PRO-K21-217	Proso millet	PRO 212	TNPM 520		6.43
4	PRO-K21-093	Proso millet	PRO 95	TNPM 393		6.20

5	PRO-K21-026	Proso millet	PRO 28	TNPM 326		6.03
6	PRO-K21-050	Proso millet	PRO 52	TNPM 350		5.70
7	PRO-K21-113	Proso millet	PRO 111	TNPM 409		5.63
8	PRO-K21-331	Proso millet	PRO 325	TNPM 638		5.60
9	PRO-K21-111	Proso millet	PRO 109	TNPM 407		5.60
10	PRO-K21-022	Proso millet	PRO 24	TNPM 322		5.53
11	PRO-K21-064	Proso millet	PRO 66	TNPM 364		5.53
12	PRO-K21-110	Proso millet	PRO 108	TNPM 406		5.53
13	PRO-K21-117	Proso millet	PRO 115	TNPM 413		5.53
14	PRO-K21-164	Proso millet	PRO 163	TNPM 462		5.50
15	PRO-K21-200	Proso millet	PRO 199	TNPM 507		5.50
16	PRO-K21-142	Proso millet	PRO 141	TNPM 440		5.47
17	PRO-K21-727	Proso millet	TNAU 164	Check 3		5.43
18	PRO-K21-047	Proso millet	PRO 49	TNPM 347		5.37
19	PRO-K21-112	Proso millet	PRO 110	TNPM 408		5.37
20	PRO-K21-725	Proso millet	GPUP 8	Check 1		5.33
21	PRO-K21-213	Proso millet	PRO 208	TNPM 516		5.30
22	PRO-K21-517	Proso millet	GPUP 8	Check 1		5.30
23	PRO-K21-817	Proso millet	PRO 873		IC0483808	5.30
24	PRO-K21-139	Proso millet	PRO 138	TNPM 437		5.27
25	PRO-K21-036	Proso millet	PRO 38	TNPM 336		5.23
26	PRO-K21-086	Proso millet	PRO 88	TNPM 386		5.20
27	PRO-K21-125	Proso millet	PRO 123	TNPM 422		5.20
28	PRO-K21-090	Proso millet	PRO 92	TNPM 390		5.13
29	PRO-K21-161	Proso millet	PRO 160	TNPM 459		5.13
30	PRO-K21-171	Proso millet	PRO 170	TNPM 476		5.10
31	PRO-K21-040	Proso millet	PRO 42	TNPM 340		5.07
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Plant height (>120.00 cm)
1	PRO-K21-225	Proso millet	PRO 220	TNPM 528		151.67
2	PRO-K21-226	Proso millet	PRO 221	TNPM 529		146.60
3	PRO-K21-934	Proso millet	TNAU 145	Check 2		144.00
4	PRO-K21-725	Proso millet	GPUP 8	Check 1		142.33
5	PRO-K21-1143	Proso millet	TNAU 164	Check 3		141.67
6	PRO-K21-726	Proso millet	TNAU 145	Check 2		140.00
7	PRO-K21-221	Proso millet	PRO 216	TNPM 524		139.67
8	PRO-K21-224	Proso millet	PRO 219	TNPM 527		137.33
9	PRO-K21-935	Proso millet	TNAU 164	Check 3		137.00
10	PRO-K21-520	Proso millet	TNAU 202	Check 4		136.33
11	PRO-K21-211	Proso millet	TNAU 164	Check 3		135.00
12	PRO-K21-231	Proso millet	PRO 226	TNPM 534		131.00
13	PRO-K21-831	Proso millet	TNAU 164	Check 3		128.67
14	PRO-K21-213	Proso millet	PRO 208	TNPM 516		127.67
15	PRO-K21-1142	Proso millet	TNAU 145	Check 2		126.00
16	PRO-K21-519	Proso millet	TNAU 164	Check 3		125.00
17	PRO-K21-1040	Proso millet	TNAU 202	Check 4		125.00
18	PRO-K21-415	Proso millet	TNAU 164	Check 3		121.00
19	PRO-K21-518	Proso millet	TNAU 145	Check 2		120.33
20	PRO-K21-936	Proso millet	TNAU 202	Check 4		120.00
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Plant height (<50.00 cm)
1	PRO-K21-762	Proso millet	PRO 816		IC0483746	32.00
2	PRO-K21-305	Proso millet	PRO 302	TNPM 615		33.33
3	PRO-K21-336	Proso millet	PRO 330	TNPM 643		35.00
4	PRO-K21-705	Proso millet	PRO 762		IC0483686	35.00
5	PRO-K21-763	Proso millet	PRO 817		IC0483747	36.00
6	PRO-K21-562	Proso millet	PRO 618		IC0483602	36.33
7	PRO-K21-578	Proso millet	PRO 634		IC0483623	40.00
8	PRO-K21-760	Proso millet	PRO 814		IC0483744	40.00
9	PRO-K21-048	Proso millet	PRO 50	TNPM 348		40.67
10	PRO-K21-431	Proso millet	PRO 484		IC0484214	43.17
11	PRO-K21-840	Proso millet	PRO 894		IC0483831	43.67
12	PRO-K21-640	Proso millet	PRO 696		IC0483657	44.67
13	PRO-K21-979	Proso millet	PRO 1038		IC0483992	44.67
14	PRO-K21-272	Proso millet	PRO 268	TNPM 580		45.00
15	PRO-K21-633	Proso millet	PRO 689		IC0484155	45.00
16	PRO-K21-940	Proso millet	PRO 997		IC0483945	45.00
17	PRO-K21-980	Proso millet	PRO 1039		IC0483993	45.00

18	PRO-K21-047	Proso millet	PRO 49	TNPM 347		45.33
19	PRO-K21-527	Proso millet	PRO 583		IC0483562	45.67
20	PRO-K21-915	Proso millet	PRO 974		IC0483919	46.00
21	PRO-K21-362	Proso millet	PRO 356	TNPM 669		46.67
22	PRO-K21-902	Proso millet	PRO 960		IC0483904	46.67
23	PRO-K21-390	Proso millet	PRO 447		IC0483558	47.00
24	PRO-K21-035	Proso millet	PRO 37	TNPM 335		47.67
25	PRO-K21-267	Proso millet	PRO 263	TNPM 575		48.00
26	PRO-K21-095	Proso millet	PRO 97	TNPM 395		48.33
27	PRO-K21-338	Proso millet	PRO 332	TNPM 645		48.33
28	PRO-K21-770	Proso millet	PRO 824		IC0483755	49.00
29	PRO-K21-454	Proso millet	PRO 507		IC0601208	49.33
30	PRO-K21-264	Proso millet	PRO 260	TNPM 572		49.67
31	PRO-K21-361	Proso millet	PRO 355	TNPM 668		50.00
32	PRO-K21-620	Proso millet	PRO 680		IC0484071	50.00
33	PRO-K21-910	Proso millet	PRO 968		IC0483913	50.00
34	PRO-K21-1157	Proso millet	PRO 1289		IC0405190	50.00
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Date of harvest (<65.00 days)
1	PRO-K21-305	Proso millet	PRO 302	TNPM 615		59.00
2	PRO-K21-362	Proso millet	PRO 356	TNPM 669		59.00
3	PRO-K21-562	Proso millet	PRO 618		IC0483602	59.00
4	PRO-K21-774	Proso millet	PRO 828		IC0483761	59.00
5	PRO-K21-781	Proso millet	PRO 835		IC0483768	59.00
6	PRO-K21-833	Proso millet	PRO 887		IC0483823	59.00
7	PRO-K21-1151	Proso millet	PRO 1283		IC0405184	59.00
8	PRO-K21-1156	Proso millet	PRO 1288		IC0405189	59.00
9	PRO-K21-035	Proso millet	PRO 37	TNPM 335		63.00
10	PRO-K21-047	Proso millet	PRO 49	TNPM 347		63.00
11	PRO-K21-048	Proso millet	PRO 50	TNPM 348		63.00
12	PRO-K21-109	Proso millet	PRO 107	TNPM 405		63.00
13	PRO-K21-115	Proso millet	PRO 113	TNPM 411		63.00
14	PRO-K21-174	Proso millet	PRO 173	TNPM 479		63.00
15	PRO-K21-219	Proso millet	PRO 214	TNPM 522		63.00
16	PRO-K21-230	Proso millet	PRO 225	TNPM 533		63.00
17	PRO-K21-268	Proso millet	PRO 264	TNPM 576		63.00
18	PRO-K21-273	Proso millet	PRO 269	TNPM 581		63.00
19	PRO-K21-279	Proso millet	PRO 275	TNPM 587		63.00
20	PRO-K21-309	Proso millet	GPUP 8	Check 1		63.00
21	PRO-K21-330	Proso millet	PRO 324	TNPM 637		63.00
22	PRO-K21-336	Proso millet	PRO 330	TNPM 643		63.00
23	PRO-K21-337	Proso millet	PRO 331	TNPM 644		63.00
24	PRO-K21-338	Proso millet	PRO 332	TNPM 645		63.00
25	PRO-K21-360	Proso millet	PRO 354	TNPM 667		63.00
26	PRO-K21-390	Proso millet	PRO 447		IC0483558	63.00
27	PRO-K21-421	Proso millet	PRO 474		IC0483650	63.00
28	PRO-K21-527	Proso millet	PRO 583		IC0483562	63.00
29	PRO-K21-537	Proso millet	PRO 593		IC0483576	63.00
30	PRO-K21-588	Proso millet	PRO 645		IC0483695	63.00
31	PRO-K21-594	Proso millet	PRO 652		IC0483760	63.00
32	PRO-K21-598	Proso millet	PRO 656		IC0483824	63.00
33	PRO-K21-599	Proso millet	PRO 658		IC0483846	63.00
34	PRO-K21-601	Proso millet	PRO 660		IC0483867	63.00
35	PRO-K21-611	Proso millet	PRO 671		IC0483979	63.00
36	PRO-K21-627	Proso millet	PRO 683		IC0484097	63.00
37	PRO-K21-629	Proso millet	PRO 685		IC0484118	63.00
38	PRO-K21-633	Proso millet	PRO 689		IC0484155	63.00
39	PRO-K21-636	Proso millet	PRO 692		IC0484176	63.00
40	PRO-K21-640	Proso millet	PRO 696		IC0483657	63.00
41	PRO-K21-648	Proso millet	PRO 704		IC0483665	63.00
42	PRO-K21-652	Proso millet	PRO 708		IC0484169	63.00
43	PRO-K21-747	Proso millet	PRO 801		IC0483729	63.00
44	PRO-K21-768	Proso millet	PRO 822		IC0483753	63.00
45	PRO-K21-778	Proso millet	PRO 832		IC0483765	63.00
46	PRO-K21-779	Proso millet	PRO 833		IC0483766	63.00
47	PRO-K21-853	Proso millet	PRO 907		IC0483845	63.00
48	PRO-K21-864	Proso millet	PRO 919		IC0483859	63.00

49	PRO-K21-869	Proso millet	PRO 925		IC0483865	63.00
50	PRO-K21-873	Proso millet	PRO 929		IC0483871	63.00
51	PRO-K21-875	Proso millet	PRO 931		IC0483873	63.00
52	PRO-K21-882	Proso millet	PRO 939		IC0483882	63.00
53	PRO-K21-910	Proso millet	PRO 968		IC0483913	63.00
54	PRO-K21-926	Proso millet	PRO 986		IC0483932	63.00
55	PRO-K21-927	Proso millet	PRO 987		IC0483934	63.00
56	PRO-K21-928	Proso millet	PRO 988		IC0483935	63.00
57	PRO-K21-929	Proso millet	PRO 989		IC0483936	63.00
58	PRO-K21-939	Proso millet	PRO 996		IC0483944	63.00
59	PRO-K21-1032	Proso millet	PRO 1113		IC0484075	63.00
60	PRO-K21-1033	Proso millet	PRO 1115		IC0484077	63.00
61	PRO-K21-1046	Proso millet	PRO 1126		IC0484090	63.00
62	PRO-K21-1092	Proso millet	PRO 1193		IC0274489	63.00
63	PRO-K21-1171	Proso millet	PRO 1326		IC0311963	63.00
64	PRO-K21-1200	Proso millet	PRO 1406		IC0382222	63.00
65	PRO-K21-1201	Proso millet	PRO 1407		IC0394832	63.00
66	PRO-K21-1202	Proso millet	PRO 1408		IC0394897	63.00
67	PRO-K21-1205	Proso millet	PRO 1416		IC0449221	63.00
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Grain yield (>15.00 g/plant)
1	PRO-K21-933	Proso millet	GPUP 8	Check 1		26.01
2	PRO-K21-414	Proso millet	TNAU 145	Check 2		20.29
3	PRO-K21-680	Proso millet	PRO 737		IC0484201	18.42
4	PRO-K21-819	Proso millet	PRO 875		IC0483810	18.30
5	PRO-K21-166	Proso millet	PRO 165	TNPM 471		17.98
6	PRO-K21-818	Proso millet	PRO 874		IC0483809	17.66
7	PRO-K21-830	Proso millet	TNAU 145	Check 2		17.47
8	PRO-K21-955	Proso millet	PRO 1013		IC0483963	17.35
9	PRO-K21-934	Proso millet	TNAU 145	Check 2		16.96
10	PRO-K21-415	Proso millet	TNAU 164	Check 3		16.23
11	PRO-K21-231	Proso millet	PRO 226	TNPM 534		15.52
12	PRO-K21-1058	Proso millet	PRO 1140		IC0484105	15.47
13	PRO-K21-601	Proso millet	PRO 660		IC0483867	15.35
14	PRO-K21-213	Proso millet	PRO 208	TNPM 516		15.16
15	PRO-K21-725	Proso millet	GPUP 8	Check 1		15.02
16	PRO-K21-780	Proso millet	PRO 834		IC0483767	15.00
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	1000-Grain weight (>5.50 g)
1	PRO-K21-524	Proso millet	PRO 580		IC0483555	8.20
2	PRO-K21-191	Proso millet	PRO 190	TNPM 498		8.10
3	PRO-K21-888	Proso millet	PRO 945		IC0483888	7.53
4	PRO-K21-934	Proso millet	TNAU 145	Check 2		6.90
5	PRO-K21-1011	Proso millet	PRO 1091		IC0484049	6.43
6	PRO-K21-036	Proso millet	PRO 38	TNPM 336		6.43
7	PRO-K21-935	Proso millet	TNAU 164	Check 3		6.30
8	PRO-K21-970	Proso millet	PRO 1029		IC0483982	6.27
9	PRO-K21-260	Proso millet	PRO 256	TNPM 564		6.23
10	PRO-K21-825	Proso millet	PRO 883		IC0483819	6.23
11	PRO-K21-1057	Proso millet	PRO 1139		IC0484104	6.23
12	PRO-K21-416	Proso millet	TNAU 202	Check 4		6.20
13	PRO-K21-1167	Proso millet	PRO 1306		IC0279616	6.20
14	PRO-K21-818	Proso millet	PRO 874		IC0483809	6.17
15	PRO-K21-742	Proso millet	PRO 796		IC0483723	6.10
16	PRO-K21-867	Proso millet	PRO 923		IC0483863	6.07
17	PRO-K21-017	Proso millet	PRO 19	TNPM 317		6.07
18	PRO-K21-1094	Proso millet	PRO 1197		IC0283755	6.00
19	PRO-K21-1160	Proso millet	PRO 1293		IC0341400	6.00
20	PRO-K21-012	Proso millet	PRO 14	TNPM 312		5.97
21	PRO-K21-206	Proso millet	PRO 205	TNPM 513		5.97
22	PRO-K21-140	Proso millet	PRO 139	TNPM 438		5.90
23	PRO-K21-199	Proso millet	PRO 198	TNPM 506		5.90
24	PRO-K21-100	Proso millet	PRO 102	TNPM 400		5.87
25	PRO-K21-166	Proso millet	PRO 165	TNPM 471		5.87
26	PRO-K21-048	Proso millet	PRO 50	TNPM 348		5.83
27	PRO-K21-987	Proso millet	PRO 1046		IC0484001	5.83
28	PRO-K21-207	Proso millet	PRO 206	TNPM 514		5.80
29	PRO-K21-001	Proso millet	PRO 3	TNPM 301		5.80

30	PRO-K21-099	Proso millet	PRO 101	TNPM 399		5.80
31	PRO-K21-217	Proso millet	PRO 212	TNPM 520		5.80
32	PRO-K21-740	Proso millet	PRO 794		IC0483721	5.80
33	PRO-K21-959	Proso millet	PRO 1018		IC0483970	5.80
34	PRO-K21-1195	Proso millet	PRO 1397		IC0344993	5.80
35	PRO-K21-129	Proso millet	PRO 128	TNPM 427		5.77
36	PRO-K21-208	Proso millet	PRO 207	TNPM 515		5.77
37	PRO-K21-1001	Proso millet	PRO 1079		IC0484036	5.77
38	PRO-K21-008	Proso millet	PRO 10	TNPM 308		5.73
39	PRO-K21-906	Proso millet	PRO 964		IC0483908	5.73
40	PRO-K21-365	Proso millet	PRO 359	TNPM 672		5.70
41	PRO-K21-896	Proso millet	PRO 953		IC0483896	5.67
42	PRO-K21-205	Proso millet	PRO 204	TNPM 512		5.67
43	PRO-K21-946	Proso millet	PRO 1003		IC0483951	5.67
44	PRO-K21-221	Proso millet	PRO 216	TNPM 524		5.67
45	PRO-K21-112	Proso millet	PRO 110	TNPM 408		5.63
46	PRO-K21-889	Proso millet	PRO 946		IC0483889	5.63
47	PRO-K21-1016	Proso millet	PRO 1097		IC0484056	5.63
48	PRO-K21-027	Proso millet	PRO 29	TNPM 327		5.60
49	PRO-K21-415	Proso millet	TNAU 164	Check 3		5.60
50	PRO-K21-678	Proso millet	PRO 735		IC0484199	5.60
51	PRO-K21-900	Proso millet	PRO 958		IC0483902	5.60
52	PRO-K21-1044	Proso millet	PRO 1123		IC0484086	5.60
53	PRO-K21-190	Proso millet	PRO 189	TNPM 497		5.60
54	PRO-K21-259	Proso millet	PRO 255	TNPM 563		5.60
55	PRO-K21-216	Proso millet	PRO 211	TNPM 519		5.57
56	PRO-K21-741	Proso millet	PRO 795		IC0483722	5.57
57	PRO-K21-1051	Proso millet	PRO 1133		IC0484098	5.57
58	PRO-K21-110	Proso millet	PRO 108	TNPM 406		5.57
59	PRO-K21-200	Proso millet	PRO 199	TNPM 507		5.57
60	PRO-K21-592	Proso millet	PRO 649		IC0483737	5.57
61	PRO-K21-659	Proso millet	PRO 715		IC0484177	5.57
62	PRO-K21-977	Proso millet	PRO 1036		IC0483990	5.57
63	PRO-K21-073	Proso millet	PRO 75	TNPM 373		5.53
64	PRO-K21-083	Proso millet	PRO 85	TNPM 383		5.53
65	PRO-K21-150	Proso millet	PRO 149	TNPM 448		5.53
66	PRO-K21-1100	Proso millet	PRO 1211		IC0332083	5.53
67	PRO-K21-884	Proso millet	PRO 941		IC0483884	5.53
68	PRO-K21-064	Proso millet	PRO 66	TNPM 364		5.50
69	PRO-K21-106	Proso millet	PRO 104	TNPM 402		5.50
70	PRO-K21-623	Proso millet	TNAU 164	Check 3		5.50
71	PRO-K21-624	Proso millet	TNAU 202	Check 4		5.50
72	PRO-K21-728	Proso millet	TNAU 202	Check 4		5.50
73	PRO-K21-832	Proso millet	TNAU 202	Check 4		5.50
74	PRO-K21-082	Proso millet	PRO 84	TNPM 382		5.50
75	PRO-K21-120	Proso millet	PRO 118	TNPM 416		5.50
76	PRO-K21-887	Proso millet	PRO 944		IC0483887	5.50
77	PRO-K21-960	Proso millet	PRO 1019		IC0483971	5.50
78	PRO-K21-1193	Proso millet	PRO 1395		IC0340939	5.50

Table 6: Multi-trait specific Proso millet germplasm identified under Institute Project (IIMR/CI/2021-2026/150) during Kharif 2021 from 675 acc. characterized

S.No.	Crop Name	MGB No	IC No/Other ID	Multi-trait
1	Proso millet	PRO 1185	IC0484157	Flag leaf blade length (>30.00 cm) Flag leaf blade width, (>2.00 cm) and Panicle length (>32.00 cm)
2	Proso millet	PRO 165	TNPM 471	Days to 50% flowering (>40.00 days), Grain yield (>15.00 g/plant and 1000-Grain weight (>5.50 g)
3	Proso millet	PRO 208	TNPM 516	Panicle length (>32.00 cm), Panicle width (>5.00 cm), Plant height (>120.00 cm) and Grain yield (>15.00 g/plant)
4	Proso millet	PRO 221	TNPM 529	Peduncle length (>11.00 cm), Panicle length (>32.00 cm) and Plant height (>120.00 cm)
5	Proso millet	PRO 226	TNPM 534	Panicle length (>32.00 cm), Plant height (>120.00 cm) and Grain yield (>15.00 g/plant)
6	Proso millet	PRO 302	TNPM 615	Days to 50% flowering (>40.00 days), Plant height (<50.00 cm) and Date of harvest (<65.00 days)
7	Proso millet	PRO 325	TNPM 638	Days to 50% flowering (>40.00 days), Flag leaf blade length (>30.00 cm), Panicle length (>32.00 cm), Panicle width (>5.00 cm)
8	Proso millet	PRO 330	TNPM 643	Days to 50% flowering (>40.00 days), Plant height (<50.00 cm) and Date of harvest (<65.00 days)
9	Proso millet	PRO 356	TNPM 669	Days to 50% flowering (>40.00 days), Plant height (<50.00 cm) and Date of harvest (<65.00 days)
10	Proso millet	PRO 359	TNPM 672	Number of basal tillers (>15.00), 1000-Grain weight (>5.50 g), Days to 50% flowering (>40.00 days), Plant height (<50.00 cm) and Date of harvest (<65.00 days)

S.No.	Crop Name	MGB No	IC No/Other ID	Multi-trait
11	Proso millet	PRO 38	TNPM 336	Days to 50% flowering (>40.00 days), Panicle length (>32.00 cm), Panicle width (>5.00 cm) and 1000-Grain weight (>5.50 g)
12	Proso millet	PRO 49	TNPM 347	Days to 50% flowering (>40.00 days), Panicle width (>5.00 cm), Plant height (<50.00 cm) and Date of harvest (<65.00 days)
13	Proso millet	PRO 50	TNPM 348	Days to 50% flowering (>40.00 days), Panicle width (>5.00 cm), Plant height (<50.00 cm), Date of harvest (<65.00 days) and 1000-Grain weight (>5.50 g)
14	Proso millet	PRO 593	IC0483576	Days to 50% flowering (>40.00 days), Flag leaf blade length (>30.00 cm), Peduncle length (>11.00 cm), Panicle length (>32.00 cm) and Date of harvest (<65.00 days)
15	Proso millet	PRO 618	IC0483602	Days to 50% flowering (>40.00 days), Plant height (<50.00 cm), Date of harvest (<65.00 days), Flag leaf blade length (>30.00 cm), Panicle length (>32.00 cm) and 1000-Grain weight (>5.50 g)
16	Proso millet	PRO 660	IC0483867	Days to 50% flowering (>40.00 days), Date of harvest (<65.00 days), Grain yield (>15.00 g/plant)
17	Proso millet	PRO 690	IC0484165	Number of basal tillers (>15.00), Flag leaf blade length (>30.00 cm) and Panicle length (>32.00 cm),
18	Proso millet	PRO 715	IC0484177	Number of basal tillers (>15.00), Panicle length (>32.00 cm) and 1000-Grain weight (>5.50 g)
19	Proso millet	PRO 791	IC0483718	Number of basal tillers (>15.00), Panicle length (>32.00 cm), Days to 50% flowering (>40.00 days) and Date of harvest (<65.00 days)
20	Proso millet	PRO 919	IC0483859	Number of basal tillers (>15.00), Days to 50% flowering (>40.00 days) and Date of harvest (<65.00 days)
21	Proso millet	PRO 968	IC0483913	Days to 50% flowering (>40.00 days), Plant height (<50.00 cm) and Date of harvest (<65.00 days)

3.2: Characterization of 553 acc. of Barnyard millet germplasm under Institute Project (IIMR/CI/2021-2026/150) at ICAR-IIMR-Hyderabad during Kharif 2021

A total of 553 acc. of Barnyard millet germplasm are characterized along with four checks viz., DHBM 93-3, VL 207, VL 172 and PRJ 1 in Augmented Block Design under Institute Project (IIMR/CI/2021-2026/150) at ICAR-IIMR-Hyderabad during Kharif 2021 for 25 agro-morphological traits. Which includes 12 quantitative and 13 qualitative traits. The plant height was the most variable trait followed by days to maturity, days to 50% flowering, grain yield/plant etc., The frequency distribution of qualitative traits of 675 acc. of proso millet germplasm characterized at ICAR-IIMR-Hyderabad under Institute Project (IIMR/CI/2021-2026/150) is presented in Table 7.

Table 7: Summary statistics of quantitative traits of 553 acc. of Barnyard millet germplasm characterized at ICAR-IIMR-Hyderabad under Institute Project (IIMR/CI/2021-2026/150) during Kharif 2021

S.No	Trait	Count	Min	Max	Range	Mean	SE	SD	Variance
1	Number of basal tillers	553.00	1.00	16.50	15.50	4.50	0.07	1.65	2.72
2	Days to 50% flowering (days)	553.00	46.00	87.00	41.00	60.82	0.39	9.22	85.07
3	Flag leaf blade length (cm)	553.00	13.10	40.63	27.53	26.49	0.19	4.46	19.85
4	Flag leaf blade width (cm)	553.00	1.37	4.90	3.53	2.72	0.03	0.65	0.42
5	Peduncle length (cm)	553.00	6.50	23.77	17.27	13.02	0.12	2.71	7.32
6	Panicle length (cm)	553.00	10.40	31.17	20.77	19.88	0.15	3.53	12.46
7	Panicle width (cm)	553.00	1.57	6.87	5.30	3.79	0.03	0.70	0.50
8	Lowest raceme length (cm)	553.00	1.10	9.30	8.20	3.04	0.03	0.78	0.60
9	Plant height (cm)	553.00	60.00	291.67	231.67	125.78	1.62	38.01	1444.61
10	Date of maturity (days)	553.00	75.00	116.00	41.00	93.52	0.41	9.54	91.07
11	Grain yield (g/plant)	553.00	0.36	43.35	42.99	13.38	0.31	7.29	53.11
12	1000-Seed weight (g)	553.00	1.00	4.77	3.77	2.72	0.02	0.48	0.23

In the qualitative data, erect plant growth habit is the most frequent in 349 acc., absence of leaf sheath pigmentation in 310 acc., arched inflorescence shape in 359 acc., green inflorescence colour in 376 acc., intermediate panicle compactness in 340 acc., onside spikelet arrangement on the rachis in 383 acc., curved lowest raceme shape in 340 acc., thick lowest raceme thickness in 317 acc., absence of lowest raceme branching in 494 acc., presence of culm branching in 443 acc., absence of lodging in 541 acc., light grey grain colour in 267 acc. and oval grain shape in 473 acc. The frequency distribution of qualitative traits of 553 acc. of Barnyard millet germplasm characterized at ICAR-IIMR-Hyderabad under Institute Project (IIMR/CI/2021-2026/150) is presented in Table 8.

Table 8: The frequency distribution of qualitative traits of 553 acc. of Barnyard millet germplasm characterized under Institute Project (IIMR/CI/2021-2026/150) during Kharif 2021

S.No	Score/State	Plant growth habit	S.No	Score/State	Plant growth habit
1	Erect	349	2	Decumbent	204

S.No	Score/State	Plant growth habit
	Grand Total	553
	Score/State	Leaf sheath pigmentation
1	Absent	310
2	Present	243
	Grand Total	553
	Score/State	Inflorescence shape
1	Arched	359
2	Diffused	193
3	Globose elliptic	1
	Grand Total	553
	Score/State	Inflorescence colour
1	Green	376
2	Dark purple	109
3	Light purple	68
	Grand Total	553
	Score/State	Panicle compactness
1	Intermediate	340
2	Compact	196
3	Open	17
	Grand Total	553
	Score/State	Spikelet arrangement on the rachis
1	Oneside	383
2	Around	170
	Grand Total	553
	Score/State	Lowest raceme shape
1	Curved	340
2	Straight	213

S.No	Score/State	Plant growth habit
	Grand Total	553
	Score/State	Lowest raceme thickness
1	Thick	317
2	Slender	236
	Grand Total	553
	Score/State	Lowest raceme branching
1	Absent	494
2	Present	59
	Grand Total	553
	Score/State	Culm branching
1	Present	443
2	Absent	110
	Grand Total	553
	Score/State	Lodging
1	Absent	541
2	Present	12
	Grand Total	553
	Score/State	Grain colour
1	Light grey	267
2	Straw white	254
3	Grey	32
	Grand Total	553
	Score/State	Grain shape
1	Oval	473
2	Elliptical	80
	Grand Total	553

Potential germplasm identified: There are 411 acc. of trait-specific Barnyard millet germplasm identified. In which, 92 acc. are multi-trait specific germplasm for multi-trait specific germplasm for 2-5 traits. The list of 411 trait-specific accessions identified is given in Table 9. The list of 49 acc. identified with multi-trait specific germplasm for 3-6 traits is given Table 10.

Table 9: Trait-specific Barnyard millet germplasm identified under Institute Project (IIMR/CI/2021-2026/150) during Kharif 2021 from 553 acc. characterized

SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Number of basal tillers (>10.00)
1	BAR-K21-0114	Barnyard millet	BAR 219		IC0601269	16.50
2	BAR-K21-0850	Barnyard millet	BAR 1280	CB-TNAU-20		12.33
3	BAR-K21-0619	Barnyard millet	BAR 959		IC0376052	11.00
4	BAR-K21-0117	Barnyard millet	BAR 222		IC0601274	10.67
5	BAR-K21-0018	Barnyard millet	BAR 29		IC0404520	10.33
6	BAR-K21-0024	Barnyard millet	BAR 36		IC0404531	10.33
7	BAR-K21-0027	Barnyard millet	BAR 39		IC0404534	10.33
8	BAR-K21-0015	Barnyard millet	BAR 26		IC0404498	10.00
9	BAR-K21-0419	Barnyard millet	BAR 593		IC0404474	10.00
10	BAR-K21-0844	Barnyard millet	BAR 1273	CB-TNAU-12		10.00
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Early flowering (<50.00 days)
1	BAR-K21-0441	Barnyard millet	BAR 617		IC0404498	46.00
2	BAR-K21-0450	Barnyard millet	BAR 628		IC0404509	46.00
3	BAR-K21-0559	Barnyard millet	BAR 803		IC0313564	46.00
4	BAR-K21-0569	Barnyard millet	BAR 822		IC0334027	47.00
5	BAR-K21-0701	Barnyard millet	BAR 1080		IC0589361	47.00
6	BAR-K21-0107	Barnyard millet	BAR 210		IC0473120	48.00
7	BAR-K21-0258	Barnyard millet	BAR 390		IC0472980	48.00
8	BAR-K21-0547	Barnyard millet	BAR 791		IC0372751	48.00
9	BAR-K21-0548	Barnyard millet	BAR 792		IC0372754	48.00
10	BAR-K21-0554	Barnyard millet	BAR 798		IC0372777	48.00
11	BAR-K21-0567	Barnyard millet	BAR 819		IC0334008	48.00
12	BAR-K21-0571	Barnyard millet	BAR 825		IC0334038	48.00
13	BAR-K21-0703	Barnyard millet	BAR 1083		IC0589364	48.00
14	BAR-K21-0756	Barnyard millet	BAR 1169		IC0612215	48.00

SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Number of basal tillers (>10.00)
15	BAR-K21-0024	Barnyard millet	BAR 36		IC0404531	49.00
16	BAR-K21-0039	Barnyard millet	BAR 60		IC0404303	49.00
17	BAR-K21-0080	Barnyard millet	BAR 175		IC0473070	49.00
18	BAR-K21-0086	Barnyard millet	BAR 191		IC0473006	49.00
19	BAR-K21-0106	Barnyard millet	BAR 209		IC0473115	49.00
20	BAR-K21-0122	Barnyard millet	BAR 229		IC0472927	49.00
21	BAR-K21-0124	Barnyard millet	BAR 232		IC0473031	49.00
22	BAR-K21-0125	Barnyard millet	BAR 234		IC0473051	49.00
23	BAR-K21-0126	Barnyard millet	BAR 235		IC0473075	49.00
24	BAR-K21-0160	Barnyard millet	BAR 275		IC0472825	49.00
25	BAR-K21-0186	Barnyard millet	BAR 308		IC0472688	49.00
26	BAR-K21-0198	Barnyard millet	BAR 325		IC0472924	49.00
27	BAR-K21-0223	Barnyard millet	BAR 353		IC0472896	49.00
28	BAR-K21-0248	Barnyard millet	BAR 379		IC0472808	49.00
29	BAR-K21-0255	Barnyard millet	BAR 386		IC0472922	49.00
30	BAR-K21-0260	Barnyard millet	BAR 392		IC0472992	49.00
31	BAR-K21-0280	Barnyard millet	BAR 413		IC0472644	49.00
32	BAR-K21-0449	Barnyard millet	BAR 627		IC0404508	49.00
33	BAR-K21-0478	Barnyard millet	BAR 664		IC0404545	49.00
34	BAR-K21-0483	Barnyard millet	BAR 670		IC0404551	49.00
35	BAR-K21-0493	Barnyard millet	BAR 681		IC0281471	49.00
36	BAR-K21-0499	Barnyard millet	BAR 691		IC0280648	49.00
37	BAR-K21-0500	Barnyard millet	BAR 692		IC0280652	49.00
38	BAR-K21-0501	Barnyard millet	BAR 693		IC0280656	49.00
39	BAR-K21-0503	Barnyard millet	BAR 695		IC0280665	49.00
40	BAR-K21-0504	Barnyard millet	BAR 696		IC0280670	49.00
41	BAR-K21-0552	Barnyard millet	BAR 796		IC0372768	49.00
42	BAR-K21-0555	Barnyard millet	BAR 799		IC0372781	49.00
43	BAR-K21-0557	Barnyard millet	BAR 801		IC0372797	49.00
44	BAR-K21-0566	Barnyard millet	BAR 814		IC0331116	49.00
45	BAR-K21-0568	Barnyard millet	BAR 820		IC0334012	49.00
46	BAR-K21-0570	Barnyard millet	BAR 823		IC0334031	49.00
47	BAR-K21-0572	Barnyard millet	BAR 826		IC0334039	49.00
48	BAR-K21-0573	Barnyard millet	BAR 827		IC0334067	49.00
49	BAR-K21-0574	Barnyard millet	BAR 829		IC0334092	49.00
50	BAR-K21-0594	Barnyard millet	BAR 859		IC0259309	49.00
51	BAR-K21-0615	Barnyard millet	BAR 952		IC0548710	49.00
52	BAR-K21-0689	Barnyard millet	BAR 1057		IC0406615	49.00
53	BAR-K21-0695	Barnyard millet	BAR 1074		IC0589355	49.00
54	BAR-K21-0704	Barnyard millet	BAR 1084		IC0589365	49.00
55	BAR-K21-0713	Barnyard millet	BAR 1095		IC0589376	49.00
56	BAR-K21-0025	Barnyard millet	BAR 37		IC0404532	50.00
57	BAR-K21-0033	Barnyard millet	BAR 46		IC0404288	50.00
58	BAR-K21-0035	Barnyard millet	BAR 50		IC0404292	50.00
59	BAR-K21-0098	Barnyard millet	BAR 205		IC0473104	50.00
60	BAR-K21-0105	Barnyard millet	BAR 208		IC0473112	50.00
61	BAR-K21-0151	Barnyard millet	BAR 264		IC0472448	50.00
62	BAR-K21-0212	Barnyard millet	BAR 336		IC0473090	50.00
63	BAR-K21-0225	Barnyard millet	BAR 355		IC0472899	50.00
64	BAR-K21-0263	Barnyard millet	BAR 395		IC0473014	50.00
65	BAR-K21-0308	Barnyard millet	BAR 445		IC0473018	50.00
66	BAR-K21-0469	Barnyard millet	BAR 655		IC0404536	50.00
67	BAR-K21-0502	Barnyard millet	BAR 694		IC0280662	50.00
68	BAR-K21-0712	Barnyard millet	BAR 1094		IC0589375	50.00
69	BAR-K21-0758	Barnyard millet	BAR 1171		IC0612220	50.00
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Longer flag leaf blade (>35.00 cm)
1	BAR-K21-0205	Barnyard millet	DHBM 93-3	Check 5		40.63
2	BAR-K21-0770	Barnyard millet	BAR 1190	CB-EF-32		39.63
3	BAR-K21-0405	Barnyard millet	BAR 582		IC0404463	39.20
4	BAR-K21-0423	Barnyard millet	BAR 597		IC0404478	36.87
5	BAR-K21-0941	Barnyard millet	BAR 1403	CB-Co-2		36.70
6	BAR-K21-0910	Barnyard millet	BAR 1373	CB-K-32		36.50
7	BAR-K21-0334	Barnyard millet	BAR 476		IC0472902	36.47
8	BAR-K21-0283	Barnyard millet	BAR 416		IC0472714	36.43
9	BAR-K21-0330	Barnyard millet	BAR 471		IC0472777	36.37

SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Number of basal tillers (>10.00)
10	BAR-K21-0268	Barnyard millet	BAR 400		IC0473056	35.93
11	BAR-K21-0812	Barnyard millet	BAR 1239	CB-EF-102		35.93
12	BAR-K21-0842	Barnyard millet	BAR 1270	CB-TNAU-9		35.90
13	BAR-K21-0318	Barnyard millet	BAR 451		IC0472499	35.80
14	BAR-K21-0306	Barnyard millet	BAR 443		IC0473007	35.67
15	BAR-K21-0623	Barnyard millet	VL 172	Check 7		35.37
16	BAR-K21-0426	Barnyard millet	BAR 600		IC0404481	35.23
17	BAR-K21-0811	Barnyard millet	BAR 1237	CB-EF-99		35.20
18	BAR-K21-0101	Barnyard millet	DHBM 93-3	Check 5		35.03
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Wider flag leaf blade
1	BAR-K21-0922	Barnyard millet	BAR 1388	CB-IEC-552		4.90
2	BAR-K21-0685	Barnyard millet	BAR 1052		IC0396693	4.80
3	BAR-K21-0518	Barnyard millet	VL 207	Check 6		4.70
4	BAR-K21-0934	Barnyard millet	VL 207	Check 6		4.23
5	BAR-K21-0254	Barnyard millet	BAR 385		IC0472909	4.20
6	BAR-K21-0850	Barnyard millet	BAR 1280	CB-TNAU-20		4.00
7	BAR-K21-0443	Barnyard millet	BAR 621		IC0404502	3.97
8	BAR-K21-0920	Barnyard millet	BAR 1385	CB-IEC-543		3.97
9	BAR-K21-0845	Barnyard millet	BAR 1274	CB-TNAU-13		3.87
10	BAR-K21-0941	Barnyard millet	BAR 1403	CB-Co-2		3.83
11	BAR-K21-0847	Barnyard millet	BAR 1277	CB-TNAU-17		3.80
12	BAR-K21-0071	Barnyard millet	BAR 163		IC0404407	3.77
13	BAR-K21-0222	Barnyard millet	BAR 351		IC0472867	3.77
14	BAR-K21-0793	Barnyard millet	BAR 1218	CB-EF-64		3.77
15	BAR-K21-0876	Barnyard millet	BAR 1330	CB-TNAU-115		3.77
16	BAR-K21-0906	Barnyard millet	BAR 1369	CB-L-2		3.77
17	BAR-K21-0651	Barnyard millet	BAR 1001		IC0097046	3.75
18	BAR-K21-0822	Barnyard millet	BAR 1251	CB-EF-124		3.73
19	BAR-K21-0853	Barnyard millet	BAR 1283	CB-TNAU-23		3.70
20	BAR-K21-0412	Barnyard millet	BAR 590		IC0404471	3.70
21	BAR-K21-0678	Barnyard millet	BAR 1040		IC0340134	3.70
22	BAR-K21-0887	Barnyard millet	BAR 1344	CB-TNAU-131(Select)		3.70
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Longer peduncle (>18.00 cm)
1	BAR-K21-0752	Barnyard millet	BAR 1164		IC0610515	23.77
2	BAR-K21-0309	Barnyard millet	DHBM 93-3	Check 5		22.40
3	BAR-K21-0298	Barnyard millet	BAR 434		IC0472901	21.27
4	BAR-K21-0212	Barnyard millet	BAR 336		IC0473090	21.20
5	BAR-K21-0786	Barnyard millet	BAR 1207	CB-EF-51		20.93
6	BAR-K21-0934	Barnyard millet	VL 207	Check 6		20.57
7	BAR-K21-0103	Barnyard millet	VL 172	Check 7		20.13
8	BAR-K21-0205	Barnyard millet	DHBM 93-3	Check 5		20.10
9	BAR-K21-0725	Barnyard millet	DHBM 93-3	Check 5		19.67
10	BAR-K21-0853	Barnyard millet	BAR 1283	CB-TNAU-23		19.60
11	BAR-K21-0539	Barnyard millet	BAR 775		IC0355780	19.47
12	BAR-K21-0677	Barnyard millet	BAR 1038		IC0338960	19.30
13	BAR-K21-0417	Barnyard millet	BAR 591		IC0404472	19.17
14	BAR-K21-0397	Barnyard millet	BAR 574		IC0404454	19.00
15	BAR-K21-0793	Barnyard millet	BAR 1218	CB-EF-64		18.80
16	BAR-K21-0809	Barnyard millet	BAR 1235	CB-EF-97		18.80
17	BAR-K21-0529	Barnyard millet	BAR 764		IC0469871	18.77
18	BAR-K21-0540	Barnyard millet	BAR 779		IC0355796	18.73
19	BAR-K21-0318	Barnyard millet	BAR 451		IC0472499	18.50
20	BAR-K21-0430	Barnyard millet	BAR 604		IC0404485	18.33
21	BAR-K21-0922	Barnyard millet	BAR 1388	CB-IEC-552		18.30
22	BAR-K21-0842	Barnyard millet	BAR 1270	CB-TNAU-9		18.27
23	BAR-K21-0651	Barnyard millet	BAR 1001		IC0097046	18.25
24	BAR-K21-0886	Barnyard millet	BAR 1343	CB-TNAU-131		18.10
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Longer panicle (>25.00 cm)
1	BAR-K21-0318	Barnyard millet	BAR 451		IC0472499	31.17
2	BAR-K21-0759	Barnyard millet	BAR 1173		IC0612224	30.57
3	BAR-K21-0842	Barnyard millet	BAR 1270	CB-TNAU-9		30.50
4	BAR-K21-0809	Barnyard millet	BAR 1235	CB-EF-97		29.83
5	BAR-K21-0837	Barnyard millet	BAR 1264	CB-TNAU-2		29.70
6	BAR-K21-0758	Barnyard millet	BAR 1171		IC0612220	29.23
7	BAR-K21-0923	Barnyard millet	BAR 1389	CB-IEC-554		29.00

SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Number of basal tillers (>10.00)
8	BAR-K21-0387	Barnyard millet	BAR 564		IC0404444	28.07
9	BAR-K21-0306	Barnyard millet	BAR 443		IC0473007	27.93
10	BAR-K21-0770	Barnyard millet	BAR 1190	CB-EF-32		27.83
11	BAR-K21-0930	Barnyard millet	BAR 1396	CB-IEC-629		27.73
12	BAR-K21-0757	Barnyard millet	BAR 1170		IC0612217	27.40
13	BAR-K21-0934	Barnyard millet	VL 207	Check 6		27.10
14	BAR-K21-0537	Barnyard millet	BAR 772		IC0355775	26.93
15	BAR-K21-0851	Barnyard millet	BAR 1281	CB-TNAU-21		26.80
16	BAR-K21-0849	Barnyard millet	BAR 1279	CB-TNAU-19		26.77
17	BAR-K21-0614	Barnyard millet	BAR 950		IC0548697	26.67
18	BAR-K21-0590	Barnyard millet	BAR 852		IC0425735	26.27
19	BAR-K21-0321	Barnyard millet	BAR 456		IC0472608	26.13
20	BAR-K21-0838	Barnyard millet	BAR 1266	CB-TNAU-4		26.10
21	BAR-K21-0493	Barnyard millet	BAR 681		IC0281471	26.03
22	BAR-K21-0010	Barnyard millet	BAR 10	PB 75		25.97
23	BAR-K21-0283	Barnyard millet	BAR 416		IC0472714	25.87
24	BAR-K21-0725	Barnyard millet	DHBM 93-3	Check 5		25.87
25	BAR-K21-0542	Barnyard millet	BAR 783		IC0355805	25.73
26	BAR-K21-0495	Barnyard millet	BAR 683		IC0281486	25.67
27	BAR-K21-0418	Barnyard millet	BAR 592		IC0404473	25.50
28	BAR-K21-0935	Barnyard millet	VL 172	Check 7		25.30
29	BAR-K21-0294	Barnyard millet	BAR 429		IC0472841	25.27
30	BAR-K21-0524	Barnyard millet	BAR 755		IC0393037	25.27
31	BAR-K21-0114	Barnyard millet	BAR 219		IC0601269	25.20
32	BAR-K21-0394	Barnyard millet	BAR 571		IC0404451	25.17
33	BAR-K21-0941	Barnyard millet	BAR 1403	CB-Co-2		25.17
34	BAR-K21-0412	Barnyard millet	BAR 590		IC0404471	25.13
35	BAR-K21-0915	Barnyard millet	BAR 1379	CB-IEC-347		25.13
36	BAR-K21-0916	Barnyard millet	BAR 1381	CB-IEC-396		25.13
37	BAR-K21-0835	Barnyard millet	BAR 1261	CB-EF-138		25.10
38	BAR-K21-0535	Barnyard millet	BAR 770		IC0606995	25.07
39	BAR-K21-0628	Barnyard millet	BAR 966		IC0426581	25.07
40	BAR-K21-0413	Barnyard millet	DHBM 93-3	Check 5		25.03
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Wider panicle (>5.00 cm)
1	BAR-K21-0318	Barnyard millet	BAR 451		IC0472499	6.87
2	BAR-K21-0930	Barnyard millet	BAR 1396	CB-IEC-629		6.73
3	BAR-K21-0430	Barnyard millet	BAR 604		IC0404485	6.50
4	BAR-K21-0159	Barnyard millet	BAR 273		IC0472776	6.47
5	BAR-K21-0759	Barnyard millet	BAR 1173		IC0612224	6.30
6	BAR-K21-0156	Barnyard millet	BAR 269		IC0472735	6.23
7	BAR-K21-0306	Barnyard millet	BAR 443		IC0473007	6.17
8	BAR-K21-0781	Barnyard millet	BAR 1202	CB-EF-43		6.07
9	BAR-K21-0786	Barnyard millet	BAR 1207	CB-EF-51		5.97
10	BAR-K21-0114	Barnyard millet	BAR 219		IC0601269	5.80
11	BAR-K21-0517	Barnyard millet	DHBM 93-3	Check 5		5.67
12	BAR-K21-0425	Barnyard millet	BAR 599		IC0404480	5.57
13	BAR-K21-0205	Barnyard millet	DHBM 93-3	Check 5		5.43
14	BAR-K21-0758	Barnyard millet	BAR 1171		IC0612220	5.43
15	BAR-K21-0506	Barnyard millet	BAR 698		IC0280691	5.40
16	BAR-K21-0940	Barnyard millet	BAR 1402	CB-Co-1		5.40
17	BAR-K21-0423	Barnyard millet	BAR 597		IC0404478	5.35
18	BAR-K21-0158	Barnyard millet	BAR 272		IC0472774	5.33
19	BAR-K21-0232	Barnyard millet	BAR 363		IC0472963	5.33
20	BAR-K21-0228	Barnyard millet	BAR 358		IC0472940	5.30
21	BAR-K21-0405	Barnyard millet	BAR 582		IC0404463	5.30
22	BAR-K21-0787	Barnyard millet	BAR 1210	CB-EF-55		5.30
23	BAR-K21-0123	Barnyard millet	BAR 230		IC0472945	5.27
24	BAR-K21-0414	Barnyard millet	VL 207	Check 6		5.27
25	BAR-K21-0941	Barnyard millet	BAR 1403	CB-Co-2		5.27
26	BAR-K21-0235	Barnyard millet	BAR 366		IC0472981	5.23
27	BAR-K21-0245	Barnyard millet	BAR 376		IC0472716	5.23
28	BAR-K21-0471	Barnyard millet	BAR 657		IC0404538	5.23
29	BAR-K21-0779	Barnyard millet	BAR 1200	CB-EF-41		5.23
30	BAR-K21-0701	Barnyard millet	BAR 1080		IC0589361	5.13
31	BAR-K21-0387	Barnyard millet	BAR 564		IC0404444	5.13

SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Number of basal tillers (>10.00)
32	BAR-K21-0842	Barnyard millet	BAR 1270	CB-TNAU-9		5.10
33	BAR-K21-0412	Barnyard millet	BAR 590		IC0404471	5.05
34	BAR-K21-0590	Barnyard millet	BAR 852		IC0425735	5.03
35	BAR-K21-0829	Barnyard millet	DHBM 93-3	Check 5		5.03
36	BAR-K21-0292	Barnyard millet	BAR 427		IC0472822	5.03
37	BAR-K21-0431	Barnyard millet	BAR 605		IC0404486	5.00
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Longer lowest receme
1	BAR-K21-0381	Barnyard millet	BAR 554		IC0404434	9.30
2	BAR-K21-0420	Barnyard millet	BAR 594		IC0404475	6.33
3	BAR-K21-0044	Barnyard millet	BAR 78		IC0404549	5.97
4	BAR-K21-0071	Barnyard millet	BAR 163		IC0404407	5.97
5	BAR-K21-0334	Barnyard millet	BAR 476		IC0472902	5.83
6	BAR-K21-0418	Barnyard millet	BAR 592		IC0404473	5.77
7	BAR-K21-0837	Barnyard millet	BAR 1264	CB-TNAU-2		5.60
8	BAR-K21-0412	Barnyard millet	BAR 590		IC0404471	5.57
9	BAR-K21-0407	Barnyard millet	BAR 584		IC0404465	5.30
10	BAR-K21-0123	Barnyard millet	BAR 230		IC0472945	5.27
11	BAR-K21-0800	Barnyard millet	BAR 1225	CB-EF-81		5.20
12	BAR-K21-0490	Barnyard millet	BAR 678		IC0281454	5.20
13	BAR-K21-0346	Barnyard millet	BAR 491		IC0473089	5.17
14	BAR-K21-0318	Barnyard millet	BAR 451		IC0472499	5.00
15	BAR-K21-0136	Barnyard millet	BAR 245		IC0052686	4.93
16	BAR-K21-0023	Barnyard millet	BAR 35		IC0404530	4.90
17	BAR-K21-0493	Barnyard millet	BAR 681		IC0281471	4.90
18	BAR-K21-0423	Barnyard millet	BAR 597		IC0404478	4.83
19	BAR-K21-0559	Barnyard millet	BAR 803		IC0313564	4.77
20	BAR-K21-0755	Barnyard millet	BAR 1168		IC0610519	4.70
21	BAR-K21-0297	Barnyard millet	BAR 433		IC0472879	4.67
22	BAR-K21-0130	Barnyard millet	BAR 239		IC0473133	4.60
23	BAR-K21-0763	Barnyard millet	BAR 1179	CB-EF-9		4.57
24	BAR-K21-0911	Barnyard millet	BAR 1374	CB-K-932		4.57
25	BAR-K21-0940	Barnyard millet	BAR 1402	CB-Co-1		4.57
26	BAR-K21-0843	Barnyard millet	BAR 1272	CB-TNAU-11		4.53
27	BAR-K21-0814	Barnyard millet	BAR 1241	CB-EF-105		4.50
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Taller plant (>200.00 cm)
1	BAR-K21-0024	Barnyard millet	BAR 36		IC0404531	252.33
2	BAR-K21-0039	Barnyard millet	BAR 60		IC0404303	225.00
3	BAR-K21-0124	Barnyard millet	BAR 232		IC0473031	231.67
4	BAR-K21-0125	Barnyard millet	BAR 234		IC0473051	261.67
5	BAR-K21-0220	Barnyard millet	BAR 349		IC0472818	249.67
6	BAR-K21-0224	Barnyard millet	BAR 354		IC0472898	225.00
7	BAR-K21-0225	Barnyard millet	BAR 355		IC0472899	240.00
8	BAR-K21-0449	Barnyard millet	BAR 627		IC0404508	249.00
9	BAR-K21-0450	Barnyard millet	BAR 628		IC0404509	210.00
10	BAR-K21-0483	Barnyard millet	BAR 670		IC0404551	215.00
11	BAR-K21-0493	Barnyard millet	BAR 681		IC0281471	291.67
12	BAR-K21-0499	Barnyard millet	BAR 691		IC0280648	244.33
13	BAR-K21-0500	Barnyard millet	BAR 692		IC0280652	243.33
14	BAR-K21-0501	Barnyard millet	BAR 693		IC0280656	255.00
15	BAR-K21-0502	Barnyard millet	BAR 694		IC0280662	241.00
16	BAR-K21-0503	Barnyard millet	BAR 695		IC0280665	236.67
17	BAR-K21-0547	Barnyard millet	BAR 791		IC0372751	252.33
18	BAR-K21-0548	Barnyard millet	BAR 792		IC0372754	248.33
19	BAR-K21-0554	Barnyard millet	BAR 798		IC0372777	238.33
20	BAR-K21-0555	Barnyard millet	BAR 799		IC0372781	230.00
21	BAR-K21-0556	Barnyard millet	BAR 800		IC0372788	237.33
22	BAR-K21-0557	Barnyard millet	BAR 801		IC0372797	270.00
23	BAR-K21-0558	Barnyard millet	BAR 802		IC0372815	246.67
24	BAR-K21-0559	Barnyard millet	BAR 803		IC0313564	246.67
25	BAR-K21-0567	Barnyard millet	BAR 819		IC0334008	241.67
26	BAR-K21-0568	Barnyard millet	BAR 820		IC0334012	245.00
27	BAR-K21-0569	Barnyard millet	BAR 822		IC0334027	241.67
28	BAR-K21-0572	Barnyard millet	BAR 826		IC0334039	236.67
29	BAR-K21-0574	Barnyard millet	BAR 829		IC0334092	268.33
30	BAR-K21-0591	Barnyard millet	BAR 854		IC0259304	243.33

SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Number of basal tillers (>10.00)
31	BAR-K21-0594	Barnyard millet	BAR 859		IC0259309	228.33
32	BAR-K21-0689	Barnyard millet	BAR 1057		IC0406615	250.00
33	BAR-K21-0701	Barnyard millet	BAR 1080		IC0589361	242.33
34	BAR-K21-0703	Barnyard millet	BAR 1083		IC0589364	250.00
35	BAR-K21-0713	Barnyard millet	BAR 1095		IC0589376	247.33
36	BAR-K21-0936	Barnyard millet	PRJ 1	Check 8		240.00
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Shorter plant (<80.00 cm)
1	BAR-K21-0468	Barnyard millet	BAR 654		IC0404535	60.00
2	BAR-K21-0729	Barnyard millet	BAR 1112		IC0589393	60.00
3	BAR-K21-0469	Barnyard millet	BAR 655		IC0404536	61.67
4	BAR-K21-0475	Barnyard millet	BAR 661		IC0404542	63.33
5	BAR-K21-0474	Barnyard millet	BAR 660		IC0404541	65.00
6	BAR-K21-0624	Barnyard millet	PRJ 1	Check 8		67.00
7	BAR-K21-0138	Barnyard millet	BAR 248		IC0052691	68.33
8	BAR-K21-0223	Barnyard millet	BAR 353		IC0472896	70.00
9	BAR-K21-0472	Barnyard millet	BAR 658		IC0404539	70.00
10	BAR-K21-0151	Barnyard millet	BAR 264		IC0472448	71.33
11	BAR-K21-0214	Barnyard millet	BAR 338		IC0473103	71.67
12	BAR-K21-0229	Barnyard millet	BAR 359		IC0472942	73.33
13	BAR-K21-0388	Barnyard millet	BAR 565		IC0404445	73.67
14	BAR-K21-0471	Barnyard millet	BAR 657		IC0404538	75.00
15	BAR-K21-0473	Barnyard millet	BAR 659		IC0404540	75.00
16	BAR-K21-0710	Barnyard millet	BAR 1092		IC0589373	75.00
17	BAR-K21-0105	Barnyard millet	BAR 208		IC0473112	77.50
18	BAR-K21-0570	Barnyard millet	BAR 823		IC0334031	78.00
19	BAR-K21-0634	Barnyard millet	BAR 983		IC0028425	78.33
20	BAR-K21-0416	Barnyard millet	PRJ 1	Check 8		80.00
21	BAR-K21-0482	Barnyard millet	BAR 669		IC0404550	80.00
22	BAR-K21-0518	Barnyard millet	VL 207	Check 6		80.00
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Early maturing (<80.00 days)
1	BAR-K21-0024	Barnyard millet	BAR 36		IC0404531	75.00
2	BAR-K21-0039	Barnyard millet	BAR 60		IC0404303	75.00
3	BAR-K21-0124	Barnyard millet	BAR 232		IC0473031	75.00
4	BAR-K21-0125	Barnyard millet	BAR 234		IC0473051	75.00
5	BAR-K21-0220	Barnyard millet	BAR 349		IC0472818	75.00
6	BAR-K21-0224	Barnyard millet	BAR 354		IC0472898	75.00
7	BAR-K21-0225	Barnyard millet	BAR 355		IC0472899	75.00
8	BAR-K21-0449	Barnyard millet	BAR 627		IC0404508	75.00
9	BAR-K21-0450	Barnyard millet	BAR 628		IC0404509	75.00
10	BAR-K21-0483	Barnyard millet	BAR 670		IC0404551	75.00
11	BAR-K21-0493	Barnyard millet	BAR 681		IC0281471	75.00
12	BAR-K21-0499	Barnyard millet	BAR 691		IC0280648	75.00
13	BAR-K21-0500	Barnyard millet	BAR 692		IC0280652	75.00
14	BAR-K21-0501	Barnyard millet	BAR 693		IC0280656	75.00
15	BAR-K21-0502	Barnyard millet	BAR 694		IC0280662	75.00
16	BAR-K21-0503	Barnyard millet	BAR 695		IC0280665	75.00
17	BAR-K21-0547	Barnyard millet	BAR 791		IC0372751	75.00
18	BAR-K21-0548	Barnyard millet	BAR 792		IC0372754	75.00
19	BAR-K21-0554	Barnyard millet	BAR 798		IC0372777	75.00
20	BAR-K21-0555	Barnyard millet	BAR 799		IC0372781	75.00
21	BAR-K21-0556	Barnyard millet	BAR 800		IC0372788	75.00
22	BAR-K21-0557	Barnyard millet	BAR 801		IC0372797	75.00
23	BAR-K21-0558	Barnyard millet	BAR 802		IC0372815	75.00
24	BAR-K21-0559	Barnyard millet	BAR 803		IC0313564	75.00
25	BAR-K21-0567	Barnyard millet	BAR 819		IC0334008	75.00
26	BAR-K21-0568	Barnyard millet	BAR 820		IC0334012	75.00
27	BAR-K21-0569	Barnyard millet	BAR 822		IC0334027	75.00
28	BAR-K21-0572	Barnyard millet	BAR 826		IC0334039	75.00
29	BAR-K21-0574	Barnyard millet	BAR 829		IC0334092	75.00
30	BAR-K21-0591	Barnyard millet	BAR 854		IC0259304	75.00
31	BAR-K21-0594	Barnyard millet	BAR 859		IC0259309	75.00
32	BAR-K21-0689	Barnyard millet	BAR 1057		IC0406615	75.00
33	BAR-K21-0701	Barnyard millet	BAR 1080		IC0589361	75.00
34	BAR-K21-0703	Barnyard millet	BAR 1083		IC0589364	75.00
35	BAR-K21-0713	Barnyard millet	BAR 1095		IC0589376	75.00



SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Number of basal tillers (>10.00)
36	BAR-K21-0936	Barnyard millet	PRJ 1	Check 8		75.00
37	BAR-K21-0122	Barnyard millet	BAR 229		IC0472927	77.00
38	BAR-K21-0695	Barnyard millet	BAR 1074		IC0589355	78.00
39	BAR-K21-0712	Barnyard millet	BAR 1094		IC0589375	80.00
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Higher grain yield (>25.00g/plant)
1	BAR-K21-0002	Barnyard millet	BAR 2	Kudiraivali - 2		39.79
2	BAR-K21-0004	Barnyard millet	BAR 4	PB 7		26.58
3	BAR-K21-0150	Barnyard millet	BAR 263		NC 59228	29.66
4	BAR-K21-0195	Barnyard millet	BAR 317		IC0472797	25.64
5	BAR-K21-0234	Barnyard millet	BAR 365		IC0472970	27.20
6	BAR-K21-0297	Barnyard millet	BAR 433		IC0472879	30.39
7	BAR-K21-0304	Barnyard millet	BAR 440		IC0472975	30.26
8	BAR-K21-0337	Barnyard millet	BAR 479		IC0472936	30.17
9	BAR-K21-0391	Barnyard millet	BAR 568		IC0404448	37.01
10	BAR-K21-0405	Barnyard millet	BAR 582		IC0404463	29.72
11	BAR-K21-0425	Barnyard millet	BAR 599		IC0404480	26.74
12	BAR-K21-0428	Barnyard millet	BAR 602		IC0404483	33.66
13	BAR-K21-0430	Barnyard millet	BAR 604		IC0404485	30.74
14	BAR-K21-0433	Barnyard millet	BAR 607		IC0404488	25.81
15	BAR-K21-0531	Barnyard millet	BAR 766		IC0469889	32.76
16	BAR-K21-0617	Barnyard millet	BAR 955		IC0570771	25.20
17	BAR-K21-0621	Barnyard millet	DHBM 93-3	Check 5		34.45
18	BAR-K21-0651	Barnyard millet	BAR 1001		IC0097046	28.13
19	BAR-K21-0709	Barnyard millet	BAR 1090		IC0589371	25.00
20	BAR-K21-0766	Barnyard millet	BAR 1186	CB-EF-28		25.32
21	BAR-K21-0769	Barnyard millet	BAR 1189	CB-EF-30		35.68
22	BAR-K21-0770	Barnyard millet	BAR 1190	CB-EF-32		25.25
23	BAR-K21-0783	Barnyard millet	BAR 1204	CB-EF-47		30.79
24	BAR-K21-0785	Barnyard millet	BAR 1206	CB-EF-49		30.73
25	BAR-K21-0796	Barnyard millet	BAR 1221	CB-EF-71/1		33.04
26	BAR-K21-0809	Barnyard millet	BAR 1235	CB-EF-97		27.01
27	BAR-K21-0815	Barnyard millet	BAR 1242	CB-EF-106		29.09
28	BAR-K21-0822	Barnyard millet	BAR 1251	CB-EF-124		26.57
29	BAR-K21-0841	Barnyard millet	BAR 1269	CB-TNAU-7		27.68
30	BAR-K21-0844	Barnyard millet	BAR 1273	CB-TNAU-12		28.54
31	BAR-K21-0845	Barnyard millet	BAR 1274	CB-TNAU-13		26.64
32	BAR-K21-0853	Barnyard millet	BAR 1283	CB-TNAU-23		32.61
33	BAR-K21-0887	Barnyard millet	BAR 1344	CB-TNAU-131(Select)		29.96
34	BAR-K21-0903	Barnyard millet	BAR 1366	CB-RAU-1		34.89
35	BAR-K21-0906	Barnyard millet	BAR 1369	CB-L-2		25.39
36	BAR-K21-0907	Barnyard millet	BAR 1370	CB-ECG-22		28.69
37	BAR-K21-0919	Barnyard millet	BAR 1384	CB-IEC-536		34.99
38	BAR-K21-0921	Barnyard millet	BAR 1387	CB-IEC-550		43.35
39	BAR-K21-0923	Barnyard millet	BAR 1389	CB-IEC-554		33.30
40	BAR-K21-0932	Barnyard millet	BAR 1398	CB-KE-125		25.56
41	BAR-K21-0940	Barnyard millet	BAR 1402	CB-Co-1		25.28
SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	1000 Seed weight
1	BAR-K21-0229	Barnyard millet	BAR 359		IC0472942	4.77
2	BAR-K21-0727	Barnyard millet	VL 172	Check 7		4.20
3	BAR-K21-0590	Barnyard millet	BAR 852		IC0425735	4.13
4	BAR-K21-0076	Barnyard millet	BAR 169		IC0404415	3.97
5	BAR-K21-0622	Barnyard millet	VL 207	Check 6		3.90
6	BAR-K21-0457	Barnyard millet	BAR 641		IC0404522	3.90
7	BAR-K21-0423	Barnyard millet	BAR 597		IC0404478	3.87
8	BAR-K21-0822	Barnyard millet	BAR 1251	CB-EF-124		3.73
9	BAR-K21-0101	Barnyard millet	DHBM 93-3	Check 5		3.70
10	BAR-K21-0621	Barnyard millet	DHBM 93-3	Check 5		3.70
11	BAR-K21-0425	Barnyard millet	BAR 599		IC0404480	3.67
12	BAR-K21-0809	Barnyard millet	BAR 1235	CB-EF-97		3.67
13	BAR-K21-0394	Barnyard millet	BAR 571		IC0404451	3.63
14	BAR-K21-0685	Barnyard millet	BAR 1052		IC0396693	3.63
15	BAR-K21-0417	Barnyard millet	BAR 591		IC0404472	3.60
16	BAR-K21-0814	Barnyard millet	BAR 1241	CB-EF-105		3.60
17	BAR-K21-0058	Barnyard millet	BAR 131		IC0404370	3.57
18	BAR-K21-0410	Barnyard millet	BAR 588		IC0404469	3.53

SN	UID	Crop Name	MGB No	Other ID	IC n EC Number	Number of basal tillers (>10.00)
19	BAR-K21-0763	Barnyard millet	BAR 1179	CB-EF-9		3.53
20	BAR-K21-0932	Barnyard millet	BAR 1398	CB-KE-125		3.53
21	BAR-K21-0140	Barnyard millet	BAR 250		IC0052695	3.50
22	BAR-K21-0388	Barnyard millet	BAR 565		IC0404445	3.50
23	BAR-K21-0930	Barnyard millet	BAR 1396	CB-IEC-629		3.50
24	BAR-K21-0292	Barnyard millet	BAR 427		IC0472822	3.50
25	BAR-K21-0540	Barnyard millet	BAR 779		IC0355796	3.50

Table 10: Multi-trait specific Barnyard millet germplasm identified under Institute Project (IIMR/CI/2021-2026/150) during Kharif 2021 from 553 acc. characterized

SN	UID	Crop Name	MGB No	IC n EC No/ Other ID	Multi-trait
1	BAR-K21-0024	Barnyard millet	BAR 36	IC0404531	Number of basal tillers (>10.00), Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
2	BAR-K21-0039	Barnyard millet	BAR 60	IC0404303	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
3	BAR-K21-0114	Barnyard millet	BAR 219	IC0601269	Number of basal tillers (>10.00), Longer panicle (>25.00 cm) and Wider panicle (>5.00 cm)
4	BAR-K21-0124	Barnyard millet	BAR 232	IC0473031	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
5	BAR-K21-0125	Barnyard millet	BAR 234	IC0473051	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
6	BAR-K21-0225	Barnyard millet	BAR 355	IC0472899	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
7	BAR-K21-0306	Barnyard millet	BAR 443	IC0473007	Longer flag leaf blade (>35.00 cm), Longer panicle (>25.00 cm) and Wider panicle (>5.00 cm)
8	BAR-K21-0318	Barnyard millet	BAR 451	IC0472499	Longer flag leaf blade (>35.00 cm) and Longer peduncle (>18.00 cm), Longer panicle (>25.00 cm), Wider panicle (>5.00 cm) and Longer lowest raceme (>4.50 cm)
9	BAR-K21-0405	Barnyard millet	BAR 582	IC0404463	Longer flag leaf blade (>35.00 cm), Wider panicle (>5.00 cm) and Higher grain yield (>25.00g/plant)
10	BAR-K21-0412	Barnyard millet	BAR 590	IC0404471	Wider flag leaf blade (>3.50 cm), Longer panicle (>25.00 cm), Wider panicle (>5.00 cm) and Longer lowest raceme (>4.50 cm)
11	BAR-K21-0423	Barnyard millet	BAR 597	IC0404478	Longer flag leaf blade (>35.00 cm), Wider panicle (>5.00 cm), Longer lowest raceme (>4.50 cm) and 1000 Seed weight (>3.50 g)
12	BAR-K21-0425	Barnyard millet	BAR 599	IC0404480	Wider panicle (>5.00 cm), Higher grain yield (>25.00g/plant) and 1000 Seed weight (>3.50 g)
13	BAR-K21-0430	Barnyard millet	BAR 604	IC0404485	Longer peduncle (>18.00 cm), Wider panicle (>5.00 cm) and Higher grain yield (>25.00g/plant)
14	BAR-K21-0449	Barnyard millet	BAR 627	IC0404508	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
15	BAR-K21-0450	Barnyard millet	BAR 628	IC0404509	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
16	BAR-K21-0483	Barnyard millet	BAR 670	IC0404551	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
17	BAR-K21-0493	Barnyard millet	BAR 681	IC0281471	Early flowering (<50.00 days), Longer panicle (>25.00 cm), Longer lowest raceme (>4.50 cm), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
18	BAR-K21-0499	Barnyard millet	BAR 691	IC0280648	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
19	BAR-K21-0500	Barnyard millet	BAR 692	IC0280652	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
20	BAR-K21-0501	Barnyard millet	BAR 693	IC0280656	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
21	BAR-K21-0502	Barnyard millet	BAR 694	IC0280662	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
22	BAR-K21-0503	Barnyard millet	BAR 695	IC0280665	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
23	BAR-K21-0547	Barnyard millet	BAR 791	IC0372751	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
24	BAR-K21-0548	Barnyard millet	BAR 792	IC0372754	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
25	BAR-K21-0554	Barnyard millet	BAR 798	IC0372777	Early flowering (<50.00 days), Taller plant (>200.00 cm), Early maturing (<80.00 days)
26	BAR-K21-0555	Barnyard millet	BAR 799	IC0372781	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
27	BAR-K21-0557	Barnyard millet	BAR 801	IC0372797	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)

SN	UID	Crop Name	MGB No	IC n EC No/ Other ID	Multi-trait
					(<80.00 days)
28	BAR-K21-0559	Bamyard millet	BAR 803	IC0313564	Early flowering (<50.00 days), Longer lowest raceme (>4.50 cm), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
29	BAR-K21-0567	Bamyard millet	BAR 819	IC0334008	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
30	BAR-K21-0568	Bamyard millet	BAR 820	IC0334012	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
31	BAR-K21-0569	Bamyard millet	BAR 822	IC0334027	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
32	BAR-K21-0572	Bamyard millet	BAR 826	IC0334039	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
33	BAR-K21-0574	Bamyard millet	BAR 829	IC0334092	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
34	BAR-K21-0590	Bamyard millet	BAR 852	IC0425735	Longer panicle (>25.00 cm), Wider panicle (>5.00 cm) and 1000 Seed weight (>3.50 g)
35	BAR-K21-0594	Bamyard millet	BAR 859	IC0259309	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
36	BAR-K21-0651	Bamyard millet	BAR 1001	IC0097046	Wider flag leaf blade (>3.50 cm), Longer peduncle (>18.00 cm) and Higher grain yield (>25.00g/plant)
37	BAR-K21-0689	Bamyard millet	BAR 1057	IC0406615	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
38	BAR-K21-0701	Bamyard millet	BAR 1080	IC0589361	Early flowering (<50.00 days), Wider panicle (>5.00 cm), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
39	BAR-K21-0703	Bamyard millet	BAR 1083	IC0589364	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
40	BAR-K21-0713	Bamyard millet	BAR 1095	IC0589376	Early flowering (<50.00 days), Taller plant (>200.00 cm) and Early maturing (<80.00 days)
41	BAR-K21-0758	Bamyard millet	BAR 1171	IC0612220	Early flowering (<50.00 days), Longer panicle (>25.00 cm) and Wider panicle (>5.00 cm)
42	BAR-K21-0770	Bamyard millet	BAR 1190	CB-EF-32	Longer flag leaf blade (>35.00 cm), Longer panicle (>25.00 cm) and Higher grain yield (>25.00g/plant)
43	BAR-K21-0809	Bamyard millet	BAR 1235	CB-EF-97	Longer peduncle (>18.00 cm), Longer panicle (>25.00 cm), Higher grain yield (>25.00g/plant) and 1000 Seed weight (>3.50 g)
44	BAR-K21-0822	Bamyard millet	BAR 1251	CB-EF-124	Wider flag leaf blade (>3.50 cm), Higher grain yield (>25.00g/plant) and 1000 Seed weight (>3.50 g)
45	BAR-K21-0842	Bamyard millet	BAR 1270	CB-TNAU-9	Longer flag leaf blade (>35.00 cm), Longer peduncle (>18.00 cm), Longer panicle (>25.00 cm) and Wider panicle (>5.00 cm)
46	BAR-K21-0853	Bamyard millet	BAR 1283	CB-TNAU-23	Wider flag leaf blade (>3.50 cm), Longer peduncle (>18.00 cm) and Higher grain yield (>25.00g/plant)
47	BAR-K21-0930	Bamyard millet	BAR 1396	CB-IEC-629	Longer panicle (>25.00 cm), Wider panicle (>5.00 cm) and 1000 Seed weight (>3.50 g)
48	BAR-K21-0940	Bamyard millet	BAR 1402	CB-Co-1	Wider panicle (>5.00 cm) and Longer lowest raceme (>4.50 cm) and Higher grain yield (>25.00g/plant)
49	BAR-K21-0941	Bamyard millet	BAR 1403	CB-Co-2	Longer flag leaf blade (>35.00 cm), Wider flag leaf blade (>3.50 cm), Longer panicle (>25.00 cm) and Wider panicle (>5.00 cm)

4. Multi-location evaluation of millets genetic resources during Kharif 2021

4.1: Screening of finger millet germplasm for leaf, neck and finger blast resistance under CRP-AB

Name of the Project: CRP-AB-Small millets

Season/Year: Kharif-2021

Name of the trial: Screening of finger millet germplasm for leaf, neck and finger blast resistance

No. of acc.: 2500 + 2 resistant checks (GE 4449 and KMR 204) + 2 susceptible check (KMR 301 and Uduru Mallige)

Plot size: 3m x 2R x 0.30m (0.61 ha)

Design: Augmented Block Design (ABD) (1 replication), All the 4 checks will be repeated on every 50 accessions

Name of the trait: Days to 50% flowering, Number of fingers, Number of productive tillers, Plant height (cm), Grain yield (Kg/ha), Fodder yield (Kg/ha), Days to maturity, Leaf blast, Neck blast and Finger blast

Locations: Vizianagaram, Mandya and Almora

Team of Scientists:

Drs TSSK Patro and N Anuradha (Vizianagaram); Drs CA Deepak and HR Raveendra (Mandya); Drs DC Joshi and Jeevan B (Almora), Drs M Elangovan and K Venkatesh (Hyderabad)

Multi-locational screening of Finger millet germplasm for leaf, stem and neck blast under CRP-AB on Small millets was conducted during Kharif 2021. A total of 2500 acc. of finger millet germplasm under CRP-AB were screened at Mandya, Vijayanagaram and Almora for all the three blast, days to 50% flowering, number of fingers, number of productive tillers, plant height, grain yield (kg/ha) and fodder yield (kg/ha) along with two resistant checks (GE 4449 and KMR 204) and Two susceptible checks (KMR 301 and Uduu Mallige) in Augmented Block Design (ABD). Data for 1375 accessions with complete data were used for analysis. The leaf, stem and neck blast resistant finger millet germplasm is presented in Table 11. Four accessions viz., IC0476211, IC0473761, IC0473797, IC0473851 were resistant to leaf blast with less than ≤ 3.0 score at all three locations (Vizhianagaram, Mandya and Almora). The neck blast screening of accessions revealed that, 35 acc., were resistant (≤ 10 score) at all 3 locations. With respect to Finger blast a set of 71 acc.were showing resistant rection (≤ 10 score) at all three locations. The two accessions, IC0473761 and IC0473797 were showing resistance to both leaf blast and finger blast while, the accession, IC0476530 was resistant against both neck and finger blast.

Table 11: List of leaf, stem and neck blast resistant finger millet germplasm identified across thee locations during Kharif 2021

S.No	Acc. SN	MGB ID	IC/EC Nos	Leaf blast		
				VIJA	MAND	ALMO
1	463	FIN 3395	IC0476211	1.0	2.0	3.0
2	1451	FIN 4891	IC0473761	3.0	2.0	3.0
3	2464	FIN 6053	IC0473797	3.0	2.0	3.0
4	2479	FIN 6074	IC0473851	2.0	3.0	3.0
S.No	Acc. SN	MGB ID	IC/EC Nos	Neck blast		
				VIJA	MAND	ALMO
1	709	FIN 3702	IC0476530	0.0	5.0	3.0
2	1334	FIN 4687	IC0479028	0.0	4.9	3.1
S.No	Acc. SN	MGB ID	IC/EC Nos	Finger blast		
				VIJA	MAND	ALMO
1	17	FIN 2869	IC0476340	5.0	3.4	2.6
2	39	FIN 2906	IC0476501	0.0	4.9	2.2
3	57	FIN 2924	IC0476583	5.0	3.1	3.1
4	101	FIN 2978	IC0476896	0.0	4.9	4.4
5	148	FIN 3032	IC0476004	5.0	3.9	3.7
6	167	FIN 3048	IC0476126	0.0	4.5	4.7
7	171	FIN 3053	IC0476153	5.0	1.0	3.8
8	188	FIN 3076	IC0476286	0.0	4.4	3.8
9	199	FIN 3090	IC0476345	0.0	3.7	3.7
10	265	FIN 3170	IC0476710	5.0	2.5	2.7
11	342	FIN 3263	IC0476294	0.0	4.5	3.8
12	423	FIN 3358	IC0476018	0.0	2.2	2.0
13	458	FIN 3390	IC0476195	0.0	3.6	2.4
14	703	FIN 3694	IC0476278	5.0	4.0	0.5
15	709	FIN 3702	IC0476530	0.0	1.8	2.2
16	818	FIN 3846	IC0475226	0.0	3.3	3.6
17	961	FIN 4050	IC0475791	0.0	3.9	4.8
18	982	FIN 4089	IC0475022	0.0	2.7	2.9
19	1166	FIN 4390	IC0475753	0.0	3.7	3.7
20	1345	FIN 4705	IC0049956	0.0	2.8	3.6
21	1346	FIN 4706	IC0049963	0.0	4.5	3.9
22	1425	FIN 4854	IC0473703	0.0	2.5	3.0
23	1426	FIN 4855	IC0473705	0.0	4.8	4.8
24	1428	FIN 4857	IC0473708	0.0	0.9	3.9
25	1429	FIN 4858	IC0473709	0.0	2.3	2.8
26	1430	FIN 4859	IC0473710	0.0	1.6	3.7

27	1436	FIN 4867	IC0473718	0.0	4.8	3.8
28	1437	FIN 4868	IC0473719	0.0	4.6	3.9
29	1439	FIN 4872	IC0473723	0.0	4.1	3.5
30	1440	FIN 4876	IC0473728	0.0	3.0	3.9
31	1441	FIN 4877	IC0473729	0.0	3.1	4.4
32	1442	FIN 4878	IC0473730	0.0	1.7	3.5
33	1443	FIN 4880	IC0473733	0.0	2.7	2.7
34	1445	FIN 4882	IC0473735	0.0	4.1	3.9
35	1446	FIN 4883	IC0473740	0.0	2.1	3.0
36	1448	FIN 4887	IC0473754	0.0	2.2	4.1
37	1451	FIN 4891	IC0473761	0.0	4.2	3.7
38	1461	FIN 4898	IC0473775	0.0	1.4	3.9
39	1462	FIN 4899	IC0473780	0.0	3.8	4.5
40	1466	FIN 4904	IC0473803	0.0	1.4	3.9
41	1468	FIN 4906	IC0473806	0.0	4.5	3.5
42	1472	FIN 4910	IC0473810	0.0	2.8	3.0
43	1474	FIN 4912	IC0473816	0.0	1.1	4.1
44	1475	FIN 4913	IC0473817	0.0	2.9	3.9
45	1477	FIN 4915	IC0473823	0.0	2.6	3.7
46	1478	FIN 4917	IC0473826	0.0	3.3	2.7
47	1479	FIN 4920	IC0473832	0.0	1.0	3.7
48	1481	FIN 4922	IC0473836	0.0	1.6	4.5
49	1483	FIN 4924	IC0473838	0.0	3.2	3.7
50	1484	FIN 4927	IC0473841	0.0	1.0	4.5
51	1486	FIN 4929	IC0473845	0.0	2.0	4.1
52	1487	FIN 4930	IC0473847	0.0	2.8	3.8
53	1495	FIN 4938	IC0473864	0.0	3.7	3.7
54	1500	FIN 4944	IC0473872	0.0	2.2	3.9
55	1502	FIN 4946	IC0473878	0.0	4.9	3.7
56	1507	FIN 4952	IC0473884	0.0	1.4	4.1
57	1516	FIN 4958	IC0473890	0.0	3.3	3.8
58	1517	FIN 4960	IC0473892	0.0	4.9	3.9
59	1527	FIN 4971	IC0473923	0.0	4.2	4.5
60	1531	FIN 4975	IC0473927	0.0	4.6	4.4
61	1533	FIN 4977	IC0473929	0.0	4.3	3.9
62	1534	FIN 4978	IC0473930	0.0	4.7	4.4
63	1535	FIN 4979	IC0473931	0.0	4.2	3.5
64	1541	FIN 4985	IC0473937	0.0	3.2	4.1
65	1543	FIN 4990	IC0473943	0.0	3.0	2.8
66	1544	FIN 4991	IC0473944	0.0	3.2	3.7
67	1545	FIN 4992	IC0473945	0.0	3.5	3.7

68	1546	FIN 4993	IC0473946	0.0	4.8	3.9
69	1547	FIN 4996	IC0473952	0.0	3.9	3.0
70	1549	FIN 4999	IC0473967	0.0	2.8	4.1
71	1551	FIN 5004	IC0474017	0.0	2.2	2.8
72	1552	FIN 5005	IC0474023	0.0	4.2	3.7
73	1557	FIN 5020	IC0474056	0.0	4.0	4.1
74	1562	FIN 5029	IC0474067	0.0	1.8	4.1
75	1578	FIN 5044	IC0474083	0.0	3.2	4.5
76	1579	FIN 5045	IC0474084	0.0	3.3	4.5
77	1581	FIN 5049	IC0474089	0.0	3.2	3.7
78	1582	FIN 5050	IC0474090	0.0	1.9	4.5
79	1584	FIN 5052	IC0474092	0.0	4.9	4.1
80	1586	FIN 5054	IC0474094	0.0	4.5	3.9
81	1587	FIN 5055	IC0474095	0.0	2.3	4.4
82	1588	FIN 5056	IC0474096	0.0	4.1	3.5
83	1589	FIN 5057	IC0474097	0.0	3.1	3.9
84	1590	FIN 5058	IC0474098	0.0	4.2	4.4
85	1591	FIN 5059	IC0474099	0.0	1.9	3.5
86	1593	FIN 5061	IC0474101	0.0	0.5	3.7
87	1595	FIN 5063	IC0474103	0.0	4.4	3.0
88	1597	FIN 5065	IC0474105	0.0	4.3	4.1
89	1598	FIN 5066	IC0474106	0.0	2.4	3.9
90	1600	FIN 5068	IC0474108	0.0	2.6	3.7
91	1603	FIN 5071	IC0474111	0.0	4.1	3.0
92	1604	FIN 5073	IC0474113	0.0	2.8	4.8
93	1605	FIN 5074	IC0474114	0.0	4.8	3.2
94	1608	FIN 5077	IC0474117	0.0	4.9	3.1
95	1610	FIN 5079	IC0474119	0.0	0.0	3.9
96	1611	FIN 5080	IC0474120	0.0	0.0	4.5
97	1612	FIN 5081	IC0474121	0.0	1.8	4.5
98	1613	FIN 5082	IC0474122	0.0	1.2	4.1
99	1614	FIN 5083	IC0474123	0.0	1.7	3.8
100	1615	FIN 5084	IC0474124	0.0	1.7	3.9
101	1616	FIN 5085	IC0474125	0.0	2.8	2.8
102	1621	FIN 5086	IC0474126	0.0	2.4	4.5
103	1622	FIN 5087	IC0474127	0.0	2.6	4.1
104	1624	FIN 5089	IC0474129	0.0	1.2	4.5
105	1625	FIN 5090	IC0474130	0.0	2.2	4.5
106	1627	FIN 5092	IC0474132	0.0	0.0	3.8
107	1632	FIN 5097	IC0474137	0.0	4.4	4.4
108	1634	FIN 5099	IC0474139	0.0	3.9	2.7
109	1658	FIN 5124	IC0474164	0.0	4.0	3.6
110	1661	FIN 5127	IC0474167	0.0	5.0	4.5
111	1663	FIN 5129	IC0474169	0.0	5.0	3.6
112	1664	FIN 5131	IC0474171	0.0	2.5	3.9
113	1677	FIN 5143	IC0474188	0.0	0.9	4.1
114	1678	FIN 5144	IC0474189	0.0	1.3	3.9
115	1680	FIN 5146	IC0474191	0.0	0.7	3.7
116	1686	FIN 5154	IC0474199	0.0	2.3	3.7
117	1688	FIN 5157	IC0474202	0.0	1.1	4.5
118	1689	FIN 5158	IC0474203	0.0	1.4	4.1
119	1692	FIN 5162	IC0474208	0.0	0.0	4.4
120	1693	FIN 5163	IC0474209	0.0	1.1	3.5
121	1696	FIN 5167	IC0474218	0.0	0.0	3.5
122	1697	FIN 5168	IC0474219	0.0	0.7	2.7
123	1698	FIN 5169	IC0474222	0.0	0.0	3.7
124	1699	FIN 5170	IC0474223	0.0	0.0	3.9
125	1703	FIN 5175	IC0474234	0.0	0.9	3.9
126	1705	FIN 5177	IC0474237	0.0	1.2	3.7
127	1707	FIN 5179	IC0474239	0.0	0.0	3.9
128	1711	FIN 5183	IC0474259	0.0	4.0	3.9
129	1712	FIN 5184	IC0474260	0.0	3.2	2.8
130	1714	FIN 5186	IC0474263	0.0	1.1	3.6
131	1716	FIN 5188	IC0474275	0.0	0.0	4.5
132	1722	FIN 5196	IC0474291	0.0	3.1	3.7
133	1723	FIN 5197	IC0474293	0.0	2.1	2.7

134	1724	FIN 5198	IC0474294	0.0	1.2	3.7
135	1729	FIN 5199	IC0474296	0.0	1.5	4.5
136	1733	FIN 5203	IC0474300	0.0	4.9	3.9
137	1734	FIN 5204	IC0474301	0.0	1.0	4.4
138	1735	FIN 5205	IC0474302	0.0	1.9	3.5
139	1736	FIN 5206	IC0474314	0.0	1.6	3.9
140	1741	FIN 5212	IC0474323	0.0	2.2	3.9
141	1744	FIN 5215	IC0474326	0.0	1.7	4.1
142	1754	FIN 5227	IC0474346	0.0	1.4	2.8
143	1757	FIN 5231	IC0474365	0.0	1.3	3.9
144	1758	FIN 5232	IC0474366	0.0	0.5	4.5
145	1762	FIN 5237	IC0474378	0.0	0.0	3.6
146	1766	FIN 5241	IC0474387	0.0	1.7	4.1
147	1769	FIN 5244	IC0474398	0.0	0.8	4.4
148	1770	FIN 5246	IC0474400	0.0	0.0	3.5
149	1772	FIN 5253	IC0474425	0.0	1.1	3.7
150	1774	FIN 5257	IC0474440	0.0	1.5	3.0
151	1778	FIN 5264	IC0474450	0.0	0.0	2.8
152	1785	FIN 5268	IC0474460	0.0	4.3	3.7
153	1802	FIN 5285	IC0474484	0.0	0.0	3.9
154	1803	FIN 5286	IC0474485	0.0	0.5	2.8
155	1805	FIN 5288	IC0474487	0.0	4.4	3.7
156	1809	FIN 5292	IC0474497	0.0	2.5	4.1
157	1811	FIN 5294	IC0474499	0.0	3.1	2.8
158	1812	FIN 5295	IC0474500	0.0	3.2	3.7
159	1819	FIN 5305	IC0141286	0.0	4.3	3.9
160	1822	FIN 5308	IC0141289	0.0	4.9	2.7
161	1827	FIN 5313	IC0478585	0.0	1.3	3.7
162	1829	FIN 5315	IC0478813	0.0	0.3	4.5
163	1839	FIN 5323	IC0045849	0.0	2.3	3.7
164	1840	FIN 5324	IC0045851	0.0	1.0	3.9
165	1841	FIN 5325	IC0045852	0.0	3.8	3.0
166	1846	FIN 5330	IC0045867	0.0	3.3	3.7
167	1852	FIN 5336	IC0049935	0.0	4.7	3.9
168	1854	FIN 5338	IC0049937	0.0	3.6	3.7
169	1855	FIN 5339	IC0049939	0.0	3.9	3.6
170	1856	FIN 5340	IC0049940	0.0	4.5	3.9
171	1867	FIN 5351	IC0049966	0.0	4.6	3.0
172	1880	FIN 5365	IC0049996	0.0	4.9	4.5
173	1882	FIN 5367	IC0065595	0.0	2.5	3.8
174	1885	FIN 5371	IC0065946	0.0	4.0	3.5
175	1886	FIN 5373	IC0071377	0.0	1.4	3.9
176	1891	FIN 5374	IC0071379	0.0	4.3	3.9
177	1903	FIN 5389	IC0071401	0.0	3.6	3.9
178	1908	FIN 5394	IC0071406	5.0	1.3	4.5
179	1911	FIN 5397	IC0071410	0.0	0.9	3.8
180	1914	FIN 5400	IC0071419	0.0	2.8	3.7
181	1923	FIN 5413	IC0071338	0.0	1.4	4.1
182	1929	FIN 5420	IC0071365-X	0.0	2.8	4.4
183	1949	FIN 5440	IC0478602	0.0	4.6	4.1
184	1981	FIN 5475	IC0478842	0.0	4.6	4.5
185	2007	FIN 5498	IC0478573	0.0	3.9	4.2
186	2011	FIN 5503	IC0478686	0.0	0.7	3.7
187	2016	FIN 5509	IC0478741	0.0	2.7	4.1
188	2017	FIN 5510	IC0478746	0.0	2.0	3.8
189	2022	FIN 5520	IC0478816	0.0	3.7	3.7
190	2027	FIN 5526	IC0478865	0.0	1.9	4.5
191	2028	FIN 5527	IC0478871	0.0	1.9	4.5
192	2029	FIN 5528	IC0478875	0.0	3.9	4.1
193	2036	FIN 5538	IC0478389	0.0	3.4	3.5
194	2039	FIN 5542	IC0478537	0.0	4.7	3.9
195	2040	FIN 5543	IC0478563	0.0	4.2	3.0
196	2041	FIN 5544	IC0478587	0.0	3.8	4.8
197	2044	FIN 5548	IC0478632	0.0	2.1	2.8
198	2045	FIN 5549	IC0478650	0.0	2.6	3.7
199	2046	FIN 5550	IC0478715	0.0	1.7	3.7

200	2047	FIN 5552	IC0478726	0.0	2.4	3.9
201	2048	FIN 5553	IC0478729	0.0	1.6	3.0
202	2054	FIN 5555	IC0478742	0.0	1.5	4.5
203	2055	FIN 5558	IC0478753	0.0	2.1	4.1
204	2058	FIN 5562	IC0478809	0.0	5.0	4.5
205	2063	FIN 5571	IC0478888	0.0	4.3	3.5
206	2064	FIN 5572	IC0478896	0.0	3.7	3.9
207	2067	FIN 5577	IC0478373	0.0	3.2	2.7
208	2070	FIN 5581	IC0478468	0.0	2.4	3.0
209	2073	FIN 5585	IC0478518	0.0	2.2	3.9
210	2074	FIN 5586	IC0478520	0.0	2.9	2.8
211	2083	FIN 5595	IC0478652	0.0	4.3	3.7
212	2088	FIN 5605	IC0478751	0.0	1.9	4.1
213	2089	FIN 5606	IC0478765	0.0	2.1	3.8
214	2091	FIN 5610	IC0478821	0.0	5.0	2.8
215	2092	FIN 5611	IC0478826	0.0	4.9	3.7
216	2099	FIN 5620	IC0478883	0.0	1.4	4.5
217	2108	FIN 5626	IC0478308	0.0	4.9	3.5
218	2110	FIN 5628	IC0478367	0.0	2.1	3.7
219	2112	FIN 5630	IC0478403	0.0	2.5	3.0
220	2146	FIN 5666	IC0478857	0.0	3.4	3.5
221	2152	FIN 5674	IC0478047	0.0	4.5	4.1
222	2155	FIN 5681	IC0478233	0.0	3.8	3.7
223	2169	FIN 5695	IC0478572	0.0	4.3	3.9
224	2170	FIN 5697	IC0478604	0.0	4.1	4.4
225	2181	FIN 5709	IC0478847	0.0	3.4	3.7
226	2199	FIN 5736	IC0096844	0.0	1.9	3.7
227	2200	FIN 5738	IC0096876	0.0	1.1	4.5
228	2208	FIN 5755	IC0473491	0.0	3.9	3.9
229	2216	FIN 5759	IC0473592	0.0	4.5	3.9
230	2220	FIN 5765	IC0473659	0.0	3.0	3.9
231	2221	FIN 5766	IC0473666	0.0	4.3	2.8
232	2224	FIN 5769	IC0473683	0.0	4.4	3.9
233	2225	FIN 5770	IC0473701	0.0	3.1	3.0
234	2227	FIN 5774	IC0473768	0.0	4.9	4.1
235	2230	FIN 5777	IC0473814	0.0	2.6	3.7
236	2231	FIN 5779	IC0474002	0.0	1.8	3.6
237	2254	FIN 5809	IC0045844	0.0	1.9	3.7
238	2255	FIN 5810	IC0045845	0.0	2.6	2.7
239	2258	FIN 5813	IC0045854	0.0	1.3	4.5
240	2260	FIN 5815	IC0045858	0.0	4.9	3.7
241	2271	FIN 5822	IC0049947	0.0	3.7	2.7
242	2347	FIN 5913	IC0473444	0.0	2.1	3.7
243	2398	FIN 5966	IC0473536	0.0	4.1	4.1
244	2399	FIN 5967	IC0473537	0.0	3.5	3.8
245	2400	FIN 5969	IC0473539	0.0	1.8	3.9
246	2413	FIN 5994	IC0473571	0.0	1.5	2.8
247	2416	FIN 5997	IC0473583	0.0	2.3	3.9
248	2417	FIN 5999	IC0473594	0.0	2.8	3.0
249	2421	FIN 6003	IC0473604	0.0	2.1	2.8
250	2424	FIN 6006	IC0473619	0.0	1.3	4.1
251	2425	FIN 6007	IC0473634	0.0	1.3	3.9
252	2426	FIN 6008	IC0473642	0.0	1.7	2.8
253	2444	FIN 6025	IC0473739	0.0	2.3	3.5
254	2447	FIN 6032	IC0473764	0.0	0.2	3.9
255	2451	FIN 6038	IC0473778	5.0	2.1	3.9
256	2453	FIN 6040	IC0473781	0.0	1.2	3.7
257	2460	FIN 6048	IC0473791	0.0	2.3	4.5
258	2461	FIN 6049	IC0473792	0.0	4.4	4.5
259	2462	FIN 6050	IC0473793	0.0	2.2	4.1

260	2463	FIN 6051	IC0473795	0.0	0.8	3.8
261	2464	FIN 6053	IC0473797	0.0	1.3	3.9
262	2467	FIN 6058	IC0473813	0.0	1.0	3.9
263	2468	FIN 6059	IC0473818	0.0	1.6	4.4
264	2469	FIN 6060	IC0473819	0.0	2.6	3.5
265	2476	FIN 6071	IC0474215	0.0	4.7	3.9
266	2485	FIN 6076	IC0473854	0.0	2.8	2.8
267	2488	FIN 6080	IC0473859	0.0	3.5	3.9
268	2494	FIN 6087	IC0473876	0.0	3.4	2.8
269	2499	FIN 6117	IC0473962	0.0	3.0	4.5
270	2500	FIN 6118	IC0473963	0.0	1.7	4.1
271	2501	FIN 6120	IC0473965	0.0	2.1	3.7
272	2502	FIN 6121	IC0473966	0.0	1.0	4.5
273	2511	FIN 6138	IC0473984	0.0	1.6	3.5
274	2516	FIN 6150	IC0474003	0.0	1.9	4.8
275	2518	FIN 6153	IC0474006	0.0	2.0	3.9
276	2523	FIN 6159	IC0474012	0.0	0.0	3.0
277	2525	FIN 6163	IC0474018	0.0	1.7	4.5
278	2534	FIN 6173	IC0474031	0.0	2.3	3.9
279	2548	FIN 6192	IC0474225	0.0	1.2	4.5
280	2549	FIN 6194	IC0474228	0.0	0.4	4.1
281	2551	FIN 6197	IC0474233	0.0	1.5	3.9
282	2552	FIN 6198	IC0474243	0.0	1.6	4.4
283	2556	FIN 6205	IC0474250	0.0	1.4	3.5
284	2558	FIN 6208	IC0474254	0.0	4.5	3.7
285	2560	FIN 6210	IC0474256	0.0	4.4	3.0
286	2567	FIN 6226	IC0474284	5.0	4.6	3.9
287	2570	FIN 6230	IC0474292	0.0	3.9	4.1
288	2571	FIN 6231	IC0474295	0.0	4.5	3.9
289	2578	FIN 6239	IC0474310	5.0	1.6	4.1
290	2579	FIN 6240	IC0474311	0.0	3.6	3.8
291	2584	FIN 6246	IC0474330	0.0	1.9	3.7
292	2585	FIN 6247	IC0474331	0.0	2.8	4.5
293	2588	FIN 6250	IC0474343	0.0	1.9	3.7
294	2595	FIN 6254	IC0474350	5.0	3.3	3.5
295	2596	FIN 6255	IC0474351	0.0	1.0	3.9
296	2608	FIN 6268	IC0474369	0.0	2.2	3.7
297	2611	FIN 6272	IC0474376	0.0	1.3	2.7
298	2626	FIN 6288	IC0474407	5.0	0.9	2.8
299	2633	FIN 6296	IC0474418	0.0	4.1	3.8
300	2635	FIN 6298	IC0474420	0.0	1.7	2.8
301	2641	FIN 6310	IC0474435	0.0	4.9	4.1
302	2642	FIN 6311	IC0474436	0.0	3.5	3.7
303	2649	FIN 6314	IC0474444	0.0	0.9	3.5
304	2650	FIN 6315	IC0474454	0.0	4.9	3.9
305	2651	FIN 6316	IC0474455	0.0	2.0	4.4
306	2653	FIN 6320	IC0474472	0.0	3.7	2.7
307	2662	FIN 6329	IC0474493	0.0	2.1	3.7
308	2663	FIN 6330	IC0474495	0.0	4.6	3.9
309	2670	FIN 6337	IC0474512	0.0	3.1	3.9
310	2676	FIN 6345	IC0050011	0.0	2.4	3.0
311	2679	FIN 6348	IC0069598	0.0	1.0	3.9
312	2685	FIN 6356	IC0065699	0.0	4.7	4.5
313	2690	FIN 6361	IC0066048	0.0	3.6	4.1
314	2691	FIN 6362	IC0071395	0.0	3.5	3.8
315	2694	FIN 6366	IC0071418	0.0	3.9	3.5

These 2500 acc. of finger were also evaluated for agro-morphological traits viz., days to 50% flowering, finger number, number of productive tillers, plant height, grain yield and fodder yield. Complete data from 1379 acc. are used for analysis. The top 50 accessions identified from these 1375 acc. of finger millet is presented in Tables 12, 13, and 14. The data of all 1375 accessions for different agro-morphological traits along with screening data on leaf

blast, neck blast and finger blast is given in Annexure tables 15, 16, and 17. The classification of accessions into different groups was carried out according to the DUS descriptors by PPV&FRA. Among the 1375 entries, 876 accessions were very late flowering (> 70 days), 433 were medium flowering (55-69 days) and none were early (< 55 days). Among the 433 medium flowering accessions, 73 were finger blast resistant and only one (IC0476530) was neck blast resistant.

When the finger length was compared, none of the accessions were falling under very long (>12 cm) category and one accession was long (10.1 – 12 cm) and also resistant (score of < 5.0) to finger blast at all three tested locations. A total of 228 accessions were of short (4 – 6 cm) finger length, in which 34 accessions were resistant (score of < 5.0) to finger blast. Comparison of accessions for number of productive tillers, seven accessions (IC0475143, IC0474127, IC0474128, IC0474133, IC0474359, IC0049995 and IC0474142) were having high (> 6 tillers) number of productive tillers and among them the accession IC0474127 was also resistant to finger blast (score of < 5.0). A large number of accessions (656) were having low (1-3 tillers) number of productive tillers and 126 of them were resistant to finger blast and one accession (IC0476530) was resistant to both neck and finger blast.

There were four accessions (IC0476710, IC0474346, IC0474032 and IC0473553) which were of very tall plant height (>160 cm) and the first two in the list were also finger blast resistant. Seventeen accessions were falling under tall plant height (120.1 to 159.9 cm) and another five accessions (IC0007218, IC0478716, IC0474308, IC0474358 and IC0474360) were of short plant height (40- 80 cm).

In the top 50 accessions, the grain yield was ranged between 2781 and 3306 kg/ha. In which, 11 acc. were also shown finger blast resistant across three locations viz. IC0049996, IC0473444, IC0473583, IC0473818, IC0473876, IC0474067, IC0474188, IC0474191, IC0476153, IC0478821 and IC0478865. In the top 50 accessions, the fodder yield was ranged between 6565 and 9487 kg/ha. In which, 1 acc. were also shown neck blast resistant across three locations viz., IC0476530 and 8 acc. were also shown finger blast resistant across three locations viz., viz., IC0473666, IC0473683, IC0474132, IC0474188, IC0474191, IC0474497, IC0476530 and IC0478883

Table 12: Top 50 entries for early flowering and more number of fingers identified from 2500 acc. of finger millet

Acc. No	Days to 50% flowering								Acc. No	Finger Number							
	ALMO	Rank	MAND	Rank	VZ	Rank	India	Rank		ALMO	Rank	MAND	Rank	VZ	Rank	India	Rank
IC0045859	75	999	58	47	55	111	63	33	IC0045867	6	1208	4	1329	8	387	11	1
IC0045864	77	1246	58	62	53	18	63	34	IC0049936	7	106	11	4	7	874	8	15
IC0096783	76	1123	58	54	55	98	63	42	IC0071355	6	575	11	6	8	549	8	16
IC0096817	64	49	58	8	65	335	62	25	IC0071381	6	514	10	25	8	533	8	47
IC0473422	71	740	62	144	55	106	63	35	IC0071382	7	284	10	12	7	938	8	48
IC0473440	69	482	63	190	55	142	62	26	IC0071398	6	976	9	37	9	279	8	49
IC0473441	66	244	58	19	53	42	59	1	IC0071399	6	502	9	56	10	89	8	23
IC0473446	72	831	58	40	55	84	62	19	IC0087539	6	1210	15	2	6	1246	9	11
IC0473482	67	317	58	23	55	80	60	4	IC0096785	7	338	8	138	10	41	8	24
IC0473483	71	760	58	33	55	78	61	14	IC0473483	7	306	7	302	10	40	8	40
IC0473485	66	242	58	18	58	162	61	9	IC0473493	7	287	11	5	10	62	9	4
IC0473489	68	387	58	26	55	94	60	7	IC0473494	7	458	10	15	8	462	8	25
IC0473490	65	148	58	12	55	108	59	3	IC0473709	7	54	7	254	10	103	8	34
IC0473596	65	138	68	542	53	25	62	22	IC0473717	6	812	9	45	9	303	8	37
IC0473598	67	307	68	569	53	43	63	36	IC0473764	7	108	8	72	10	56	8	17
IC0473921-X	64	59	66	332	54	61	61	15	IC0473787	6	631	8	81	12	13	9	9
IC0474082	69	466	66	359	50	3	62	20	IC0473817	6	980	7	521	13	4	9	14
IC0474084	73	865	66	394	50	7	63	43	IC0474031	7	25	16	1	5	1349	9	5
IC0474153	68	390	66	350	55	75	63	44	IC0474034	6	1067	11	3	8	341	8	18
IC0474254	64	64	68	534	55	102	62	27	IC0474063	5	1310	10	19	9	284	8	38
IC0474255	66	239	58	16	60	253	61	16	IC0474107	7	147	8	202	10	71	8	29
IC0474257	68	398	68	581	53	36	63	45	IC0474120	6	734	10	9	8	616	8	26
IC0474307	64	54	68	533	55	91	62	28	IC0474162	7	160	7	362	11	35	8	21
IC0474507	65	156	59	68	53	46	59	2	IC0474168	6	553	7	559	11	25	8	50
IC0474776	64	66	61	91	55	82	60	5	IC0474288	7	68	7	286	12	10	9	12
IC0475120	68	386	66	349	55	114	63	46	IC0474331	6	522	6	724	12	8	8	30
IC0475352	69	476	61	97	58	175	63	37	IC0474386	7	234	8	125	12	11	9	8

Acc. No	Days to 50% flowering								Acc. No	Finger Number							
	ALMO	Rank	MAND	Rank	VIZ	Rank	India	Rank		ALMO	Rank	MAND	Rank	VIZ	Rank	India	Rank
IC0475410	72	825	59	73	57	153	63	38	IC0474436	7	348	8	151	10	75	8	31
IC0475614	65	134	61	92	58	193	61	17	IC0474497	7	324	9	59	10	88	8	19
IC0475802	65	151	67	442	53	20	62	21	IC0474503	6	1048	6	699	13	5	8	22
IC0476003	64	45	67	434	55	104	62	23	IC0474518	6	779	11	7	7	722	8	39
IC0476095	65	142	67	440	57	151	63	47	IC0475187	6	781	7	478	17	2	10	2
IC0476098	67	308	62	130	58	197	62	29	IC0475226	6	1109	8	74	11	33	8	20
IC0476245	67	315	67	456	55	88	63	48	IC0476031	7	488	6	825	12	15	8	46
IC0476710	69	470	62	139	55	83	62	24	IC0476153	8	2	8	179	9	322	8	33
IC0477199	74	913	60	81	55	72	63	49	IC0476286	8	4	6	922	16	3	10	3
IC0478047	65	155	64	254	58	185	62	30	IC0476323	7	12	8	143	10	107	8	28
IC0478110	65	141	63	173	55	134	61	11	IC0476376	5	1379	10	11	9	182	8	32
IC0478367	64	48	62	121	55	141	60	8	IC0478389	7	216	11	8	9	149	9	10
IC0478552	68	391	68	580	53	54	63	50	IC0478409	7	48	8	78	9	125	8	35
IC0478604	65	145	63	174	60	237	63	39	IC0478469	6	508	8	123	10	52	8	36
IC0478638	72	830	58	39	53	29	61	12	IC0478585	7	398	9	28	8	546	8	41
IC0478673	71	730	63	208	53	55	62	31	IC0478618	7	139	7	320	10	74	8	42
IC0478750	69	461	66	358	53	56	63	40	IC0478683	6	1142	9	33	9	134	8	43
IC0478801	71	724	63	207	53	58	62	32	IC0478760	7	266	10	16	11	24	9	6
IC0478807	66	233	63	177	53	47	61	10	IC0478765	7	267	8	114	11	19	9	13
IC0478844	70	579	63	198	55	144	63	41	IC0478789	7	333	6	610	11	21	8	44
IC0478856	71	744	58	32	55	116	61	18	IC0479072	6	1056	7	331	11	34	8	45
IC0478871	64	61	61	90	55	123	60	6	IC0479124	7	472	8	83	10	91	8	27
IC0478896	68	393	58	27	57	157	61	13	IC0479179	6	809	8	156	13	6	9	7
GE4449	71	604	64	313	58	207	64	96	GE4449	6	823	6	757	7	973	6	955
KMR204	70	602	64	314	80	893	71	668	KMR204	6	821	6	589	8	326	7	456
KMR301	72	765	77	1149	95	1205	81	1239	KMR301	6	822	7	232	8	325	7	218
Uduru Mallige	70	601	68	735	56	148	65	133	Uduru Mallige	6	501	6	758	8	646	7	615
Mean	71		70		75		72		Mean	6.3		6.35		7.4		6.7	
CD 5%	0.24		0.35		0.79		0.31		CD 5%	0.02		0.07		0.08		0.04	
CD 1%	0.31		0.46		1.03		0.41		CD 1%	0.03		0.09		0.11		0.05	
CV %	6.33		9.43		19.74		8.15		CV %	7.8		20.2		21.4		10.6	

Table 13: Top 50 entries with more number of tillers and taller plant height identified from 2500 acc. of finger millet

Acc. No	No. of Productive tillers								Acc. No	Plant Height							
	ALMO	Rank	MAND	Rank	VIZ	Rank	India	Rank		ALMO	Rank	MAND	Rank	VIZ	Rank	India	Rank
IC0043275	2	353	3	1065	11.5	11	6	17	IC0049942	146	4	100	511	108	636	118	32
IC0043276	2	105	5	416	10.5	41	6	13	IC0049974	110	528	109	169	128	78	116	50
IC0045845	2	147	4	984	7.5	252	6	20	IC0066088-X1	92	1264	304	1	60	1376	152	6
IC0049949	2	72	5	204	9.5	50	6	22	IC0066172	119	187	108	203	133	29	120	24
IC0049976	1	1169	5	128	10.5	32	6	15	IC0354385	139	15	103	397	119	251	120	21
IC0049983	2	107	5	281	9.5	59	5	36	IC0473446	146	2	97	624	108	625	117	38
IC0049988	3	3	6	69	8	145	6	19	IC0473553	115	318	260	4	109	572	161	4
IC0049995	3	11	5	307	11.5	8	6	5	IC0473699	123	92	114	77	129	55	122	11
IC0050015	1	1035	4	965	11.5	14	5	46	IC0473702	96	1205	125	9	139	16	120	23
IC0065694-X	2	551	7	24	7.5	222	5	37	IC0473703	103	980	116	53	138	23	119	26
IC0065946	1	874	4	794	12.5	2	6	12	IC0473710	107	747	100	502	141	11	116	45
IC0065956	2	573	5	279	9.5	64	5	38	IC0473730	139	14	100	508	189	3	143	8
IC0066172	2	471	6	41	7.5	181	5	50	IC0473733	107	774	104	369	180	4	130	9
IC0066178-X1	1	764	5	298	10.5	26	5	35	IC0473866	118	228	108	213	123	117	116	44
IC0096781	2	327	3	1109	11.5	10	6	21	IC0473925	119	201	107	231	121	178	116	48
IC0096844	1	926	5	143	10	44	5	30	IC0473936	123	89	94	777	139	18	119	27
IC0473668	1	1306	4	934	11.5	13	5	45	IC0473946	129	41	122	19	113	419	121	13
IC0473696	1	829	4	695	11	21	5	49	IC0473954	129	39	118	41	117	306	121	14
IC0473756	1	1203	4	499	11	20	5	31	IC0473967	124	76	123	15	106	697	117	36
IC0473863	2	383	3	1183	11.5	9	6	23	IC0473985	124	77	114	75	117	309	118	30
IC0473919	3	20	4	547	9	80	5	33	IC0474032	111	459	97	625	439	1	216	1
IC0473923	3	21	5	371	8.5	105	5	42	IC0474067	113	368	125	10	112	428	117	41
IC0473967	2	173	6	88	9	87	6	24	IC0474075	146	3	105	278	112	431	121	17
IC0473975	2	465	3	1084	11	17	5	32	IC0474092	137	24	107	220	120	224	121	15

Acc. No	No. of Productive tillers								Acc. No	Plant Height							
	ALMO	Rank	MAND	Rank	VIZ	Rank	India	Rank		ALMO	Rank	MAND	Rank	VIZ	Rank	India	Rank
IC0474026	2	312	3	1327	12	5	6	25	IC0474093	121	121	118	39	118	261	119	25
IC0474062	1	1086	7	9	9	82	6	9	IC0474097	121	123	110	146	129	53	120	22
IC0474098	1	1082	6	59	9.5	55	6	27	IC0474116	109	586	108	187	138	19	118	29
IC0474105	2	223	6	44	9	79	6	10	IC0474122	104	907	121	27	122	149	116	47
IC0474126	1	1345	7	11	8.5	126	6	16	IC0474261	118	226	104	334	126	93	116	46
IC0474127	1	1018	8	5	10.5	37	7	4	IC0474292	103	957	259	5	84	1221	149	7
IC0474128	2	154	9	3	14	1	8	1	IC0474301	119	183	101	450	134	27	118	31
IC0474133	2	450	7	35	9.5	69	6	7	IC0474311	119	182	98	604	132	31	116	43
IC0474137	2	332	6	48	9.5	67	6	8	IC0474340	117	246	103	408	127	82	116	49
IC0474142	2	613	8	6	8.5	104	6	6	IC0474346	117	254	282	2	122	159	174	3
IC0474143	2	435	7	21	7.5	246	6	28	IC0474776	123	100	115	70	123	124	120	19
IC0474245	1	1131	4	646	11	24	5	40	IC0474927	108	648	118	38	130	48	119	28
IC0474359	2	574	13	1	8.5	133	8	2	IC0475170	108	667	103	389	153	5	121	16
IC0474371	2	144	4	1021	10.5	27	5	43	IC0475361	132	33	118	44	116	331	122	12
IC0474429	2	226	3	1039	11	16	5	29	IC0475846	102	1057	101	481	146	8	116	42
IC0474450	1	809	7	36	9	81	6	26	IC0475980	119	204	110	141	124	110	118	35
IC0474509	2	368	3	1050	12	3	6	11	IC0476022	122	115	114	82	115	356	117	39
IC0475143	2	357	11	2	6.5	351	7	3	IC0476302	107	735	93	824	152	6	117	37
IC0475164	2	568	4	531	10.5	30	6	18	IC0476345	146	1	93	818	114	370	118	34
IC0475264	2	140	5	355	9.5	54	5	41	IC0476360	139	12	107	230	115	358	120	20
IC0478715	1	843	4	1019	11.5	7	5	44	IC0476530	129	44	121	25	113	409	121	18
IC0478789	2	183	4	798	10.5	25	5	34	IC0476710	117	252	99	537	340	2	185	2
IC0478800	2	655	3	1347	11.5	12	5	48	IC0478319	137	22	91	924	123	130	117	40
IC0478846	2	677	3	1195	11	15	5	39	IC0478656	84	1358	277	3	103	783	155	5
IC0478895	1	982	5	266	11	22	6	14	IC0478853	125	58	107	229	140	14	124	10
IC0478903	2	427	4	967	10.5	38	5	47	IC0588016	125	67	115	62	113	406	118	33
GE4449	2	714	4	441	3.1	1197	3	1042	GE4449	106	839	90	976	85	1207	94	1222
KMR204	2	715	4	654	4.4	874	3	848	KMR204	106	785	95	739	98	914	100	866
KMR301	1	718	4	892	4.6	703	3	896	KMR301	108	708	109	182	107	670	108	320
Uduru Mallige	2	716	4	655	3.1	1198	3	1158	Uduru Mallige	108	707	94	794	97	958	99	901
Mean	1.53		4.14		5.2		3.6		Mean	108		96		104		103	
CD 5%	0.03		0.05		0.11		0		CD 5%	0.57		0.85		1.02		0.5	
CD 1%	0.04		0.07		0.15		0.1		CD 1%	0.75		1.12		1.35		0.6	
CV %	34.9		25.08		40.6		21.7		CV %	10.08		16.79		18.61		8.8	

Table 14: Top 50 entries with more grain yield and fodder yield identified from 2500 acc. of finger millet

Acc. No	Grain Yield (kg/ha)								Acc. No	Fodder Yield (kg/ha)							
	ALMO	Rank	MAND	Rank	VIZ	Rank	India	Rank		ALMO	Rank	MAND	Rank	VIZ	Rank	India	Rank
IC0045855	613	659	2833	185	5239	37	2895	21	IC0071331-X1	630.3	562	12944	57	7441	20	7005	32
IC0045868	934.3	70	3833	29	3621	641	2796	44	IC0096775	720.2	299	17333	5	4768	1099	7607	12
IC0049996	798	162	3611	47	4835	107	3081	8	IC0096815	739.6	272	14222	27	4803	1087	6588	48
IC0050000	564.4	875	3278	87	4500	173	2781	50	IC0200123	545	847	15278	18	6023	610	7282	18
IC0473444	428.2	1251	3056	123	5048	60	2844	30	IC0473508	759.1	226	14778	21	6665	299	7401	15
IC0473463	720.2	260	3833	31	4092	345	2882	24	IC0473666	506.1	961	20667	2	4767	1100	8647	5
IC0473465	720.2	259	3222	95	4409	206	2784	49	IC0473682	603.4	690	14556	23	5044	996	6734	42
IC0473498	1148.4	10	2778	212	4578	154	2835	34	IC0473683	6726.6	6	15333	17	6400	412	9487	1
IC0473561	934.3	83	3556	50	4795	110	3095	7	IC0474100	761.4	216	13889	36	6930	188	7193	23
IC0473583	830.4	130	1222	1191	6332	1	2795	45	IC0474102	645.1	513	13611	41	6761	263	7006	31
IC0473784	588.2	776	2667	270	5357	18	2871	27	IC0474132	207.6	1350	13500	45	7037	149	6915	35
IC0473818	968.9	57	2944	156	4568	158	2827	37	IC0474133	311.4	1285	13222	48	6264	486	6599	47
IC0473844	759.1	205	3472	61	4811	108	3014	11	IC0474188	484.4	1047	13944	34	7479	10	7303	17
IC0473876	986.2	55	1889	712	6134	2	3003	14	IC0474190	276.8	1302	14722	22	7490	6	7496	14
IC0473877	798	161	3500	54	4320	230	2873	26	IC0474191	553.6	822	15444	15	6886	211	7628	11
IC0473968	607.9	674	4444	6	3977	410	3010	12	IC0474298	6726.6	8	7667	378	6170	534	6854	36
IC0473975	630.6	574	4444	7	3423	763	2833	36	IC0474371	5979.2	12	7833	365	6571	335	6795	39
IC0474027	467.1	1183	3889	25	5053	59	3136	5	IC0474497	6726.6	4	9611	197	5640	821	7326	16
IC0474063	603.4	689	4778	2	4537	165	3306	1	IC0475007	628.9	571	16889	6	5861	699	7793	9
IC0474067	689.6	358	3944	21	4906	86	3180	3	IC0475038	486.6	1022	20167	3	5783	748	8812	2
IC0474068	672.7	413	3556	51	4545	163	2924	19	IC0475064	721.9	287	13533	43	7275	69	7177	24

Acc. No	Grain Yield (kg/ha)								Acc. No	Fodder Yield (kg/ha)							
	ALMO	Rank	MAND	Rank	VIZ	Rank	India	Rank		ALMO	Rank	MAND	Rank	VIZ	Rank	India	Rank
IC0474110	684	381	3722	35	3970	415	2792	46	IC0475143	545	853	21611	1	4278	1283	8811	3
IC0474187	1051	23	3889	26	4295	246	3078	9	IC0475156	525.5	922	15561	14	5017	1005	7035	30
IC0474188	603.4	726	3611	45	4287	249	2834	35	IC0475310	650.5	485	13894	35	6379	428	6975	33
IC0474191	525.5	1057	2722	236	5460	7	2903	20	IC0475435	655.7	472	12978	54	7499	1	7044	29
IC0474194	1051	31	3833	30	3759	555	2881	25	IC0475444	415.2	1179	13667	40	7233	87	7105	26
IC0474204	1148.4	14	2278	446	5105	52	2844	31	IC0475469	524.6	938	12944	56	6232	503	6567	49
IC0474321	564.4	874	2889	158	5328	20	2927	18	IC0475610	266.9	1308	15811	11	6737	276	7605	13
IC0475064	709.1	316	2722	225	5009	67	2813	39	IC0475985	533.9	897	15333	16	5941	656	7269	19
IC0475164	449.8	1218	3333	69	4780	114	2854	28	IC0476022	600.6	697	18222	4	5875	692	8233	6
IC0475369	617.1	648	2833	177	5477	6	2976	16	IC0476025	6726.6	9	13033	53	6415	401	8725	4
IC0475555	632.2	561	3667	43	4063	364	2787	48	IC0476181	467.1	1083	13978	33	7297	61	7247	21
IC0475789	603.4	740	3167	101	5199	44	2990	15	IC0476213	486.6	1021	13589	42	5788	742	6621	44
IC0475797	467.1	1209	2500	333	5401	13	2789	47	IC0476225	467.1	1081	13167	50	6209	517	6614	45
IC0475834	661.8	463	3667	42	4111	334	2813	40	IC0476324	657.4	466	14056	30	6744	273	7152	25
IC0475839	709.1	319	2722	240	5222	39	2884	22	IC0476350	536.3	870	12611	63	6547	346	6565	50
IC0475880	953.7	60	3000	137	4512	170	2822	38	IC0476364	7687.6	1	7056	464	5086	989	6610	46
IC0476135	1148.4	16	2833	175	5043	61	3008	13	IC0476397	570.9	735	14222	29	5645	419	6813	38
IC0476153	975.5	56	3056	120	4515	169	2849	29	IC0476478	501.7	998	14367	25	6330	463	7066	28
IC0476181	661.8	451	3167	97	4578	155	2802	43	IC0476502	545	848	16589	8	7148	111	8094	8
IC0476310	426.5	1264	2778	209	5448	9	2884	23	IC0476530	369.8	1220	15889	10	4228	1302	6829	37
IC0476316	523.5	1070	4333	12	3566	672	2808	42	IC0476545	798	189	15056	19	5933	661	7262	20
IC0476633	517.6	1074	3611	46	4300	243	2810	41	IC0476626	564.4	742	15778	12	5357	920	7233	22
IC0476648	645.1	529	2944	146	5286	25	2959	17	IC0476648	882.4	121	16778	7	6779	251	8146	7
IC0478507	720.2	264	4611	3	3807	519	3046	10	IC0476651	674.7	423	14222	28	6393	419	7097	27
IC0478821	369.8	1319	3889	28	5030	64	3096	6	IC0476761	674.7	418	15628	13	4500	1197	6934	34
IC0478827	608	666	4222	14	4610	145	3147	4	IC0476788	1012.1	61	14333	26	4944	1030	6763	41
IC0478862	934.3	65	5222	1	3402	780	3186	2	IC0478629	934.3	89	14444	24	4947	1028	6775	40
IC0478865	721.9	255	3500	60	4301	242	2841	32	IC0478883	603.4	649	14778	20	4511	1191	6631	43
IC0479179	882.4	108	3000	136	4636	135	2839	33	IC0588016	709.1	338	15944	9	6716	282	7790	10
GE4449	850.4	120	2261	472	3095	955	2069	660	GE4449	677.9	409	6656	531	5058	993	4131	635
KMR204	683.6	389	2711	246	4564	159	2653	94	KMR204	700.7	347	7042	467	6758	266	4834	351
KMR301	699.2	331	3789	32	3309	835	2599	120	KMR301	848.2	135	9598	202	5895	683	5447	190
UduruMallige	697.3	332	1628	911	3107	947	1811	1027	UduruMallige	820.9	160	5930	656	5307	937	4019	695
Mean	617		2001		3575		2065		Mean	649.5		6196		5780		4209	
CD 5%	8.82		39.81		41.16		20.1		CD 5%	32.42		168.1		51.11		59.7	
CD 1%	11.59		52.35		54.13		26.4		CD 1%	42.63		221.04		67.2		78.5	
CV %	27.14		37.78		21.86		18.4		CV %	94.81		51.53		16.79		26.8	

4.2: Multi-location evaluation of Indigenous finger millet germplasm

Name of the Project: Institute Project (IIMR/CI/2021-2026/150)
Season/Year: Kharif-2021
Name of the trial Multi-location evaluation of Indigenous finger millet germplasm
Name of the discipline Breeding
No. of accession 200 + 4 checks (GPU 48, GPU 67, VL 376 and PR 202)
Plot size 3m x 2R x 0.45m
Design Augmented Block Design (ABD) (1 replication)
Name of the trait Days to 50% flowering, Plant height (cm), Grain yield (kg/ha), Fodder yield (kg/ha), Number of productive tillers, Number of fingers, Ear head length (cm), Plant stand at the time of harvest and Days to maturity
Name of the location Vizianagaram, Waghai, Bengaluru, Mandya, Athiyandal, Hagari and Perumallepally (7)

Multi-locational evaluation of indigenous finger millet germplasm for 9 agro-morphological traits under Institute Project (IIMR/CI/2021-2026/150) was conducted during Kharif 2021. A total of 200 acc. of finger millet germplasm were evaluated at Vizianagaram, Waghai, Bengaluru, Mandya, Athiyandal, Hagari and Perumallepally (7) for days to 50% flowering, plant height (cm), grain yield (kg/ha), fodder yield (kg/ha), number of productive tillers, number of fingers, finger length (cm) and days to maturity along with four checks (GPU 48, GPU 67, VL 376 and PR 202) in

Augmented Block Design (ABD). Data for 74 accessions with complete data were used for analysis. The range of diversity observed in days to 50% flowering (64 – 88 days), plant height (78 – 149 cm), grain yield (1624 – 3105 kg/ha), fodder yield (4105 – 7766 kg/ha), number of productive tillers (2.8 – 4.7), number of fingers (4.9 – 8.1), finger length (5.7 – 9.8 cm) and days to maturity (99 – 122 days). Complete data collected from 74 accessions for eight agro morphological traits is presented in table 18, 19 and 20.

Five accessions viz., ER 37, ER 41, IC0476095, IC0478181 and IC0478935 were identified as early flowering (>68 days). Eight accessions viz., ER 37, ER 41, IC0474816, IC0476095, IC0476587, IC0478181, IC0478543 and IC0478935 were identified as early maturing (105 days). Twelve accessions viz., EN 22, EN 99, IC00622007, IC00622031, IC00622036, IC00622041, IC00622046, IC00622069, IC00622089, IC00622112, IC0624940, IC0627127, SEA 11 and SEA 23 were identified as taller plant (<110 days). Five accessions viz., EN 96, IC0007953, IC0007954, IC0478640 and IC0478746 were identified as higher grain yield (>2800 kg/ha). Four accessions viz., IC0007953, IC00622089, IC0066140 and IC0478746 were identified as higher fodder yield (>7000 kg/ha). Three accessions viz., IC00622053, IC00622063 and SEA 23 were identified as more number of fingers (>7.5). Eleven accessions viz., EN 22, IC0007953, IC00622031, IC00622036, IC0476587, IC0624940, IC0624941, IC0627123, IC0627127, IC0627180 and IC0628944 were identified with more number of tillers (>4.0). Thirteen accessions viz., ER 62, IC00622007, IC00622031, IC00622084, IC00622112, IC0473882, IC0476095, IC0478442, IC0478693, IC0478710, IC0478821, IC0478832 and IC0624940 were identified as longer finger (>8.0).

These 74 accessions were also screened for leaf, neck and finger blast. Six accessions viz., IC00622057, IC00622073, IC047388, IC0475125; IC0478442; and IC0624939 were identified as leaf blast (<3 score) resistant at three locations. Three accessions viz., ER 53, IC00622041 and IC0624941 were identified as finger blast (<2 score) resistant at two locations. Six accessions viz., E 326, ER 53, ER 55, IC00622069, IC0475125 and IC0627127 were identified as neck blast (<10% blasted florets) resistant at three locations. No symptoms of leaf sheath blight were observed at Waghai. None of the accessions were affected with pink borer at Waghai and 63 acc. not affected with aphids. Sixty-nine acc. showed upto 3 score for brown spot resistance at Bengaluru. Twelve accessions showed upto 5% infection for foot rot at Mandya. The pest and disease screening data of 74 accessions is presented in table 32 and 33.

4.3: Multi-location evaluation of multi-whorl finger millet germplasm

Name of the Project:	Institute Project (IIMR/CI/2021-2026/150)
Season/Year:	Kharif-2021
Name of the trial	Multi-location evaluation of multi-whorl finger millet germplasm
Name of the discipline	Breeding
No. of accession	57 + 4 checks (GPU 48, GPU 67, VL 376 and PR 202)
Plot size	3m x 2R x 0.45m
Design	Augmented Block Design (ABD) (1 replication)
Name of the trait	Days to 50% flowering, Plant height (cm), Grain yield (kg/ha), Fodder yield (kg/ha), Number of productive tillers, Number of fingers, Finger length (cm)
Name of the location	Vizianagaram, Waghai, Bengaluru, Mandya and Athiyandal

Multi-locational evaluation multi-whorl finger millet germplasm for 8 agro-morphological traits under Institute Project (IIMR/CI/2021-2026/150) was conducted during Kharif 2021. A total of 57 acc. of finger millet germplasm were evaluated at Vizianagaram, Waghai, Bengaluru, Mandya and Athiyandal for days to 50% flowering, plant height (cm), grain yield (kg/ha), fodder yield (kg/ha), number of productive tillers, number of fingers, ear head length (cm), and days to maturity along with four checks (GPU 48, GPU 67, VL 376 and PR 202) in Augmented Block Design (ABD). Data for 51 accessions with complete data were used for analysis. The range of diversity observed in days to 50% flowering (68 – 82 days), days to maturity (103 – 117 days), plant height (99 – 119 cm), grain yield (1582 – 2419 kg/ha), fodder yield (4397 – 6177 kg/ha). number of productive tillers (3.6 – 4.7), number of fingers (6.5 – 8.0) and finger length (6.2 – 7.6 cm). The detailed data of 51 accessions for eight agro morphological traits is presented in annexure table 21, 22 and 23.

Three accessions viz., IC0308859, IC0473493 and IC0478862 were identified as early flowering (>70 days). Four accessions viz., IC0308859, IC0403728, IC0473493 and IC0478543 were identified as early maturing (>105 days). Four accessions viz., IC0308859, IC0403728, IC0478319 and IC0478862 were identified as short plants (>100 cm). Two accessions viz., IC0283800 and IC0331688 were identified as taller plant (<115 cm). Eleven accessions viz., IC0283758, IC0283853, IC0312325, IC0326825, IC0331680, IC0344972, IC0474052, IC0474306, IC0474345, IC0478640 and IC0478808 (<2100 kg/ha). Six accessions viz., IC0045854, IC0071335, IC0283822, IC0308860, IC0331688 and IC0478640 (<6000 kg/ha). Thirty accessions viz., EC0002194-X, IC0071411-A, IC0262368, IC0283758, IC0283800, IC0283822, IC0308859, IC0308899, IC0312005, IC0321797, IC0326825, IC0331680, IC0331687, IC0331688, IC0344216-X, IC0344951, IC0344972, IC0345088, IC0403326, IC0403412, IC0403728, IC0473644, IC0474052, IC0474306, IC0474345, IC0478571, IC0478640, IC0478766, IC0478862 and IC0519664 were identified with more number of productive tillers (>4). Eight accessions viz., IC0071411, IC0071411-A, IC0312005, IC0403326, IC0473493, IC0478317, IC0478543 and IC0478808 were identified with more number of fingers (>7). Twenty-one accessions viz., IC0045854, IC0071335, IC0071411-A, IC0262368, IC0283758, IC0308859, IC0312005, IC0321797, IC0344216-X, IC0344972, IC0344977, IC0345072, IC0345088, IC0403728, IC0473493, IC0473644, IC0474306, IC0474345, IC0478317, IC0478766 and IC0478862 were identified with longer fingers (>7 cm).

4.4: Multi-location evaluation of Indigenous foxtail millet germplasm

Name of the Project:	Institute Project (IIMR/CI/2021-2026/150)
Season/Year:	Kharif-2021
Name of the trial	Multi-location evaluation of indigenous foxtail millet germplasm
Name of the discipline	Breeding
No. of accession	100 + 4 checks (DHft 109-3, SiA 3156, SiA 326 (C) and Suryanandi)
Plot size	3m x 2R x 0.45m
Design	Augmented Block Design (ABD) (1 replication)
Name of the trait	Days to 50% flowering, Number of productive tillers, Plant height (cm), Grain yield (kg/ha), Fodder yield (kg/ha), Days to maturity, Panicle length (cm), Panicle compactness (Visual score: 3 – Lax, 5 – Medium, 7 - Compact), Lodging (Visual score: 1-30% - Low, 31-60% - Medium, 61-100% - High) and 1000-Seed weight (g)
Name of the location	Vizianagaram, Bengaluru, Mandya, Athiyandal, Hagari, Nandyal and Solapur

Multi-locational evaluation Indigenous foxtail millet germplasm for 8 agro-morphological traits under Institute Project (IIMR/CI/2021-2026/150) was conducted during Kharif 2021. A total of 100 acc. of foxtail millet germplasm were evaluated at Vizianagaram, Bengaluru, Mandya, Athiyandal, Hagari, Nandyal, Sholapur and Dholi for days to 50% flowering, plant height (cm), grain yield (kg/ha), fodder yield (kg/ha), number of tillers, panicle length (cm), and days to maturity along with five checks (DHft 109-3, SiA 3156, SiA 3222, SiA 326 and Suryanandi) in Augmented Block Design (ABD). Data for 73 accessions with complete data were used for analysis. The range of diversity observed in days to 50% flowering (45 - 56 days), days to maturity (75 - 91 days) plant height (96 – 123cm), grain yield (1293 – 3088 kg/ha), fodder yield (3053 - 4825 kg/ha), number of tillers (2.6 – 6.2), panicle length (14.5 – 20.9 cm) and 1000-seed weight (2.1 – 3.2 g). The detailed data of 73 accessions for eight agro morphological traits is presented in annexure table 24, 25 and 26.

Nine accessions viz., IC0403787, IC0403742, IC0413273, IC0480653, IC0403860, IC0120235, IC0403900, IC0547316 and IC0610531 were identified as early maturing (>45 days). Ten accessions viz., IC0403787, IC0404094, IC0479633, IC0403487, IC0413273, IC0403860, IC0403900, IC0403859, IC0022180 and IC0547316 were identified as early maturing (>80 days). Three accession viz., IC0403869, IC0610531 and IC0403950 were identified as short plant (>100 cm). Three accessions viz., IC0479633, IC0479804 and IC0480408 were identified as tall plant (<120 cm). Fifteen accessions viz., IC0404094, IC0480820, IC0022179, IC0404216, IC0283925, IC0345126, IC0479349, IC0403440, IC0283926, IC0479977, IC0479719, IC0345124, IC0479445, IC0479860 and IC0120213 were identified as higher grain yield (<2400kg/ha). Ten accessions viz., IC0480820, IC0479605,

IC0404216, EC0529794, IC0479349, IC0283926, IC0479719, IC0345124, IC0479445 and IC0479860 were identified with higher fodder yield (<4200 kg/ha). Ten accessions viz., IC0480861, IC0479507, IC0345126, IC0480653, IC0479977, IC0480959, IC0479719, IC0479598, IC0479660 and IC0479860 were identified with more productive tillers (<5). 19 accessions viz., IC0403787, IC0404094, IC0480820, IC0403564, IC0480946, IC0479804, IC0403816, IC0403505, IC0413273, IC0403952, IC0120235, IC0479445, IC0480408, IC0479306, IC0479598, IC0479644, IC0610533, IC0403738 and IC0427920 were identified with longer panicle (<18). Eight accessions viz., IC0403787, IC0404094, IC0479647, IC0480820, IC0479633, IC0403564, IC0480946 and IC0022179 were identified with higher 1000-seed weight.

Two accessions, IC0403487, IC0610536 were resistant to brown spot disease at three centres (Athiyandal, Bengaluru and Vijayanagaram). Ten accessions (IC0022180; IC0257888; IC0324333; IC0345124; IC0403956; IC0479605; IC0479644; IC0479647; IC0480408; IC0610450) were resistant to rust at two locations (Athiyandal and Bengaluru). One accession (IC0479445) was resistant to leaf blast at all three tested locations (Athiyandal, Bengaluru and Vijayanagaram). When resistance for multiple diseases were studied together, IC0403487 and IC0610536 were resistant to both brown spot and leaf blast. The pest and disease screening data of 74 accessions has been presented in table 34 and 35.

4.5: Multi-location evaluation of Indigenous little millet germplasm

Name of the Project:	Institute Project (IIMR/CI/2021-2026/150)
Season/Year:	Kharif-2021
Name of the trial	Multi-location evaluation of indigenous little millet germplasm
Name of the discipline	Breeding
No. of accession	196 + 3 checks (BL6, CLMV1 and OLM203)
Plot size	3m x 2R x 0.45m
Design	Augmented Block Design (ABD) (1 replication)
Name of the trait	Days to 50% flowering, Number of productive tillers, Plant height (cm), Grain yield (kg/ha) and Fodder yield (kg/ha)
Name of the location	Vizianagaram, Waghai, Bengaluru, Athiyandal and Dindori (5)

Multi-locational evaluation indigenous little millet germplasm for 9 agro-morphological traits under Institute Project (IIMR/CI/2021-2026/150) was conducted during Kharif 2021. A total of 196 acc. of little millet germplasm were evaluated at Vizianagaram, Waghai, Bengaluru, Athiyandal, Hagari, Kolhapur and Dindori for days to 50% flowering, plant height (cm), number of productive tillers, grain yield (kg/ha) and fodder yield (kg/ha) along with three checks (OLM 203, BL 6 and CLMV 1) in Augmented Block Design (ABD). Data for 36 accessions with complete data were used for analysis. There was a severe germination problem in all the locations due to less quantity of seed. Trials at Kolhapur and Hagari centres failed due to weather vagaries and data from Bengaluru and Dindori centres were not presented due to many missing values. The range of diversity observed in days to 50% flowering (42 - 72 days), plant height (94 - 146 cm), number of productive tillers (4.9 - 9.6), grain yield (1148 - 2436 kg/ha) and fodder yield (3246 - 9459 kg/ha).

Twelve accession viz., EN 05, EN 09, EN 14, EN 42, EN 45, EN 50, ER 47, ER 57, ER 66, EUK 08, EUK 14 and IC0628931 were identified for early flowering (>50 days). Two accessions viz., ER 47 and SEJ 64 were identified for more number of productive tillers (<8). Three accessions viz., EN 45, EUK 08 and EUK 14 were identified with shorter plant (>100 cm). Nine accessions viz., E 264, EN 03, IC0404844, IC0404846, IC0404849, IC0404985, IC0483101, IC0628937 and IC0628941 were identified with taller plant (<130 cm). Six accessions viz., EN 07, EN 27, EN 82, EUK 14, IC0404844 and IC0622048 were identified as higher grain yield (>2000 kg/ha). Five accessions viz., E 264, EN 03, IC0404849, IC0622048 and IC0628937 were identified with higher fodder yield (>8000 kg/ha). The detailed data of 36 accessions for eight agro morphological traits is presented in table 27.

All these 196 accessions were screened for pest and diseases at four hotspot locations. It has been observed that 7 acc. at Waghai and Vijayanagaram for resistance to leaf blight, 127 acc. at Waghai for resistance to banded blight, 195 acc. at Waghai for resistance to grain smut and 55 acc. at Waghai and Athiyandal for resistance to shoot fly.

4.6: Multi-location evaluation of kharif sorghum landraces

Name of the Project:	Institute Project (IIMR/CI/2021-2026/150)
Season/Year:	Kharif-2021
Name of the trial	Multi-location evaluation kharif sorghum landraces
Name of the discipline	Breeding
No. of accession	115 + 2 checks (CSV 17 and CSV 27)
Plot size	3m x 2R x 0.45m
Design	Augmented Block Design (ABD) (1 replication)
Name of the trait	Days to 50% flowering, Ear head length, Plant height (cm), Grain yield (kg/ha) and Fodder yield (kg/ha), 100-seed weight and Days to maturity
Name of the location	Akola, Coimatore, Udaipur, Dharwad and Indore (5)

Multi-locational evaluation kharif sorghum landraces for 7 agro-morphological traits under Institute Project (IIMR/CI/2021-2026/150) was conducted during Kharif 2021. A total of 115 kharif landraces of sorghum were evaluated at Akola, Dharwad, Udaipur, Indore and Coimbatore for days to 50% flowering, ear head length (cm), plant height (cm), grain yield (kg/ha), fodder yield (kg/ha), 100-seed weight, and days to maturity along with two checks (CSV 17 and CSV 27) in Augmented Block Design (ABD). Data for 23 landraces with complete data were used for analysis. The range of diversity observed in days to 50% flowering (62 – 91 days), ear head length (8.8 – 39.1 cm), plant height (132 – 335 cm), grain yield (2215 – 5873 kg/ha), fodder yield (16451 – 56713 kg/ha), 100-seed weight (1.6 – 2.7 g), and days to maturity (99 – 133 days). The detailed data of 23 landraces for 7 agro morphological traits is presented in table 28, 29, 30 and 31.

Six accessions viz., E159, GGUB 54, GGUB 55, IC0409424, IC0409485 and IC0409487 were identified for early flowering (>70 days). Four accessions viz., E 220, EB 2, EUK 28 and GGUB 57 were identified with longer ear head (>25 cm). Five accessions viz., E 1, EB 1, EB 2, EG 10 and EJ 42 were identified with taller plant (>275 cm). Four accessions viz., E 220, EJN 73, EUK 28 and IC0409487 were identified with higher grain yield (>4500 kg/ha). Four accessions viz., E 1, EB 1, EG 24, GGUB 50 and GGUB 57 were identified with higher fodder yield (>50000 kg/ha). Two accessions viz., EB 1 and GGUB 51 were identified with more 100 seed weight (>2.5 g). Three accessions viz., GGUB 54, GGUB 55 and IC0409485 were identified with early maturing (<110 days).

5. Conservation of millets genetic resources at Millets Genebank (MGB), ICAR-IIMR

As on 31st March 2022, a total of 48,462 accessions of millets in bulk are being conserved in the Millets Genebank (MGB). Sorghum was maximum with 27,366 acc. followed by Finger millet (8057), Pearl millet (4765), Foxtail millet (4575) etc. The status of millet genetic resources conservation in the millets genebank at ICAR-IIMR-Hyderabad is presented in Table 36.

Table 36: The list of millets genetic resources conserved at MGB-ICAR-IIMR (as on 31st March 2022)

S.No	Name of the crop	No. of acc.	Augmentation (2021-22)	Total	Wild
1	Sorghum	25624	1742	27366	22
2	Finger millet	7713	344	8057	76
3	Pearl millet	4094	671	4765	5
4	Foxtail millet	4573	2	4575	34
5	Proso millet	1463		1463	
6	Barnyard millet	1159		1159	
7	Little millet	670		670	
8	Kodo millet	333		333	
9	Tef	36		36	

S.No	Name of the crop	No. of acc.	Augmentation (2021-22)	Total	Wild
10	Browntop millet	25		25	
11	Quinoa	12		12	
12	Jobs Tear	1		1	
	Total	45703	2759	48462	

6. Multiplication of millets genetic resources

A total of 1,808 acc. of millets germplasm are multiplied during 2021-22. Which includes, Proso millet (685 acc.), Barnyard (563), Sorghum (344), Finger millet (89) etc., In which, 1524 acc. are germplasm, 150 acc. of elite breeding stocks and 134 acc. of wild relatives. The list of millets germplasm/genetic stocks multiplied during 2021-22 is presented in Table 37

Table 37: The list of millets genetic resources/stocks multiplied during 2021-22

S.No	Name of crop	Germplasm	Elite genetic stocks	Wild relatives	No. of acc.
1	Proso millet	675	10		685
2	Barnyard millet	553	10		563
3	Sorghum	260	50	34	344
4	Finger millet		24	65	89
5	Pearl millet		36	5	41
6	Browntop millet	36			36
7	Foxtail millet			30	30
8	Little millet		17		17
9	Kodo millet		3		3
	Grand Total	1524	150	134	1808

7. Distribution of millets genetic resources

During 2021-2022, a total of 19,466 acc. of millets genetic resources are distributed to the bonafied users in the country. The distribution of genetic resources was done through 145 Material Transfer Agreements (MTAs). This includes 11,458 acc. of finger millet, 3,560 acc. of, sorghum, 2,381 acc. little millet, 1,832 acc. of foxtail millet etc. The crop-wise millets genetic resources distributed to the bonafied users during 2021-2022 are presented in Table 38. The AICRP on Small millets – Vizianagaram received maximum of 3,349 acc. followed by AICRP on Small millets - Mandya (3,063), ICAR-VPKAS, Almora (2,500), AICRP on Small millets – Bengaluru (1,358) etc., The division / centre-wise millets genetic resources distributed during 2021-2022 is presented in Table 39. In the utilization / purpose-wise distribution, screening finger millet germplasm for blast resistance under CRP-AB-SM received maximum of 7,500 acc. followed by Indigenous and high grain yielding little millet germplasm (2,156), Indigenous and high grain yielding finger millet germplasm (1,600) etc., The utilization / purpose-wise distribution of millets germplasm is presented in Table 40. In the category-wise material received, AICRP on Small millet received maximum of 11,380 acc. followed by other ICAR institutes (2,694), AICRP on Sorghum (2,325), ICAR-IIMR (1,145) etc. The category-wise bonafied users received the material is presented in Table 41

Dr TSSK Patro received a maximum of 3,602 acc. for utilization followed by Dr CA Deepak (3,063), Dr Dinesh Chandra Joshi (2,500) etc. Scientist-wise millets genetic resources distributed during 2021-22 is presented in Table 42. The list of millets genetic resources distributed during 2020-2021 is presented in Table 43.

Table 38: The crop-wise list of millets genetic resources distributed during 2021-2022

S.No	Name of the crop	No. of acc.
12	Finger millet	11458
3	Sorghum	3540
4	Little millet	2381
5	Foxtail millet	1832
6	Barnyard millet	108

7	Pearl millet	48
8	Proso millet	41
9	Browntop millet	30
10	Kodo millet	28
	Grand Total	19466

Table 39: The division/centre-wise list of millets genetic resources distributed during 2021-2022

S.No	Name of the Centre / Division	No.of acc.
1	AICRP on Small millets - Vizianagaram	3349
2	AICRP on Small millets - Mandya	3063
3	ICAR-VPKAS, Almora	2500
4	AICRP on Small millets - Bengaluru	1358
5	AICRP on Small millets - Waghai	855
6	AICRP on Small millets - Athiyandal	853
7	PI UPCAR, Millets Project, BUAT, Banda	500
8	AICRP on Small millets - Hageri	496
9	AICRP on Sorghum - Dharwad	416
10	AICRP on Sorghum - Parbhani	410
11	AICRP on Small millets - Kolhapur	396
12	Plant Breeding - ICAR-IIMR-Hyderabad	344
13	Agri Entomology - IIMR - Hyderabad	332
14	ICAR - IIMR - Hyderabad	288
15	AICRP on Sorghum - Akola	238
16	AICRP on Small millets - Vizianagaram	210
17	AICRP on Small millets - Nandyal	204
18	AICRP on Small millets - Perumalleapalle	200
19	Plant Pathology - IIMR - Hyderabad	200
20	AICRP on Small millets - Dindori	196
21	AICRP on Sorghum - Rahuri	176
22	Applied Bptany and Biotechnology, University of Mysore	151
23	AICRP on Sorghum - Palem	150
24	Genetic and Plant Breeding, RLBCAU, Jhansi	150
25	Dept of Genetic and Plant Breeding, Annamalai University	129
26	AICRP on Sorghum - Surat	124
27	AICRP on Sorghum - Hisar	123
28	AICRP on Sorghum - Indore	115
29	AICRP on Sorghum - Udaipur	115
30	AICRP on Sorghum - Coimbatore	115
31	AICRP on Sorghum - Pantnagar	115
32	Crop Improvement Division, ICAR-IGFRI-Jhansi	112
33	Dept of Genetic nad Plant Breeding, ACRI-Virinchipuram	110
34	Dept of Genetic and Plant Breeding, Nagaland University, Medziphema	100
35	Genetic and Plant Breeding, SAST, Shirpur	100
36	Dept of Genetic and Plant Breeding, Punjab Agricultural University-Ludhiana	100
37	Dept of Genetic and Plant Breeding, RSKVV-Indore	100
38	ICAR-IIMR-CRS - Solapur	100
39	AICRP on Small millets - Dholi	100
40	The Director, ICAR-IGFRI-Jhansi	70

S.No	Name of the Centre / Division	No.of acc.
41	Plant Breeding, ICAR-IIMR-Hyderabad	63
42	Dept. of Genetics and Plant Breeding, Agricultural College, ANGRAU, Bapatla	60
43	Dept of Genetics and Plant Breeding, Sam Higginbotham University, Naini	50
44	Dept of Botany, UAS-Bengaluru	41
45	Dept of Botany, Archarya Nagarjuna University, Guntur	40
46	AICRP on Forage Crops - Vellayani	40
47	Dept of Genetic and Plant Breeding, SHUATS, Naini, Prayagraj	40
48	Sahaja Samrudha, Timmapur, Bommanahalli	40
49	Dept of Crop Physiologist, Assam Agricultural University, Jorhat	40
50	Agronomy, ICAR-IIMR-Hyderabad	36
51	School of Agriculture, Food Technology Nutrition, Lovely University, Jalandhar	30
52	AICRP on Sorghum - Vijayapura	26
53	Dept of Botany, Padmabani Arts & Science College for Women, Salem	24
54	Plant Biotechnology, ICAR-IIMR-Hyderabad	23
55	Department of Physiology, TNAU-Coimbatore	20
56	AICRP on Sorghum - Tandur	18
57	Forage, Millets and Nutrition Section, Punjab Agricultural University-Ludhiana	16
58	AICRP on Sorghum - Solapur	16
59	AICRP on Sorghum - Hageri (Volunteer centre)	16
60	AICRP on Sorghum - Nandyal	16
61	AICRP on Sorghum - Chamarajnagar	16
62	Division of Germplasm Conservation, ICAR-NBPGR-New Delhi	12
63	Dept of Genetics and Plant Breeding, College of Agri, Raichur	6
64	Dept. of Botany, University of Calicut	5
65	Dept of Botany, KM Govt Institute for PG Rsearch, Pondicherry	4
66	Dept of Botany, MD University, Rohtak	2
67	Dept of Virology, Venkateshwara University, Tripathi	1
68	Biotechnology - ICAR-IIMR-Hyderabad	1
69	Biotechnology Department, Jaypee Institute of IT, Noida	1
70	Grand Total	19466

Table 40: The utilization / purpose-wise list of millets genetic resources distributed during 2021-2022

S.No	Utilization / Purpose	No.of acc.
1	Finger millet germplasm under CRP-AB-SM	7500
2	Indigenous and high grain yielding little millet germplasm	2156
3	Indigenous and high grain yielding finger millet germplasm	1600
4	Indigenous and high grain yielding finger millet germplasm - screening for biotic stress	824
5	High grain yielding indigenous foxtail millet germplasm	800
6	Kharif sorghum landraces for evaluation of breeding traits	690
7	Indigenous finger millet germplasm	560
8	High grain yielding indigenous foxtail millet germplasm - screening for biotic stress	500
9	Indigenous kharif sorghum germplasm for screening	480

S.No	Utilization / Purpose	No.of acc.
	for pests	
10	Reference set of finger millet germplasm	304
11	Multi-whorled finger millet germplasm	285
12	Kharif sorghum landraces for screening for pests	230
13	Kharif sorghum landraces for screening for diseases	230
14	IS Numbers collected from high altitude	226
15	Forage sorghum germplasm	212
16	More seed weight rabi sorghum landraces	210
17	High yielding and early flowering germplasm	200
18	Indigenous sorghum landraces New	200
19	Indigenous and high grain yielding little millet germplasm screening for biotic stress	196
20	Indigenous foxtail millet germplasm	163
21	Finger millet wild relatives	156

S.No	Utilization / Purpose	No.of acc.
22	Kharif landraces for screening for pests	120
23	Sorghum kharif landraes	100
24	Kharif sorghum landraces for PhD work	100
25	Kharif sorghum germplasm from adjoining districts of Madhya Pradesh	100
26	Kharif sorghum landraces for MSc (Agri) work	96
27	Resistant sources, early, high yielding, high biomass and bold seeds for kharif and rabi	83
28	Foxtail millet wild relatives	73
29	Single and Multi-cut forage indigenous sorghum germplasm	70
30	Indigenous photo insensitive sorghum germplasm (flowers in both kharif and rabi)	60
31	Sahaja material and local landraces	56
32	Finger millet germplasm from Uttar Pradesh	50
33	Photo insensitive sorghum germplasm (early flowering)	50
34	Sorghum wild relatives	49
35	Indigenous Barnyard millet landraces	42
36	Sweet sorghum germplasm	41
37	Finger millet germplasm from Karnataka	40
38	Indigenous pearl millet germplasm	40
39	Indigenous finger millet germplasm collected from Uttar Pradesh	40
40	Varieties and indigenous germplasm	40
41	High seed weight rabi sorghum landraces including wild an indigenous acc.	33
42	Selections from K2021 characterization	31
43	Parental lines and Varieties of drought experiment by Dr SS Rao	31
44	Browntop germplasm	30
45	Kodo millet minicore collections	25
46	Barnyard millet minicore collections	25
47	Proso millet minicore collections	25

S.No	Utilization / Purpose	No.of acc.
48	Foxtail millet minicore collections	25
49	Little millet minicore collections	25
50	Finger millet minicore collections	25
51	Millet for demonstration	24
52	Parental lines of sorghum	23
53	Drought tolerant sorghm germplasm	20
54	Pop sorghum germplasm	16
55	Wild relatives of sorghum	16
56	SiA 326, SiA 3282, SiA 3179 and SiA 907	16
57	Sudan grass sorghum germplasm	15
58	Millet genetic stocks for registration	12
59	Resistant sources	8
60	For molecular work	7
61	Anthocyanin pigmented proso millet germplasm	7
62	Scented sorghum for aroma analysis	6
63	Wild species of sorghum	6
64	Leaf sheath pigmented germplasm	6
65	Pearl millet wild relative	5
66	Core collections of finger millet germplasm	5
67	Finger millet varieties	5
68	ELB 45, ELB 104, ELB 110, ELB 114 and ELB 116 - Indigenous collections	5
69	Check varieties of sorghum	4
70	(blank)	2
71	Molecular studies	2
72	Varieties	2
73	Variety	2
74	Resistant source	2
75	Foxtail millet germplasm ISe 719/FOX 4422	1
76	ISe719	1
77	IS 9606 (Rio)	1
	Grand Total	19466

Table 41: The category-wise list of millets genetic resources distributed during 2021-2022

S.No	Name of the Category	No.of acc.
1	AICRP on Small millet	11380
2	ICAR	2694
3	AICRP on Sorghum	2325
4	IIMR	1145
5	University	943
6	SAU	720
7	CAU	150
8	NGO	40
9	AICRP on Forage crops	40
10	College	29
	Grand Total	19466

Table 42: The Scientist-wise list of millets genetic resources distributed during 2021-2022

S.No	Name of the Scientist	No.of acc.
1	Dr TSSK Patro	3602
2	Dr CA Deepak	3063
3	Dr Dinesh Chandra Joshi	2500
4	Dr TE Nagaraj	959
5	Dr HE Patil	855
6	Dr A Nirmalakumari	853
7	Dr Kamaluddin	500
8	Dr LN Yogesh	496
9	Dr NG Hanumaratti	416
10	Dr KR Kamble	410
11	Dr KB Palanna	399
12	Dr Yogeesh Ben	396
13	Dr KN Ganapathy	373

S.No	Name of the Scientist	No.of acc.
14	Dr Chandra Nayak	283
15	Dr RB Ghorade	238
16	Dr D Sooganna	226
17	Dr Usha Saxena	215
18	Dr PG Padmaja	200
19	Dr L Madhavilatha	200
20	Dr IK Das	200
21	Dr OP Dubey	196
22	Dr AS Jadav	176
23	Dr Maheshwaramma	150
24	Dr Vishnu Kumar	150
25	Dr Bharath Kumar Davda	124
26	Dr Pummy Kumari	123

S.No	Name of the Scientist	No.of acc.
27	Dr Parashuram Patrotri	116
28	Dr B Selvi	115
29	Dr PK Pandey	115
30	Dr Dadya Swamy	115
31	Ms Indu	112
32	Dr Nanthakumar	110
33	Dr CV Chandramohan Reddy	104
34	Mr Purushotama Rao	100
35	Dr Rajendragouda	100
36	Dr RS Sohu	100
37	Dr SK Singh	100
38	Miss Pugazhendi	96
39	(blank)	70
40	Ms. G Bharathi	60
41	Dr N Anuradha	57
42	Dr Hema Yadav	50
43	Dr B Amasiddha	45
44	Dr Harnikumar	41
45	Dr G Gayathri	40
46	Dr Anandateertha Pyati	40
47	Miss Madhusri	40
48	Dr Ranjan Das	40
49	Dr Rama Rao	40
50	Dr R Narayanan	33
51	Dr Gangaiah	31

S.No	Name of the Scientist	No.of acc.
52	Dr Sawinder Kaur	30
53	Dr Gowri Sajjanar	26
54	Dr R. Madhusudhana	26
55	Dr K Anbarasan	24
56	Dr D Balakrishna	23
57	Dr MK Kalarani	20
58	Dr Harpreet Kaur	16
59	Dr SK Sameera	16
60	Dr Somu G	16
61	Dr G Girish	16
62	Dr Sudharani	16
63	Dr B. Venkatesh Bhat	15
64	Dr Eveena Gupta	12
65	Miss Usha Satija	9
66	Dr Suvama	6
67	Dr Yusuf	5
68	Dr Swarna Ronanki	5
69	Dr Vikranth	4
70	Dr Gaurav Chaudhary	2
71	Dr K Sujatha	2
72	Dr M Hema	1
73	Ms Archana Kumari	1
74	Dr K Hariprasanna	1
75	Dr P Rajendrakumar	1
76	Grand Total	19466

8. Submission of millets genetic resources for issuance of IC Number by ICAR-NBPGR

8.1: Germplasm issued Indigenous Collection (IC) Numbers

We have received IC no. for 34 acc. millets collected from Tamil Nadu during 2018. The details of IC nos. issued to new millets collections are presented in Table 44.

9. Registration of millets genetic stocks for registration with ICAR-NBPGR, New Delhi

9.1: Millets genetic stocks registered with ICAR-NBPGR-New Delhi during 2021-2022

Eighteen millets genetic stocks were registered with ICAR-NBPGR in which, **Barnyard millet (2)**: Highly resistant to grain smut disease (PRB 903), Glumeless mutant line (DHBM93-3 **Little millet (1)**: Early flowering (47 days), Early maturity (71 days) (VS 25); **Finger millet (8)**: Neck blast resistance and Finger blast resistance (VR 1070), Neck blast resistance and Finger blast resistance (VR 1067), Early flowering & Early maturity, Red grain & High yielding (WN 585), Banded blight resistant (VR 1141), Finger blast resistance (VR 1122), Neck blast resistance (VR 1128), White color, bold grains, Multi finger, long fingers, High grain yielding (WWN 55), Longer finger (GPU28-2081); **Sorghum (7)**: More number of leaves, More leaf:stem ratio and Low HCN (SPV 2804), Taller plant height, Longer leaves and More number of leaves per plant (SPV 2805), High fresh stalk yield and High biomass (SPV 2596), - High oil content and Hard seed with bigger germ size (IS 1212-4-1-1), High oil content and Very bold seed with medium hardness and small germ size (IS 31714-2-1-1), High in-vitro true digestibility of dry matter, Organic dry matter, and Metabolisable energy, Low acid detergent fiber and Acid detergent lignin content (SPV 2017), Early flowering, Early maturing and Higher brix and total sugars (SPV 2595))

1. INGR21127: **PRB 903** – Barnyard millet - Highly resistant to grain smut disease – PRB 903 (IC0640691) by Laxmi Rawat, Dinesh C Joshi, Vijay Kumar Yadav, Bijendra Kumar Yadav, IK Das, Prabhakar Bhat, **M Elangovan**, Amol Vasisth and AK Karnatak.
2. INGR21131: **VS 25** – Little millet - Early flowering (47 days), Early maturity (71 days). VS 25 (IC0640696) by TSSK Patro, N Anuradha, **M Elangovan**, KB Palanna and IK Das.
3. INGR21132: **VR 1070** – Finger millet – Neck blast resistance and Finger blast resistance. VR 1070 (IC0640697) by TSSK Patro, N Anuradha and **M Elangovan**.
4. INGR21133: **VR 1067** – Finger millet – Neck blast resistance and Finger blast resistance. VR 1067 (IC0640698) by TSSK Patro, N Anuradha and **M Elangovan**.

5. INGR21211: **WN 585** - Finger Millet - Early Flowering & Early Maturity. Red Grain & High Yielding WN 585 (IC0624599) by Harshal Eknath Patil, **M Elangovan**, BK Patel, GD Vadodariya Hill Millet Research Station, Navsari Agricultural University, Waghai, Gujarat
6. R2011822043 - Finger millet - VR 1141 – 2022 - Drs. TSSK Patro, N Anuradha, **M Elangovan**, KB Palanna, IK Das - Banded blight resistant
7. R2011822041 - Finger millet - VR 1122 – 2022 - Drs. TSSK Patro, N Anuradha, **M Elangovan**, KB Palanna, IK Das.- Finger Blast Resistance.
8. R1864422069 – Sorghum - SPV 2804 – 2022 – Drs RB Ghorade, **M Elangovan**, Venkatesh Bhat, B Amasiddha, KN Ganapathy and Vilas A Tonapi - More number of leaves, More leaf :stem ratio and Low HCN
9. R1864422070 – Sorghum - SPV 2805 – 2022 - Drs RB Ghorade, **M Elangovan**, Venkatesh Bhat, B Amasiddha, KN Ganapathy and Vilas A Tonapi - Taller plant height, Longer leaves and More no. of leaves/pt.
10. R1864421218 – Sorghum - SPV 2596 (SM-2288-3) – 2022 - Drs KBRS Visarada, Kanti Meena, AV Umakanth, **M Elangovan** and P Snajana Reddy - High fresh stalk yield and High biomass
11. R1864422012 – Sorghum - IS 1212-4-1-1 – 2022 - Drs. Sujay Rakshit, Aruna C, Praduman Yadav, Parashuram Patrotri, G Girish, KN Ganapathy, CV Ratnavathi, PG Padmaja, **M Elangovan** and DM Bahadure - High oil content and Hard seed with bigger germ size
12. R1864422013 – Sorghum - IS 31714-2-1-1 – 2022 - Drs. Sujay Rakshit, Aruna C, Praduman Yadav, Parashuram Patrotri, G Girish, KN Ganapathy, CV Ratnavathi, PG Padmaja, **M Elangovan** and DM Bahadure - High oil content and Very bold seed with medium hardness and small germ size
13. R1864422021 – Sorghum - SPV 2017 – 2022 - Drs. Umakanth, **M Elangovan**, B Amasiddha, VA Tonapi - High in-vitro True Digestibility of Dry Matter (TDDM), Organic Dry Matter (ODM), and Metabolisable Energy (ME), Low Acid Detergent Fiber (ADF) and Acid Detergent Lignin content (ADL)
14. R2011822042 - Finger millet - VR 1128 – 2022 - Drs. TSSK Patro, N Anuradha, **M Elangovan**, KB Palanna, IK Das.- Neck Blast Resistance.
15. R1864421309 – Sorghum - SPV 2595 (SM-2144-8) – 2022 - Drs KBRS Visarada, Kanti Meena, AV Umakanth, **M Elangovan** and P Snajana Reddy - Early flowering, Early maturing and Higher brix and total sugars
16. R2011822071 - Finger millet - WVN 55 – 2022 - Drs. Harshal Eknath Patil, **M Elangovan**, BK Patel, and GD Vadodariya - White color, bold grains, Multi finger, long fingers, High grain yielding
17. R1936322020 - Finger millet - GPU28-2081 – 2022 - Drs Ganapathy KN, IK Das, **M Elangovan**, B Amasiddha, TE Nagaraja, TSSK Patro, KB Palanna, N Anuradha, VA Tonapi - Longer finger
18. R2033122019 - Barnyard millet - Glumeless mutant DHBM93-3 – 2022 - Drs B Amasiddha. **M Elangovan**, KN Ganapathy, C Deepika, R Swarna, VA Tonapi - Glumeless mutant line

9.2: Millets genetic stocks registered with ICAR-NBPGR-New Delhi during 1998-2022

A total of 115 millets genetic stocks registered with ICAR-NBPGR-New Delhi. In which Sorghum (76), Pearl millet (20), Finger millet (13) etc., The crop-wise millet genetic stocks registered is presented in Table 43 and list of millets genetic stocks in Table 44.

Table 43: Crop-wise millets genetic stocks registered with ICAR-NBPGR during 1998-2022

S.No	Name of the millet	No. of genetic stock
1	Sorghum	76
2	Pearl Millet	20
3	Finger Millet	13
4	Barnyard Millet	3
5	Foxtail Millet	2
6	Little millet	1
	Grand Total	115

10. International / National Trainings / Webinars Organized

10.1: International

10.1.1: ICAR-IIMR Coordinated International Virtual Workshop on “Digital Field Book - Paperless Data Collection [Android Application]” with Annamalai University on 15th Sep 2021

The Department of Genetics and Plant Breeding, Faculty of Agriculture, Annamalai University has organized International Virtual Workshop on "Digital Field book - Paperless Data Collection [Android Application]". The workshop was organised by Department

of Genetics and Plant Breeding, National Academy of Biological Sciences & DST Purse II, Annamalai University, Chidambaram, Tamil Nadu on 15th September 2021. Dr M Elangovan, Principal Scientist, ICAR-IIMR-Hyderabad delivered the lecture on Digital Field followed by hands-on training on the Field Book App. There were 320 participants from across India and 4 from abroad (Japan, Taiwan, Korea and Sri Lanka). The participants include Scientists, Asst./Asso./Professor, Research Scholars, MSc (Agri.) Students etc., Scientists from IIMR, NBPGR, IIWBR, NBFGR, CRIDA, IIOR, IIHR, IIFSR, NBAIR etc., also participated the workshop. The workshop is Coordinated by Drs M Elangovan and B Sunil Kumar.

10.2: National

10.2.1: Virtual Webinar on “This Too Will Pass by Shri Arun Tiwari” on 27th May 2021

Virtual webinar under the COVID 19 Management series on the topic “*This too will pass*” by the eminent writer, philosopher and close associate of Dr APJ Abdul Kalam, Former President of India was organized by ICAR-Indian Institute of Millets Research in collaboration with Karnataka Agri-Professionals Association on 27th May, 2021. Dr Vilas A Tonapi welcomed the Speaker and the participants and set the tone for the COVIT Management Series of the lecture. Shri Tiwari spoke on the chronological occurrences of pandemics and its impacts in the world since 1918. He also appreciated the Government of India's massive vaccination drive in a systematic way throughout the country. He also appealed the people to know that projections are never real and learn to discern real from the projection. He emphasized three stages of control to effectively manage one's own-self viz., Circle of Control encompasses problems involving our own behaviour and thoughts; Circle of Influence includes the things we can do something about; Circle of Concern emerges when there are situations not in your control or influence then shift focus to Circle of Influence and get busy. He also elaborated the importance of right-hand gesture called *The Abhaya Mudra* meaning reassurance and safety, which dispels fear and accords divine protection and bliss with the linked story of Gautama Buddha when attacked by an elephant, subduing it. The webinar was attended by 160 participants from ICAR-IIMR, AICRP on Sorghum and Small millets Centre's and Agri-Professionals of KAPA. Dr Narayana Bhat, Secretary KAPA proposed the vote of thanks. The virtual webinar was coordinated by Dr M Elangovan, Dr Venkatesh Bhat and Shri OV Ramana.

10.2.2: ICAR-IIMR Coordinated Training on Data Digitalization with ICAR-IISR-Calicut during 22-24th Feb 2022

Dr M Elangovan, Principal Scientist Coordinated Online Training on Data Digitalization and Visualization with ICAR-Indian Institute of Spices Research (IISR), Calicut and AICRP on Spices during 22-24 February 2022. Lectures and demonstrations were organized during the training on Digitalization of Field Data, Scientific presentation, Statistical protocols for field experiments and data analysis, Introduction to R, MS Excel – Tool for Experimental Database, Modern statistics through SAS and R- ethics and method of data collection, Phenotypic data collection using AI, Introduction to DIVA-GIS: Diversity Analysis and MS Access – Tool for Connecting Database. There were 81 participants attended the training programme from ICAR-IISR and AICRP on Spices. The training was coordinated by Drs C. Sarathambal, S. Aarthi, Sharon Aravind and M Elangovan.

10.2.3: Online Training on “Data Management” during 3-5th March 2022

ICAR-IIMR-Hyderabad organized Online training on Data Management during 3-5th March 2022. The training was attended by 130 participants from All-Indian Coordinated Research Project on Sorghum and Small millets, ICAR-IIMR-Hyderabad-Solapur, ICAR-NBPGR-RS-Hyderabad and other Universities and Colleges by Scientists, Technical, Research Fellows and Research Scholars. The participants learned about Data Processing for Better Interpretation and Publication Using SAS and R, Bioinformatics in Agriculture, Geospatial Technologies in Agriculture, DIVA-GIS: Tool for Data Visualization, MS Excel – Tool for Germplasm Database; Digital Field Book for Paperless Data Collection, MS Access – Tool for Connecting Germplasm Database and Scientific Video Editing through lectures and demonstrations. Dr G Prabhu from ICAR-IARI-New Delhi; Dr M Balakrishnan and Dr PD Sreekanth from ICAR-NAARM-Hyderabad and Dr M Elangovan of ICAR-IIMR-Hyderabad handled the training sessions. The training was coordinated by Drs M Elangovan, KN Ganapathy, B Amasiddha, K Venkatesh and Shri OV Ramana.

10.2.4: Online Training on “Genotype to Genomics and advanced laboratory tools” during 28-30th March 2022

ICAR-IIMR-Hyderabad organized Training on “Genotype to Genomics and advanced laboratory tools” during 28-30th Mar 2022. The training was attended by 40 participants of Scientists and Technical staffs of ICAR-IIMR-Hyderabad, AICRP on Sorghum and Small millets. Lectures were delivered on “Developments from Genotype to Genomics in millets” by Dr. T Nepolean, Principal Scientist (Plant Breeding), “Applications of MAS in Millets Improvement” by Dr P Rajendrakumar (Biotechnology), “A Journey of Biochemistry Research at IIMR with Advanced laboratory equipments and protocols” by Dr CV Ratnavathi, Principal Scientist (Biochemistry). During the training, latest development in genomics research in millets, available genetic and genomic resources and their utilization strategies, application of advanced and precise breeding techniques, marker assisted breeding techniques (MABB, MARS) with availability of molecular markers in millets, research programs for molecular marker development in millets (SSR, SNPs), development of mapping populations and their utilization (MAGIC, NAM, BILs, NILs, RILs, F2:3), journey of processing and product development in sorghum with new methodologies and machineries, availability of different instruments for biochemical analysis and their handling protocols, importance of analysing millets for nutrient contents

and health benefits etc. were discussed through interaction mode with trainees. The training was coordinated by Drs M Elangovan, B Amasiddha and KN Ganapathy.

11. National Events / Meetings Organized

11.1: ICAR-IIMR Meeting with “A Dialogue” on 26th April 2021

ICAR-IIMR has organized a meeting with A Dialogue on 26th April 2021 to discuss about the 2. branding and positioning of millets for a wider global market and Mapping of biodiversity loss across local regions in India and plan a comprehensive strategy to document, revive it in local regions. The meeting was chaired by Dr. Vilas A Tonapi and attended by Drs. M Elangovan, B Venkatesh Bhat, B Dayakar Rao, R Madhusudhana and K Hariprasanna from IIMR and Miss Prerna Garg and Mr Nitin Sisodia from A Dialogue. During the meeting it ICAR-IIMR has considered to work with A Dialogue on the areas viz., 1. A Dialogue uses Biodesign innovation process expertise to find unique insights/ stories in local biodiversity zones. 2. Need for biodiversity-focused research and collection of stories to find the unique association of millets with tradition, culture, ethnobotanical concepts of India. 3. A Dialogue on a regular basis will contribute stories to a platform (website/ blog) that can be promoted and shared with the national & international audience. 4. It is also decided to highlight the immunity development qualities of millets and how it is used traditionally in the Indian context by the tribal, rural communities in the stories. 5. To create an emotional connection of the urban consumer with the concept of millets. 6. Communicate the health benefits of millets, and their contribution to diversity, climate change for wider acceptance of Indian millets in India and abroad. 7. Demonstration of the benefits of millets and thus help in the formation of policies for millet, & truly realize the concept of ‘Local to Global’. 8. Need to align these activities keeping the International millet year 2023 in perspective. The meeting also requested A Dialogue to propose the expression of interest for further discussion. The meeting was coordinated by Dr M Elangovan.

11.2: 6th Institute Germplasm Identification Committee (IGIC) meeting on 17th June 2021

The virtual meeting of the 6th Institute Germplasm Identification Committee (IGIC) was held on 17th June 2021 in the presence of Dr. Vilas A Tonapi, Director, ICAR-IIMR. The meeting was chaired by Dr. M Elangovan (Chairman, IGIC) and attended by other member's viz., Dr. C Aruna Reddy, Dr. P Sanjana Reddy and Dr. B Amasiddha (Member Secretary). The applicants viz., Drs. KBRS Visarada, RB Ghorade, TKKS Patro, HE Patil, Laxmi Rawat, Sudhirkumar injeti, Jhansi Rani and Maheshwaramma were also attended the meeting. A total of 16 new applications screened for registration which includes Sorghum (4), Finger millet (8), Little millet (2), Foxtail millet (1) and Barnyard millet (1). In which, 10 are recommended without any modifications / additions, 5 applications are suggested for registration after modification/addition of relevant data and one application is rejected. Fresh stalk yield, high biomass, early flowering, early maturing, grain mold and leaf blight resistance traits in sorghum; neck blast and finger blast in finger millet, early flowering, early maturing in finger millet; grain smut in barnyard millet; banded leaf blight resistant, early flowering and early maturing in little millet were the important trait-specific genotypes identified in combination with grain/fodder yield during the meeting for registration. The meeting was organized by Dr M Elangovan and OV Ramana.

11.3: First Dr NGP Rao Memorial Lecture and Dr NGP Rao Lifetime Achievement Awards on 5th Sep 2021

The First Dr. NGP Rao Memorial Lecture and Dr NGP Rao Memorial Life-time Achievement Award ceremony was organized at ICAR-Indian Institute of Millets Research, Hyderabad on Teacher's Day – 5th September, 2021 on his Birthday. Dr. Neelamraju Ganga Prasada Rao (1927-2016), has been acclaimed as the ‘Father of Hybrid Sorghum’, for leading the green revolution in sorghum in rainfed semi-arid regions of India. His services to the nation as Teacher, Researcher, Scientist, Vice-chancellor and Chairman of ASRB, New Delhi are highly remarkable. With a great respect, The Society for Millets Research, located at ICAR-Indian Institute of Millets Research announced a Memorial Award on his name to be given to the most accomplished agricultural scientists, researchers in millets every two years in association with NGP Rao Foundation and Advanta.

The first ever virtual award ceremony was organized on 5th September, 2021 at ICAR-Indian Institute of Millets Research. Dr. Jacqueline Hughes, Director General, ICRISAT was the Chairperson of the proceeding and Co-Chaired by Dr. Tilak Raj Sharma, Deputy Director General (CS), ICAR, New Delhi. Padma Bhushan Dr. Raj Paroda, Former Secretary, DARE and Director General, ICAR, and Chairman, TAAS New Delhi, was the Chief Guest. The other Guests of Honor were: Dr. Bhupen Dubey, CEO, Advanta; Dr. Rajendra Prasad, VC-UAS-Bengaluru, Dr. Aravind Kumar, DDG, ICRISAT and Dr. NH Rao, Trustee, NGP Rao Foundation.

At the outset, Dr. Vilas A Tonapi, Director, ICAR-IIMR & General Secretary, Society for Millets Research welcomed the Guests, other dignitaries and other participants and briefed about Society for Millets Research activities. He also informed about Dr. NGP Rao's education and research contributions. Dr. Jacqueline Hughes, Director General, ICRISAT given the Chairperson's opening remarks and Dr. TR Sharma, Deputy Director General (CS), ICAR, New Delhi recollected Dr. NGP Rao's contributions. ICAR-IIMR also dedicated the newly constructed “Crop Work Area” Facility at IIMR as “NGP RAO Crop Improvement Centre”.

Dr RS Paroda delivered the First Dr NGP Rao memorial lecture on “Future of Sorghum and Millets”. He emphasized for the Second Green Revolution for the Nutritional Security of India. He also highlighted that food for good health and immunity with greater focus on local food systems as learning during the COVID 19 pandemic. The health and nutritional benefits of millets, diversifying the food baskets. He finally requested policy makers to consider MSP to be linked to procurement by States; Inclusion of millets in Mid-Day-Meal scheme; Including millets in PDS, ICDS, ODOFP programs; Premium needed on biofortified varieties; Incentives to FPOs in millet growing districts and GST exemption to youth on value added products. The strengthening of millets based value addition in Food industry, Feed industry and Ethanol industry is urgently required as way forward. The promotion of millets in future needs to include the following strategy on doubling R&D allocation on millets, a consortium on hybrid millets, strong Public-Private Partnership, promoting South-South Collaboration, GI protection for Maldandi like Basmati Rice and roadmap on Millets for 2030.

This year “Award Selection Committee” declared the First Dr NGP Rao Memorial Award to the following Researchers: Dr. Bhanwar Singh Rana, Former Director, NRC-Sorghum-Hyderabad and Former Project Coordinator – All-India Coordinated Sorghum Improvement Project, Hyderabad, Dr. Annada Seetharam, Former Project Coordinator – All India Coordinated Small Millets Improvement Project, Bengaluru and Dr. Kedar Nath Rai, Principal Breeder, ICRISAT, Patancheru, Hyderabad. This award carries Citation and One lakh Rupees cash prize. Dr. Raj Paroda, Dr. Jacqueline Hughes, Dr. TR Sharma, Dr. Bhupen Dubey conferred these awards to three researchers recognizing their yeomen contributions to Sorghum, Small Millets and Pearl Millet improvement respectively in the presence of Dr. Vilas Tonapi, Director, ICAR-IIMR. The awardees thanked the Society for Millets Research for initiating the awards.

Dr Tilak Raj Sharma, DDG (CS), ICAR in his Co-Chairman’s remark suggested to develop an Action Points viz., utilization of germplasm, pre-breeding using the wild and local landraces for trait-specific flagship programme; avoiding the utilization of same parental lines in the AICRP programmes; identification of gene scattered in the landraces; consortium project on CRP on hybrids across institutes; CRP on Molecular Biology, AICRP on Biotech Crops; upgrading IIMR as the International Centre for Millets education; targeting middle income group for millet diet; Global Climate Change; Short duration varieties; mechanical harvesting; Fast varietal breeding; speed breeding to advance generations; training human resources; using big data analysis, IoT and AI etc., He pointed out that the Government of India is very keen to promote Millets a big way involving 12 ministries in India and abroad. He expressed his belief that ICAR and IIMR can fulfil all these tasks including organizing International seminars, technology dissemination to farmers and capacity building of entrepreneurs and start-ups, awareness campaigns on millet nutritional benefits to students, Home Makers, Self- help groups. They can enable millet food to be available to the passengers in Rail and Air ways, include millet food in Mid-day meals of School children.

Dr Jacqueline Hughes, DG, ICRISAT in her Chairman’s address emphasized the need for discussion on the emerging areas; priority research areas of NARS; Private and Government collaboration; malnutrition, HRD etc. She finally quoted that millets are better than Quinoa and Sorghum and millets are the future crops. Dr K Hariprasanna proposed the vote of thanks. This programme was coordinated by Dr M Elangovan, Principal Scientist, ICAR-IIMR.

11.4: Azadi ka Amrit Mahotsav – Week-long Celebrations under the Theme on “National Campaign on Nutricereals and Tree Plantation” (12-17th Sep 2021)

11.4.1: Diversifying Agriculture and Cropping Systems with Millets on 12th Sep 2021: The First-day programme under the Azadi ka Amrit Mahotsav - Theme: National Campaign on Nutricereals and Tree Plantation was organized under the Sub-theme: Diversifying Agriculture and Cropping Systems with Millets. There were 100 participations including 50 farmers from various parts of the country. Dr Gangaiah, Principal Scientist (Agronomy) delivered the lecture under the sub-theme with detailed millets based cropping system, millet crop diversification, modern farming, agro-tourism, millets in rice fallow, sorghum biofuel etc., Dr K Hariprasanna presented an outlook on local and improved varieties performance in Karnataka. Farmers from Pradhan group lead by Mrs Anita Shil, Farmers from Kodo Bazar Fed FPO Limited, Jivan marshal Fed FPOs, Mr Jogi Naidu, SVDS interacted with the Scientists of ICAR-IIMR. Dr Vilas A Tonapi delivered his closing remarks and hint more such programmes in regional languages in future to commemorate the International Year of Millets in 2023. The sub-theme on Diversifying Agriculture and Cropping Systems with Millets is coordinated by Drs Srinivasa Babu, KN Ganapathy and Sangappa.

11.4.2: Enabling Farmer Producer Organizations (FPOs) to enhance production, productivity of Millets on 13th Sep 2021: The Second-day programme under the Azadi ka Amrit Mahotsav - Theme: National Campaign on Nutricereals and Tree Plantation was organized under Sub-theme: Enabling Farmer Producer Organizations (FPOs) to enhance production, productivity of Millets. There were 120 participations including Farmer Producing Organizations (FPO) from various parts of the country. Dr Divakar, Tech Lead, Centre for Agrarian Studies, NIRD&PR delivered the lecture on Case Studies of Model FPOs

with video presentation on Tamara (Turmeric), floriculture etc., He has also explained the 4 C Approach to FPOs viz., Conservation, Cultivation, Consumption and Commerce; FPO Board meeting agenda structures; Best practices for successful FPOs etc., He also answered several queries about the formation of new FPOs, strengthening the FPOs etc., The sub-theme on Enabling Farmer Producer Organizations (FPOs) to enhance production, productivity of Millets was coordinated by Drs. Sangappa and Srinivasa Babu.

11.4.3: Millets Biodiversity Conservation on 14th Sep 2021: The Third-day programme on 14th September 2021 under the Azadi ka Amrit Mahotsav Theme: National Campaign on Nutricereals and Tree Plantation was organized under the Sub-theme: Millets Biodiversity Conservation. There were 50 participations from ICAR-IIMR, ICAR-NBPGR, AICRP on Sorghum and Small millets, Other ICAR Institutes, RRA Network, WASSAN etc., The programme was Chaired by Dr KS Varaprasad, Former Director, ICAR-IIOR and Dr Prabhakar, Former Project Coordinator (Small millets) as special guest. There were 5 presentations made viz., Status of Millets Germplasm at National Genebank by Dr Sushil Pandey, Principal Scientist, ICAR-NBPGR-New Delhi; Status of Millets Germplasm at Dr RS Paroda Genebank, ICRISAT by Dr M Ventrivethan, Senior Scientist, ICRISAT, Patancheru; Millets Diversity by Dr M Elangovan, Principal Scientist, ICAR-IIMR-Hyderabad; Traditional Millet Varieties by Mr Krishna Prasad, Director, Sahaja Samrudha and Use and Promotion of millets diversity through seed centres by Ms Bhagya, Associate Director, WASSAN. In the special guest remarks Dr Prabhakar emphasized on making the database on germplasm utilization in the released varieties. Dr KS Varaprasad, Chairman highlighted the mainstreaming landraces - SOPs NBPGR; Principal traits - groups of germplasm taxonomy combining ability nutritional value, genetic purity seed standards Crop improvement Vs Plant Breeding and Participatory Plant Breeding - Core/ Minicore, Trait specific etc.; Gap analysis along with NGOs, NBA/SBBs (PBR), ICAR-NBPGR, ICRISAT, ICAR-IIMR, PPVFRA, SAUs and also identify popular State/District level ecosystem landraces in Finger millet, Foxtail millet and Barnyard millet; Working with health and medical sciences linking soil, water, air; Traditional Food products using modern industrial systems; Industry Branding Focus etc., The sub-theme on Millets Biodiversity Conservation was coordinated by Drs. M Elangovan, B Amsiddha and VM Malathi.

11.4.4: Millet processing and value addition on 15th Sep 2021: The Fourth-day programme under the Azadi ka Amrit Mahotsav Theme: National Campaign on Nutricereals and Tree Plantation was organized under the Sub-theme: Millet processing and value addition. There were 50 participations including ICAR-IIMR, AICRP on Sorghum and Small Millets Scientists, FPO, Students etc., from various parts of the country. Dr P Hemashankari, Scientist (SS) (AS&PE) delivered the lecture on "Primary and secondary processing of machineries for millets" She has explained the primary processing machineries for millets include destoner, cleaner cum grader cum aspirator, dehuller, both centrifugal and impeller type, commercially available dhan foundation dehuller, polishing machines for improving the whiteness of the grain to be used in the value added products. The secondary processing machines include mechanized wet cleaner, tray dryer for drying the wet grains ,steaming unit, cold extruder unit for making vermicelli from both major and minor millets, hot extruder for making kurkure, flavour coating machine for coating masala to kurkurae, pasta making machine, semolina making machine consisting of pneumatic conveyor of the pulverized grains, sieving unit for different types of rawa suitable for making various value added products including idly, dosa, upma and khichadi etc., The sub-theme on Millet processing and value addition was coordinated by Drs. P Hemashankari and N Anuradha.

11.4.5: Cooking with Millets on 16th Sep 2021: The Fifth-day programme under the Azadi ka Amrit Mahotsav Theme: National Campaign on Nutricereals and Tree Plantation was organized under the Sub-theme: Cooking with Millets. There were 50 participations including ICAR-IIMR, AICRP on Sorghum and Small millets centre Scientists, FPO, Students etc., from various parts of the country. Dr Sujatha, Mrs Vijayalakshmi and Dr V Ravikumar made the live demonstration videos of Millet recipes viz., Multi Millet stuffed Idly, Foxtail Bisibele bath, Pearl Millet Bun, Little Millet Payasam and Pearl Millet Dora Cake. The sub-theme on Cooking with Millet processing and value addition was coordinated by Dr V Ravikumar, Dr Sujatha and Mrs Vijayalakshmi).

11.4.6: Inauguration of National Campaign on Nutricereals and Tree Plantation on 17th Sep 2021

Shri Narendra Sing Tomar, Hon'ble Union Minister for Agriculture & Farmers Welfare inaugurated the National Campaign on Nutricereals and Tree Plantation at ICAR-Indian Institute of Millets Research (IIMR), Hyderabad on 17th September 2021. He started the inauguration with planting a Tree in the ICAR-IIMR campus. He cut the ribbon in the exhibition stall where the diversity of 10 different millets were exhibited from IIMR to show the panicle/ear head diversity, seed colour diversity and wild relative of millets in a live sample and poster forms. The millets diversity stall was visited by many famers and FPOs to know the diversity of millets available globally. He also visited all the stalls exhibited millets value added products by the Farmers Producing Companies and interacted with them.

11.5: IIMR Participated in the National Consultation on 22nd Oct 2021

Dr Vilas A Tonapi and Dr M Elangovan participated in the National Consultation on Plant-based Local Food System for Health and Nutrition - a side event of 2nd International Agrobiodiversity Congress organized by Alliance of Bioversity International and International Centre for Tropical Agriculture (CIAT), Indian Society of Plant Genetic Resources (ISPGR), International Crops Research for Semi-Arid Tropics (ICRISAT) and Trust for Advancement for Agricultural Sciences (TAAS) on 22nd October 2021. Dr Vilas A Tonapi has presented the topic on "Millets and Other Nutri-cereals" under the theme on Status and Strategies for the Future of Local Food Systems along with the action points needed to promote the local food system.

11.6: Genebank Team, ICRISAT Visited Millets Genebank, ICAR-IIMR on 25th Oct 2021

Dr Kuldeep Singh, Head Genebank (Consultant) and Dr M Vetriventhan, Senior Scientist (Genetic Resources) visited Millets Genebank, ICAR-IIMR on 25th October 2021. They appreciated the efforts on documentation and publication of pedigree database, potential genotypes identified and distribution of millets germplasm at ICAR-IIMR.

11.7: ICAR-IIMR Scientists Participated in the ICRISAT Germplasm Field Day on 15th Nov 2021

Scientists of ICAR-IIMR and AICRP on Small millets participated in the Millets Germplasm Field Day at International Crops Research Institute for Semi-Arid Tropics (ICRISAT), Patancheru, 15th November 2021. We visually observed an enormous diversity of small millets and selected around 1000 accessions of trait-specific and diverse germplasm for utilization in millet improvement program. The genebank seed processing facility with all the machineries for threshing, winnowing and packing is worth visiting. We also visited Dr RS Paroda Genebank, wild species garden etc., Drs M Elangovan, KN Ganapathy, P Rajendrakumar, R Venkateshwarlu, K Venkatesh, C Deepika from ICAR-IIMR and Dr TE Nagaraja from AICRP on Small millets, Bengaluru and Dr Dinesh Kumar Joshi from ICAR-VPKAS-Almora are the other millet researchers participated. Dr Rajeev K Varshney, Research Program Director, ICRISAT and Dr Kuldeep Singh, Head, Genebank, ICRISAT interacted with millets scientists. Dr M Ventriventhan, Senior Scientist, Genebank, ICRISAT made all logistic arrangement and visit to different millets diversity blocks.

11.8: School Children's Visited IIMR on the eve of 'National Campaign on Agriculture and Environment-Citizen Face' on 26th Nov 2021

ICAR-IIMR has organized a visit of School children to experimental fields, value addition, food laboratories and genebank on the eve of 'National Campaign on Agriculture and Environment-Citizen Face' on 26th November 2021. There were 100 children from 5 different schools from Rajendranagar participated in the program. During the event children were actively participated to know different millet crops and their health benefits, nutrient richness, value addition, processing machineries etc. They also visited the millet gene bank and witnessed the live panicles of all millets for the first time. Three different competitions were organized during these children's visit to IIMR. All the three competitions were focused on the theme of "Agriculture and Environment". The best drawings, winners of the debate and quiz competitions were distributed with prizes and certificates by Dr. Vilas A Tonapi, Director, ICAR-IIMR-Hyderabad. He also addressed the School Children's and hinted the importance of millets and Government of India's policies on diversification of food plates. He also congratulated the winners of the competitions and informed the children's that many more such events are going to come to celebrate the International Year of Millets-2023. The student representatives of all the schools gave a feedback about the new leanings and understandings of agriculture and millets exactly when they are departing from the school studies and they felt it will be helpful for their future. The program was coordinated by Drs. M Elangovan, V Ravikumar, KBRS Visarada, Jinu Jacob, Srividhya. B Amasiddha, C Deepika and R Swarna.

11.9: 7th Institute Germplasm Identification Committee (IGIC) meeting held on 9th December 2021

The virtual meeting of the 7th Institute Germplasm Identification Committee (IGIC) was held on 9th December 2021 in the presence of Dr. Vilas A Tonapi, Director, ICAR-IIMR. The meeting was chaired by Dr. M Elangovan (Chairman, IGIC) and attended by other member's viz., Dr. C Aruna Reddy, Dr. P Sanjana Reddy, Dr. Avinash Singode and Dr. B Amasiddha (Member Secretary). A total of 16 new applications were screened for registration. In which, 13 applications were recommended for registration with suggested modifications at ICAR-NBPGR-New Delhi. Early flowering, early maturity, high grain oil content, leaf blight disease resistance, neck blast, finger blast, fodder digestibility traits, plant height, mutants for disease resistance and absence of glumes were the important trait-specific genotypes identified in combination with grain yield during the meeting for registration. These applications were thoroughly screened to select or reject or to know the requirement of any modifications in the applications from applicants.

11.10: 8th Institute Germplasm Identification Committee (IGIC) meeting held on 28th Jan 2022

The meeting of the 8th Institute Germplasm Identification Committee (IGIC) was held on 28th January 2022 in the presence of Dr. Vilas A Tonapi, Director, ICAR-IIMR. The meeting was Chaired by Dr. M Elangovan (Chairman, IGIC) and attended by other member's viz., Dr. C Aruna Reddy, Dr. P Sanjana Reddy, Dr. Avinash Singode and Dr. B Amasiddha (Member Secretary). A total of 8 new applications were screened for registration. In which, 3 applications were recommended for registration without any

changes, 4 applications were suggested modifications and one application was suggested to resubmit with more data. High dry biomass, grain iron content, number of leaves, leaf length, leaf:stem ratio in Sorghum; neck blast, finger blast, banded leaf blight diseases, finger number and finger length in Finger millet were the important trait-specific genotypes identified in combination with grain yield during the meeting for registration.

11.11: Exposure to Innovations Visit by Women's College under Institution's Innovation Council an Initiative of Ministry of Education on 15th Feb 2022

Forty-seven B. Com Second year students from Raja Bahadur Venkat Rama Reddy Women's College, Hyderabad visited ICAR-IIMR on 15th February 2022 as an exposure to innovations in various agriculture fields under the Institution's Innovation Council, an initiative of Ministry of Education. During the visit the students visited the Millets Genebank to know about the conservation of local varieties, Agricultural Entomology lab to see the basic research in pest resistance, Biotechnology laboratory to know about status of molecular characterization and transgenic research in millets, NUTRIHB to know the link between idea-innovation-incubation-entrepreneur, CoE for diversified millet value added food products, machineries and processing units. They also visited the millets experimental fields to know how to grow millets. The visit was coordinated by Drs M Elangovan, PG Padmaja, P Rajendrakumar, R Venkateshwarl, B Amasiddha, KN Ganapathy and V Ravi Kumar.

11.12: Engineering Students Visited IIMR on the Occasion of National Science Day on 28th Feb 2022

On the occasion of National Science Day on 28th February 2022, Thirty first to third year Engineering College students from Kommuri Pratap Reddy Institute of Technology visited today on 28th February 2022 to ICAR-IIMR-Hyderabad. Most of them are studying data science. They were facilitated to visit millets genebank to see the conservation and utilization of local landraces, biochemistry laboratory to know nutritional benefits of millets, NUTRIHUB for business opportunities, CoE for diverse millet products and Value Addition Processing Units for machineries and experimental fields to see different millet crop cultivation. This visit was sponsored by Samskruti Foundation and M/s MIDHANI Ltd, Hyderabad. The visit was coordinated by Drs M Elangovan, R Venkateshwarlu, V Ravi Kumar and Mr Shetty Mahesh.

12. Germplasm Field Days Organized

12.1: Sorghum Germplasm Field Day Organized on 3rd Mar 2022

ICAR-IIMR-Hyderabad organized Sorghum Germplasm Field Day on 3rd March 2022 in collaboration with ICAR-NBPGR-RS-Hyderabad under the Consortium Research Platform on Agrobiodiversity (CRP-AB). Dr K Anita, Officer In-Charge, ICAR-NBPGR-RS-Hyderabad in her Chief Guest address emphasized on importing more diverse germplasm from International Centres. Dr Vilas A Tonapi, Director, ICAR-IIMR highlighted the progress made under wide hybridization programme and more efforts to reduce duplicate accessions in the National Genebank and Millets Genebank. There were 40 participants from ICAR-NBPGR and ICAR-IIMR visited 1549 acc. of sorghum under CRP-AB and 4064 acc. under Institute project. Drs M Elangovan and K Venkatesh briefed the trait diversity of sorghum germplasm along with its plan of utilization. Germplasm field was coordinated by Drs M Elangovan, KN Ganapathy, B Amasiddha and K Venkatesh.

13. Awards and Recognitions

13.1: International (3)

1. **Certificate of Appreciation:** International Virtual Workshop on Digital Field book- Paperless Data Collection [Android Application]" organized jointly by Department of Genetics and Plant Breeding, Faculty of Agriculture, Annamalai University and ICAR-Indian Institute of Millets Research (IIMR) on 15th September 2021. (Coordinator: Drs **M Elangovan** and Sunil Kumar)
2. **Best Oral Presentation:** Ganapathy, KN., TSSK Patro, KB Palanna, IK Das, K Hariprasanna, **M Elangovan**, TE Nagaraja, B Amasiddha, Prashant and Vilas A Tonapi, 2022. Development of gamma mutants with improved grain yield with blast resistance in finger millet. In: International conference on Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and Prospects Proceedings, Eds. TE Nagaraja, CA Deepak, YG Shadakshari, Vilas A Tonapi and S Rajendra Prasad, Excel India Publishers, ISBN: 978-93-91355-32-6, pp. 4.
3. **Best Poster Presentation:** Ganapathy, KN., **M Elangovan**, K Venkatesh and Vilas A Tonapi, 2022. Genetic diversification of cultivated gene pool of Finger millet using inter-specific hybridization. In: International conference on Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and Prospects Proceedings, Eds. TE Nagaraja, CA Deepak, YG Shadakshari, Vilas A Tonapi and S Rajendra Prasad, Excel India Publishers, ISBN: 978-93-91355-32-6, pp. 25.

13.2: National (5)

1. **Certificate of Appreciation:** Azadi ka Amrit Mahotsav, Theme: National Campaign on Nutricereals and Poshan Vatika Maha Abhiyan and Nutri-Cereal Multi-Stakeholder Convention 3.0, Sub-theme: Millets Biodiversity Conservation at ICAR-Indian Institute of Millets Research (IIMR), Hyderabad on 14th September 2021.
2. **Invited lecture:** National Webinar on Nutri-cereals Genetic Resources Management, School of Agricultural Sciences, Bharath Institute of Higher Education and Research, Chennai, Tamil Nadu, 11th October 2021. (150 participants)
3. **Invited lecture: Elangovan, M.,** 2021. Digital Field Book – Paperless Data Collection. In: National Seminar on Barnyard millet - A Promising Crop for Future Needs organized by Agricultural College & Research Institute (AC&RI), Tamil Nadu Agricultural University (TNAU), Madurai, Tamil Nadu on 10th November 2021 (200 participants).
4. **Best Oral Presentation:** Amasiddha B, **M. Elangovan**, KN Ganapathy, C Deepika, R Swarna, and C Sangappa, 2021. Selection of Barnyard millet Genotypes under Moisture Deficit Stress Condition using Multi-trait Genotype-Ideotype Distance Index. In: National Seminar on Barnyard millet - A Promising Crop for Future Needs organized by Agricultural College & Research Institute (AC&RI), Tamil Nadu Agricultural University (TNAU), Madurai, Tamil Nadu on 10th November 2021.
5. **Invited lecture: M. Elangovan**, 2021. Nutri-cereals Research and Development during the DIT-TNSCST FUNDED Three days training Program on "Processing of Millet grains and development of value added products from millets for the enrichment of livelihood of rural women and farmers" in the Department of Food Processing and Preservation Technology, School of Engineering, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore on 24th November 2021 (150 participants).

14. Publications

14.1: Journal papers (7)

14.1.1: International (2)

1. Ganapathy, K. N., T. S. S. K. Patro, K. B. Palanna, I. K. Das, **M. Elangovan**, B. Prashant, S. C. Venkatesha, N. Anuradha, T. E. Nagaraja and V. A. Tonapi, 2021. Development of Improved Mutants for Grain Yield and Related Traits in Finger Millet (*Eleusine coracana* L Gaertn.) Through Gamma Mutagenesis. *International Journal of Plant & Soil Science*, 33(18): 225-235 (NAAS Score 5.07).
2. Minakshi Agney, **M. Elangovan**, H. S. Talwar and Keshavulu, K. 2021. Characterization of Sorghum Genotype and Varieties using Physiological and Biochemical Test. *Int. J. Curr. Microbiol. App. Sci.* 10(06): 215-222. doi: <https://doi.org/10.20546/ijcmas.2021.1006.023>

14.1.2: National (5)

1. **Elangovan, M.,** A Annapurna, Rajendragouda Patil, Parashuram Patroti, Sushil Pandey and Chitra Devi Pandey, 2020. Characterization of 2500 Indigenous Collections of Sorghum (*Sorghum bicolor* L.) Germplasm. *Indian J. Plant Genet. Resour.* 33(3): 295–299 (NAAS Score 5.54).
2. Harshal E Patil, Vikas Pali, BK Patel and **M Elangovan**, 2021. Waghai white Nagli-55 (WWN-55): High grain yielding, Multiplier, Multi finger, long finger, bold grain white finger millet (*Eleusine coracana* L. Gaertn) genotype. *The Pharma Innovation Journal*, 2021; 10(12): 111-117.
3. Patro, T.S.S.K., N. Anuradha, Y. Sandhya Rani, U. Triveni and **M. Elangovan**, 2021. Identification of blast resistant and trait specific Finger millet breeding lines. *Frontiers in Crop Improvement.*, Vol 9: 1353-1361 (Special Issue-IV).
4. Patro, T.S.S.K., N. Anuradha and **M. Elangovan**, 2021. VR 1081 (IC0635027; INGR20022), a Finger Millet (*Eleusine coracana*) Germplasm Resistant to Finger Blast., *Indian J. Plant Genet. Resour.* 34(2): pp 325.
5. Parashuram Datu Patroti, Rahimasalawada Madhusudhana, Sujay Rakshit, Nitesh Shirur Devaraja, Kuldeep Kumar Sharma, **Maruthamuthu Elangovan**, Mohan Yadav Samdur, Ashok Ramachandra Limbore, 2021. Genetic diversity analysis in post rainy sorghum landraces and identification of rabi adaptive traits specific genotypes. *Journal of Cereal Research*, 13(3): 295-304.

14.2: Conference presentation/paper/abstract/poster (18)

14.2.1: International (16)

1. **Elangovan, M.,** Sushil Pandey and Chitra Devi Pandey, 2021. Agro-morphological Characterization of Finger millet Germplasm under CRP-AB. In: Geetha, S., P. Jayamani, S. Rajeswari, S. Manonmani and N. Manivannan. 2021. Book of abstracts of the International Conference on Future Challenges & Prospects in

- Plant Breeding (FCPPB 2021), 6-7 October 2021, Centre for Plant Breeding and Genetics, Tamil Nadu Agricultural University, Coimbatore, PP 1017, p 50. P1-207.
2. **Elangovan, M.,** Sushil Pandey, Chitra Devi Pandey, B Amasiddha and KN Ganapathy, 2021. Agro-morphological Characterization of Finger millet Germplasm under CRP-AB. In: 2nd International Agrobiodiversity Congress organized by Bioversity International, Rome, Italy, 15-18th November 2021. Theme-Conservation, Poster presentation, Abstract No. 481.
3. **Elangovan, M.,** Sushil Pandey, Chitra Devi Pandey, B Amasiddha and KN Ganapathy, 2021. Agro-morphological Characterization of Foxtail millet Germplasm under CRP-AB. In: 2nd International Agrobiodiversity Congress organized by Bioversity International, Rome, Italy, 15-18th November 2021. Theme-Conservation, Poster presentation, Abstract No. 492.
4. **Elangovan, M.,** 2021. Traditional Knowledge of Millets Genetic Resources. In: 2nd International Agrobiodiversity Congress organized by Bioversity International, Rome, Italy, 15-18th November 2021. Theme-Consumption, Poster presentation, Abstract No. 211.
5. **Elangovan, M.,** 2021. Trait-specific Millets Germplasm Identified at ICAR-IIMR (2000-2019). In: 2nd International Agrobiodiversity Congress organized by Bioversity International, Rome, Italy, 15-18th November 2021. Theme-Conservation, Pre-recorded presentation, Abstract No. 249.
6. **Elangovan, M.,** 2021. Tracking System for Millets Genetic Resources Utilization. In: 2nd International Agrobiodiversity Congress organized by Bioversity International, Rome, Italy, 15-18th November 2021. Theme-Conservation, Pre-recorded presentation, Abstract No. 158.
7. **Elangovan, M.,** K. Venkatesh, K.N. Ganapathy and B Amasiddha, 2022. Characterization of Finger millet [*Eleusine coracana* (L.) Gaertn.] Core Collection Germplasm. In: International conference on Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and Prospects Proceedings, Eds. TE Nagaraja, CA Deepak, YG Shadakshari, Vilas A Tonapi and S Rajendra Prasad, Excel India Publishers, ISBN: 978-93-91355-32-6, pp. 14.
8. **Elangovan, M.,** K. Venkatesh, K.N. Ganapathy, B. Amasiddha, Sushil Pandey, Chitra Devi Pandey and Vilas A Tonapi, 2022. Agro-morphological Diversity in Indigenous Finger millet [*Eleusine coracana* (L.) Gaertn.] Germplasm. In: International conference on Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and Prospects Proceedings, Eds. TE Nagaraja, CA Deepak, YG Shadakshari, Vilas A Tonapi and S Rajendra Prasad, Excel India Publishers, ISBN: 978-93-91355-32-6, pp. 15.
9. **Elangovan, M.,** Prabhakar, Vilas A Tonapi, A Seetharam, KT Krishne Gowda, MV Channabyre Gowda, KN Ganapathy, B Amasiddha and K Venkatesh, 2022. Finger millet Elite Breeding Stocks Database (1986-2016). In: International conference on Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and Prospects Proceedings, Eds. TE Nagaraja, CA Deepak, YG Shadakshari, Vilas A Tonapi and S Rajendra Prasad, Excel India Publishers, ISBN: 978-93-91355-32-6, pp. 16.
10. **Elangovan, M.,** Sushil Pandey, Chitra Devi Pandey, K. Venkatesh, K.N. Ganapathy, B Amasiddha, TSSK Patro, N Anuradha and Vilas A Tonapi, 2022. Variability in Indigenous Finger millet [*Eleusine coracana* (L.) Gaertn.] Germplasm. In: International conference on Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and Prospects Proceedings, Eds. TE Nagaraja, CA Deepak, YG Shadakshari, Vilas A Tonapi and S Rajendra Prasad, Excel India Publishers, ISBN: 978-93-91355-32-6, pp. 17.
11. **Elangovan, M.,** K.N. Ganapathy, B. Amasiddha, H.E. Patil and Vilas A Tonapi, 2022. Potential Finger Millet Genotypes Identified for Utilization - AICRP on Small Millets Centres (2007-2018). In: International conference on Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and Prospects Proceedings, Eds. TE Nagaraja, CA Deepak, YG Shadakshari, Vilas A Tonapi and S Rajendra Prasad, Excel India Publishers, ISBN: 978-93-91355-32-6, pp. 18.
12. Ganapathy, KN., TSSK Patro, KB Palanna, IK Das, K Hariprasanna, **M Elangovan**, TE Nagaraja, B Amasiddha, Prashant and Vilas A Tonapi, 2022. Development of gamma mutants with improved grain yield with blast resistance in finger millet. In: International conference on Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and Prospects Proceedings, Eds. TE Nagaraja, CA Deepak, YG Shadakshari, Vilas A Tonapi and S Rajendra Prasad, Excel India Publishers, ISBN: 978-93-91355-32-6, pp. 4.
13. Bharathi, G., N Anuradha, **M Elangovan** and TSSK Patro, 2022. Genetic divergence analysis in Finger millet (*Eleusine coracana* L. Gaertn.). In: International conference on Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and Prospects Proceedings, Eds. TE Nagaraja, CA Deepak, YG Shadakshari, Vilas A Tonapi and S Rajendra Prasad, Excel India Publishers, ISBN: 978-93-91355-32-6, pp. 9.
14. Deepak, CA., HR Raveendra, **M Elangovan**, SR Sahana, Sushil Pandey and Chitra Devi Pandey, 2022. Study on variability of yield and disease resistance among the potential Finger millet [*Eleusine coracana* (L.) Gaertn.]. In: International conference on Harnessing the Potential of Finger Millet for Achieving Food and Nutritional

- Security: Challenges and Prospects Proceedings, Eds. TE Nagaraja, CA Deepak, YG Shadakshari, Vilas A Tonapi and S Rajendra Prasad, Excel India Publishers, ISBN: 978-93-91355-32-6, pp. 11.
15. Deepak, CA., KN Ganapathy, **M Elangovan**, HR Raveendra and SR Sahana, 2022. Characterization and evaluation of white grained genotypes of Finger millet [*Eleusine coracana* (L.) Gaertn]. In: International conference on Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and Prospects Proceedings, Eds. TE Nagaraja, CA Deepak, YG Shadakshari, Vilas A Tonapi and S Rajendra Prasad, Excel India Publishers, ISBN: 978-93-91355-32-6, pp. 12.
 16. Ganapathy, KN., **M Elangovan**, K Venkatesh and Vilas A Tonapi, 2022. Genetic diversification of cultivated gene pool of Finger millet using inter-specific hybridization. In: International conference on Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and Prospects Proceedings, Eds. TE Nagaraja, CA Deepak, YG Shadakshari, Vilas A Tonapi and S Rajendra Prasad, Excel India Publishers, ISBN: 978-93-91355-32-6, pp. 25.

14.2.2: National (2)

1. **Elangovan, M.**, 2021. Agro-morphological Diversity in Barnyard millet Core Collections. In: National Seminar on Barnyard millet - A Promising Crop for Future Needs organized by Agricultural College & Research Institute (AC&RI), Tamil Nadu Agricultural University (TNAU), Madurai, Tamil Nadu on 10th November 2021.
2. Amasiddha B, **M. Elangovan**, KN Ganapathy, C Deepika, R Swarna, and C Sangappa, 2021. Selection of Barnyard millet Genotypes under Moisture Deficit Stress Condition using Multi-trait Genotype-Ideotype Distance Index. In: National Seminar on Barnyard millet - A Promising Crop for Future Needs organized by Agricultural College & Research Institute (AC&RI), Tamil Nadu Agricultural University (TNAU), Madurai, Tamil Nadu on 10th November 2021.

14.3: Book chapters (1)

1. Tonapi, VA, C Aruna, B Venkatesh Bhat, R Madhusudhana, AV Umakanth, K Hariprasanna, B Gangaiah, G Shyam Prasad, IK Das, **M Elangovan** and RR Chapke, 2020. Fifty years of research and development under All-India Coordinated Research Project on Sorghum. In: Arna, C., Deepika, C., Raghavendra Rao KV. And Vilas A Tonapi (Eds). Golden Jubilee Publication: 50 Years of Sorghum Research: Contribution of AICRP-Sorghum Centres, ICAR-Indian Institute of Millets Research, Hyderabad 500030, Telangana, India. PP 233. ISBN: 978-81-946973-4-3.

14.4: Books / Technical bulletins (4)

1. **Elangovan, M.** 2021. Two Decades of Millets Genetic Resources Management (2000-2020). ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad 500030, Telangana, India, 407 pp ISBN: 978-81- 946973-1-2.
2. **Elangovan, M.**, B Amasiddha, KN Ganapathy, Avinash Singode, A Annapurna and Vilas A Tonapi, 2021. Potential Sorghum Genotypes Identified for Utilization in AICRP on Sorghum Centres (2014-2020). ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad 500030, Telangana, India, 301 pp.
3. Nagaraja, T.E., Prabhakar, H S Saritha, **M Elangovan**, Jayaram Gowda, Sujatha Bhat, C Nandini, K N Ganapathy, K Hariprasanna, B Venkatesh Bhat and Vilas A Tonapi, 2021. DUS Characteristics of Finger millet Varieties.
4. Vilas A Tonapi, TE Nagaraja, Prabhakar, MV Channabyre Gowda, KT Krishne Gowda, A Seetharam, K N Ganapathy, K Hariprasanna, B Venkatesh Bhat, **M Elangovan**, A Nirmalakumari, A K Jain, TSSK Patro, S Saralamma, Dinesh C Joshi, C A Deepak, O P Dubey, Ashwani Kumar Thakur, Laxmi Rawat, Harshal E Patil, Satish Kumar Singh, Pavitra Mohan Mohapatra, Yogesh G Ban, Arun Kumar, C Nandini and Sujata Bhat, 2021. Thirty-Five Years of Research and Development, All-India Coordinated Research Project on Small Millets.

14.5: Technical/Popular articles (2)

1. **Elangovan, M.**, Finger millet genetic resources management, 2022. In: International conference on Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and Prospects Proceedings, Eds. TE Nagaraja, CA Deepak, TS Sukanya, YG Shadakshari, Vilas A Tonapi and S Rajendra Prasad, Excel India Publishers, ISBN: 978-93-91355-33-3, p. 60-69.
2. Ganapathy, KN., K Hariprasanna, B Prabhakar, VC Gowda, BV Bhat, B Amasiddha, **M Elangovan**, TE Nagaraja and Vilas A Tonapi, 2022. Recombination breeding techniques in Finger millet. 2022. In: International conference on Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and

Prospects Proceedings, Eds. TE Nagaraja, CA Deepak, TS Sukanya, YG Shadakshari, Vilas A Tonapi and S Rajendra Prasad, Excel India Publishers, ISBN: 978-93-91355-33-3, p. 102-107

14.6: Compilations and documentations (2)

1. **Elangovan, M.**, 2021. Progress Report: Millets Genetic Resources Management. Annual Group Meetings of AICRP on Sorghum & Small Millets, 17-19th May 2021. 61 pp.
2. **Elangovan, M.**, 2021. Progress Report: CRP-AB on Small millets. Annual Review Meeting of CRP -AB, 6th December 2021. 2 pp.

14.7: Resource person / Lectures / Seminars (20)

14.7.1: International (1)

1. **Elangovan, M.**, 2021. "Digital Field book- Paperless Data Collection [Android Application]" during the International Virtual Workshop on Digital Field Book organized by Department of Genetics and Plant Breeding, Faculty of Agriculture, Annamalai University on 15th September 2021.

14.7.2: National (19)

1. **Elangovan, M.**, 2021. Millets Genetic Resources Management. Delivered Lecture to the Trainees of TEDP through Online Platform – Value Chain on Millets – Stakeholder's Functions and Role by NUTRIHUB, TBISC at ICAR-IIMR-Hyderabad in virtual mode on 1st April 2021.
2. **Elangovan, M.**, 2021. Digitization of PGR characterization data. Delivered Lecture and Demonstration during the Virtual Training Programme on "Plant Genetic Resources Management and Utilization" Organized by the ICAR-National Bureau of Plant Genetic Resources (NBPGR) on 27th July 2021.
3. **Elangovan, M.**, 2021. Scenario of Millets – Area, production and cultivation aspects with reference to local landraces of millets during the Brainstorming session on "Minor millet cultivation in Tamil Nadu – Issues in Cultivation, Procurement and marketing" organized by the Agriculture Production Commissioner and Secretary to Government of Tamil Nadu, Agriculture and Farmers' Welfare Department on 7th August 2021.
4. **Elangovan, M.**, 2021. Millets Diversity. During the Azadi ka Amrit Mahotsav, Theme: National Campaign on Nutricereals and Tree Plantation and Sub-theme: Millets Biodiversity Conservation on 14th September 2021.
5. **Elangovan, M.**, 2021. Nutri-cereals Genetic Resources Management during the National Webinar on Nutri-cereals Genetic Resources Management, School of Agricultural Sciences, Bharath Institute of Higher Education and Research, Chennai, Tamil Nadu, 11th October 2021. (150 participants)
6. **Elangovan, M.**, 2021. Digital Field Book – Paperless Data Collection. In: National Seminar on Barnyard millet - A Promising Crop for Future Needs organized by Agricultural College & Research Institute (AC&RI), Tamil Nadu Agricultural University (TNAU), Madurai, Tamil Nadu on 10th November 2021 (200 participants).
7. **Elangovan, M.**, 2022. Utilizing Digital Field Note Book for Collection, Characterization and Utilization of Plant Genetic Resources" In: ICAR Sponsored Short Course "Exploitation of Genetic Resources of Underutilized Tuber Crops" organized by ICAR-Central Tuber Crops Research Institute (CTCRI), Thiruvananthapuram on 3rd February 2022 (30 participants).
8. **Elangovan, M.**, 2022. Digital Field Book – Paperless Data Collection. In: ICAR Sponsored Winter School on "Underexploited Vegetables: Unexplored treasure trove for Food, Nutritional and Economic Security" organized by ICAR-Indian Institute of Vegetable Research (IIVR), Varanasi on 9th February 2022 (25 participants).
9. **Elangovan, M.**, 2022. Digitalization of Field Data. In: Virtual Training on Data Digitalization and Visualization" organized by ICAR-Indian Institute Spices Research (IISR), Calicut and All-India Coordinated Research Project on Spices on 22nd February 2022 (100 participants).
10. **Elangovan, M.**, 2022. MS Excel: Tool for Experimental Database. In: Virtual Training on Data Digitalization and Visualization" organized by ICAR-Indian Institute Spices Research (IISR), Calicut and All-India Coordinated Research Project on Spices on 23rd February 2022 (100 participants).
11. **Elangovan, M.**, 2022. Introduction to DIVA-GIS: Diversity Analysis. In: Virtual Training on Data Digitalization and Visualization" organized by ICAR-Indian Institute Spices Research (IISR), Calicut and All-India Coordinated Research Project on Spices on 24th February 2022 (100 participants).
12. **Elangovan, M.**, 2022. MS Access – Tool for Connecting Database. In: Virtual Training on Data Digitalization and Visualization" organized by ICAR-Indian Institute Spices Research (IISR), Calicut and All-India Coordinated Research Project on Spices on 24th February 2022 (100 participants).
13. **Elangovan, M.**, 2022. DIVA-GIS: Tool for Data Visualization. In: Online Training on "Data Management" organized by

- ICAR-Indian Institute Millets Research (IIMR), Hyderabad for All-India Coordinated Research Project on Sorghum and Small millets, 3-5th March 2022 (130 participants).
14. **Elangovan, M.**, 2022. MS Excel – Tool for Germplasm Database. In: Online Training on “Data Management” organized by ICAR-Indian Institute Millets Research (IIMR), Hyderabad for All-India Coordinated Research Project on Sorghum and Small millets, 3-5th March 2022 (130 participants).
 15. **Elangovan, M.**, 2022. Digital Field Book for Paperless Data Collection. In: Online Training on “Data Management” organized by ICAR-Indian Institute Millets Research (IIMR), Hyderabad for All-India Coordinated Research Project on Sorghum and Small millets, 3-5th March 2022 (130 participants).
 16. **Elangovan, M.**, 2022. MS Access – for Connecting Germplasm Database. In: Online Training on “Data Management” organized by ICAR-Indian Institute Millets Research (IIMR), Hyderabad for All-India Coordinated Research Project on Sorghum and Small millets, 3-5th March 2022 (130 participants).
 17. **Elangovan, M.**, 2022. Scientific Video Editing. In: Online Training on “Data Management” organized by ICAR-Indian Institute Millets Research (IIMR), Hyderabad for All-India Coordinated Research Project on Sorghum and Small millets, 3-5th March 2022 (130 participants).
 18. **Elangovan, M.**, 2022. Millets Genetic Resources Management. In: Initiative on “Certified Farmer Advisor on Millets” to develop Agricultural Extension Personnel into specialists in Millets, organized by ICAR-Indian Institute Millets Research (IIMR), Hyderabad in collaboration with MANAGE, Hyderabad 8th March 2022 (20 participants).
 19. **Elangovan, M.**, 2022. Digitalization of Data Collection in Extension Management. In: Initiative on “Certified Farmer Advisor on Millets” to develop Agricultural Extension Personnel into specialists in Millets, organized by ICAR-Indian Institute Millets Research (IIMR), Hyderabad in collaboration with MANAGE, Hyderabad 8th March 2022 (20 participants).

15. Trainings

15.1: Training attended (1)

15.1.1: National (1)

1. Virtual Training on Data Digitalization and Visualization” Organized by ICAR-Indian Institute Spices Research (IISR), Calicut and All-India Coordinated Research Project on Spices during 22-24th February 2022.

15.2: Training organized (6)

15.2.1: International (1)

1. International Virtual Workshop on Digital Field book- Paperless Data Collection [Android Application]” organized jointly by Department of Genetics and Plant Breeding, Faculty of Agriculture, Annamalai University and ICAR-Indian Institute of Millets Research (IIMR) on 15th September 2021. (Coordinator: Drs **M Elangovan** and Sunil Kumar)

15.2.2: National (5)

1. Virtual Training on Data Digitalization and Visualization” Organized by ICAR-Indian Institute Spices Research (IISR), Calicut and All-India Coordinated Research Project on Spices during 22-24th February 2022 (Coordinator (s): Drs. C Sarathambal, Sharon Arvind, S Aarthi and **M Elangovan** (81 participants).
2. National Science Day –Visit of Engineering College students from Kommuri Pratap Reddy Institute of Technology, 28th February 2022 to ICAR-IIMR-Hyderabad. Coordinator (s): Drs **M Elangovan**, R Venkateshwarlu, V Ravi Kumar and Mr Shetty Mahesh.
3. Online training on Data Management, ICAR-Indian Institute of Millets Research (IIMR), 3-5th March 2022. Coordinator (s): Drs **M Elangovan**, KN Ganapathy, B Amasiddha, K Venkatesh and Shri OV Ramana.
4. Training on “Farm Mechanization and Management”, ICAR-Indian Institute of Millets Research (IIMR), 23-25th March 2022. Coordinator (s): Drs **M Elangovan**, B Amasiddha and C Deepika (15 participants).
5. Training on “Genotype to Genomics and Advanced laboratory tools”, ICAR-Indian Institute of Millets Research (IIMR), 28-30th March 2022. Coordinator (s): Drs **M Elangovan**, B Amasiddha and KN Ganapathy (40 participants).

16. Workshop/Seminar/Symposia/Conferences/Group Meetings

16.1: Workshop/Seminar/Symposia/Conferences/Group Meetings organized (4)

1. First Dr NGP Rao Memorial Lecture and Dr NGP Rao Lifetime Achievement Award Organized by the Society for Millets Research and ICAR-Indian Institute of Millets Research (IIMR) on 5th September 2021. (Coordinator: **M Elangovan**)
2. Azadi ka Amrit Mahotsav, Theme: National Campaign on Nutricereals and Poshan Vatika Maha Abhiyan, Sub-theme: Millets Biodiversity Conservation on 14th September 2021. (Coordinator: Drs **M Elangovan**, B Amasiddha and VM

Malathi)

3. Week-long Celebrations under the Azadi ka Amrit Mahotsav, Theme: National Campaign on Nutricereals and Poshan Vatika Maha Abhiyan 12-16th September 2021. (Coordinator: Dr **M Elangovan**)
4. Azadi ka Amrit Mahotsav, Theme: 'National Campaign on Agriculture and Environment-Citizen Face' on 26th November 2021. (Coordinator: Drs. **M Elangovan**, V Ravikumar, KBRS Visarada, Jinu Jacob, Srividhya. B Amasiddha, C Deepika and R Swarna.

16.2: Workshop/Seminar/Symposia/Conferences/Group Meetings attended (18)

16.2.1: International (6)

1. Expert Consultation for Securing the Long-term Conservation and Use of Sorghum Genetic Resources Globally on 23 September 2021 Organized by The Crop Trust, Bonn, Germany.
2. Agri-talks – India-Brazil - Agricultural Innovation and Food Security organized by elets, IARI, Pusa Krishi and ApexBrasil on 28th September 2021.
3. International conference on Future Challenges and Prospects in Plant Breeding, Organized by Centre for Plant Breeding and Genetics & Indian Society of Plant Breeders (ISPB) 6-7th October 2021.
4. 2nd International Agrobiodiversity Congress organized by Bioversity International, Rome, Italy, 15-18th November 2021.
5. Participated in the One-day Webinar on "Data mining in agriculture" under the Program for Big Data in Agriculture organized by CGIAR on 10th December 2021.
6. International conference on "Harnessing the Potential of Finger Millet for Achieving Food and Nutritional Security: Challenges and Prospects (ICFM-2022)" January 19-22, 2022 Venue - Zonal Agricultural Research Station, V. C. Farm, Mandya, Karnataka, India.

16.2.2: National (12)

1. Virtual Group Meetings of AICRP on Sorghum & AICRP on Small Millets 51st Group Meeting of AICRP on Sorghum & 32nd Group Meeting of AICRP on Small Millets Programme, 17-19th May, 2021.
 2. 8th Dr Harbhajan Singh Memorial Lecture on "Challenges to the utilization of genebanks" by Professor Paul Gepts, University of California, Davis, on the occasion of celebrating 45th Foundation Day of ICAR-NBPGR on 2nd August 2021.
 3. General Body Meeting of Indian Society of Plant Genetic Resources (ISPGR) organized by ICAR-NBPGR-New Delhi on 27th August 2021.
 4. 4th Dr A.B. Joshi Memorial Lecture on "Farmers' varieties, grassroots innovations and the emerging role of global genebanks" by Professor Anil Gupta, Visiting Faculty of Indian Institute of Management, Ahmedabad on 27th August 2021 organized by the Indian Society of Plant Genetic Resources, ICAR-NBPGR-New Delhi.
 5. National Campaign on Nutri-Cereals and Poshan Vatika Maha Abhiyan and Nutri-Cereal Multi-Stakeholder Convention 3.0 organized by ICAR-Indian Institute of Millets Research (IIMR) at the Hyderabad International Convention Centre (HICC), Kondapur, Hyderabad, 17-18th September 2021.
 6. XXXVth Meeting of Plant Germplasm Registration Committee (PGRC) organized by ICAR-National Bureau of Plant Genetic Resources (NBPGR), New Delhi on 21st September 2021 under the Chairmanship of Dr Tilak Raj Sharma, DDG (CS), ICAR-New Delhi.
 7. Webinar on "Working model (s) to maximize the use of genetic diversity in plant breeding programs" by Dr SK Vasal, World Food Prize laureate on the occasion of World Food Day, Organized by the Indian Society of Plant Genetic Resources and ICAR-National Bureau of Plant Genetic Resources (NBPGR), 16th October 2021.
- National Consultation on Plant-based Local Food System for Health and Nutrition - a side event of 2nd International Agrobiodiversity Congress organized by Alliance of Bioversity International and International Centre for Tropical Agriculture (CIAT), Indian Society of Plant Genetic Resources (ISPGR), International Crops Research for Semi-Arid Tropics (ICRISAT) and Trust for Advancement for Agricultural Sciences (TAAS) on 22nd October 2021.
- National Seminar on Barnyard millet - A Promising Crop for Future Needs organized by Agricultural College & Research Institute (AC&RI), Tamil Nadu Agricultural University (TNAU), Madurai, Tamil Nadu on 10th November 2021.
- Participated in the Review Meeting on Consortium Research Platform (CRP) on Agro-Biodiversity organized by the ICAR-NBPGR-New Delhi on 6th December 2021.
8. PPVFRA Azadi ka Amrit Mahotsav webinar with Plant Genome Saviour Community Awardee(s) on 12th January 2022.
 9. XXXVIIth Meeting of Plant Germplasm Registration Committee (PGRC) organized by ICAR-National Bureau of Plant Genetic Resources (NBPGR), New Delhi on 29th March 2021 under the Chairmanship of Dr Tilak Raj Sharma, DDG



(CS), ICAR-New Delhi.

17. Institutional activities

1. Chairman, Institute Germplasm Identification Committee (IGIC) (Since 2018)
2. Coordinator, Event Management (Since 2002)
3. Genebank Curator (Since 2000)
4. Facilitator – Human Resource Development
5. Facilitator – Intellectual Property Management
6. Facilitator – Millets Germplasm Exchange
7. Visitors Service (Since 2000)

18. Annexures

**Annexure Table 15: Finger millet germplasm 1375 acc. (2500 acc.) characterization and screening and ranking for days to 50% flowering, finger number and no. of productive tillers**

No	Acc. No	Days to 50% flowering								Finger Number								No. of Productive tillers							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
1	IC0007218	69	432	73	879	85	1012	76	1006	7	358	5	1092	10	84	7	219	2	197	3	1170	7	271	4	340
2	IC0007579	66	184	71	779	77	821	71	628	6	769	5	1031	8	526	7	734	2	412	3	1083	4.5	757	3	884
3	IC0007951	64	12	67	432	100	1289	77	1085	6	810	5	1275	10	104	7	369	1	1099	4	879	3.5	974	3	1210
4	IC0007952	65	147	67	441	63	289	65	115	7	434	5	1208	6	1043	6	1182	1	938	4	543	7.5	242	4	256
5	IC0043274	70	584	63	199	60	238	64	82	6	1058	6	822	6	1035	6	1148	1	1221	4	824	8	164	4	268
6	IC0043275	73	861	68	660	65	319	69	370	6	644	6	788	6	1050	6	1077	2	353	3	1065	11.5	11	6	17
7	IC0043276	79	1353	66	430	62	271	69	403	7	178	6	978	4	1368	5	1328	2	105	5	416	10.5	41	6	13
8	IC0044035	75	983	66	407	68	453	70	468	6	973	5	1218	7	768	6	1149	2	521	3	1091	7.5	225	4	255
9	IC0045839	65	122	73	850	106	1322	81	1240	6	1144	6	953	5	1354	6	1313	1	1264	5	414	6	432	4	466
10	IC0045842	74	889	67	497	67	380	69	434	7	74	7	573	5	1298	6	1039	2	59	3	1134	5	699	3	799
11	IC0045843	79	1323	89	1388	103	1309	90	1375	6	512	6	928	7	946	6	960	2	269	3	1157	3.5	1125	3	1149
12	IC0045844	77	1181	63	230	72	652	71	564	6	1207	6	993	8	493	6	901	1	1295	4	980	3	1218	3	1299
13	IC0045845	72	767	73	911	80	912	73	798	7	282	5	1023	6	1175	6	1006	2	147	4	984	7.5	252	6	20
14	IC0045847	76	1129	73	936	51	9	67	221	7	223	6	948	9	110	7	330	1	845	4	839	7	275	4	421
15	IC0045849	65	133	62	126	69	509	82	1243	7	435	5	1288	6	1091	6	1078	1	939	4	1010	10	46	4	454
16	IC0045850	75	971	58	46	72	661	68	336	6	601	5	1291	8	494	6	902	2	321	4	882	5.5	501	4	514
17	IC0045851	71	615	68	619	84	1003	74	916	7	90	5	1041	9	246	7	331	1	763	5	423	5	632	4	665
18	IC0045852	77	1186	70	763	83	982	77	1067	6	939	5	1101	10	81	7	370	1	1162	4	854	7.5	187	4	322
19	IC0045854	71	628	58	30	75	750	68	322	5	1329	5	1153	6	1141	6	1314	1	1358	4	865	9	90	5	163
20	IC0045855	76	1047	62	155	85	1015	74	917	6	573	5	1067	4	1381	5	1353	2	304	4	533	7.5	262	5	155
21	IC0045858	67	286	63	179	85	1021	72	669	7	399	6	913	5	1340	6	1218	2	217	3	1074	10.5	40	5	52
22	IC0045858-X	77	1150	76	1116	103	1312	85	1344	6	542	6	939	6	1253	6	1150	2	285	3	1298	5.5	591	3	768
23	IC0045859	75	999	58	47	55	111	63	33	7	243	7	370	8	360	7	220	1	854	3	1121	3.5	1022	3	1281
24	IC0045860	65	109	73	849	77	841	72	670	7	155	6	778	7	844	7	671	2	92	4	816	3	1235	3	1129
25	IC0045862	77	1153	58	56	75	762	70	501	6	543	6	834	6	1146	6	1079	2	286	4	825	5.5	578	4	516
26	IC0045863	71	662	66	379	98	1266	78	1150	6	1026	6	731	7	933	6	903	2	550	3	1063	2.5	1329	3	1265
27	IC0045864	77	1246	58	62	53	18	63	34	5	1291	6	830	9	112	7	555	1	1338	4	717	5.5	448	4	701
28	IC0045865	77	1189	58	59	70	584	68	337	6	544	6	665	7	793	7	735	2	287	3	1281	5.5	540	3	754
29	IC0045866	77	1208	66	423	72	673	72	671	7	40	5	1137	9	202	7	371	1	738	4	539	6.5	319	4	398
30	IC0045867	77	1250	79	1259	60	243	74	885	6	1208	4	1329	8	387	11	1	2	633	4	552	6	382	3	803
31	IC0045868	69	454	79	1209	100	1286	83	1279	7	359	5	1157	9	294	7	460	1	897	4	540	3.5	1005	3	1099
32	IC0045869	71	747	64	281	58	188	64	83	7	91	5	1055	6	1026	6	1080	2	68	4	987	3	1246	3	1169
33	IC0045874	64	57	63	167	63	285	63	53	6	1160	6	743	6	1040	6	1116	1	1274	5	247	3.5	1143	3	971
34	IC0045878	70	564	66	367	69	486	68	338	6	1059	5	1048	8	440	6	836	1	1222	4	730	5.5	497	4	707
35	IC0045880	71	639	79	1220	100	1293	83	1298	6	663	5	1079	5	1350	6	1315	1	1034	3	1304	7	315	4	630
36	IC0049931	71	608	66	372	100	1280	79	1171	6	664	5	1142	7	936	6	1040	2	360	6	120	2.5	1330	3	836
37	IC0049934	77	1207	71	816	73	698	74	865	7	194	5	1179	8	505	7	736	1	826	3	1184	7.5	216	4	444
38	IC0049935	78	1280	58	63	75	744	70	532	6	934	8	106	9	215	8	92	2	498	4	453	8.5	106	5	90
39	IC0049936	70	520	63	194	83	975	72	709	7	106	11	4	7	874	8	15	1	774	4	893	4.5	803	3	1043
40	IC0049937	71	719	79	1227	70	546	73	829	6	1240	9	57	8	460	7	195	2	647	5	168	7.5	214	5	97
41	IC0049939	66	231	80	1268	68	468	71	629	6	1129	6	843	7	773	6	1007	1	1257	4	718	2.5	1317	3	1312
42	IC0049940	70	576	79	1217	58	181	69	404	6	1060	6	850	7	705	6	1008	2	560	5	320	4.5	784	4	515
43	IC0049941	70	528	79	1213	76	801	75	962	7	336	7	317	8	523	7	221	2	184	4	678	9	83	5	82
44	IC0049942	68	371	79	1201	77	834	75	941	6	744	6	934	9	232	7	417	2	400	4	520	6.5	322	4	251
45	IC0049944	67	300	79	1194	78	880	75	942	5	1363	6	935	6	1171	6	1282	1	1379	4	838	5.5	580	3	777
46	IC0049947	70	483	71	768	89	1108	76	1044	6	724	6	836	7	984	6	1041	2	717	3	1071	4.3	875	3	890
47	IC0049949	70	574	75	1080	58	194	68	297	7	107	5	1015	9	135	7	332	2	72	5	204	9.5	50	6	22
48	IC0049951	70	549	79	1214	100	1288	83	1284	6	695	5	1247	7	940	6	1117	1	1049	5	211	5	680	4	538
49	IC0049953	76	1042	79	1249	88	1090	81	1228	7	224	6	676	9	263	7	222	2	115	4	705	3.5	998	3	947



50	IC0049955	64	1	79	1171	100	1290	81	1229	6	1161	4	1330	10	105	7	556	1	1275	4	649	5.5	445	4	641
51	IC0049956	69	443	81	1293	87	1064	79	1172	6	1081	7	446	9	257	7	257	1	1230	5	182	5.5	474	4	433
52	IC0049958	67	270	72	828	77	846	72	710	7	400	5	1097	8	531	7	672	2	218	5	208	4.5	759	4	442
53	IC0049960	75	1030	85	1381	55	119	72	672	6	975	7	440	6	1013	6	1009	1	1175	5	139	7	303	4	196
54	IC0049964	64	46	76	1084	65	341	68	339	6	1162	6	768	6	1054	6	1151	1	1276	4	607	10.5	35	5	58
55	IC0049965	64	26	72	826	100	1294	79	1160	7	166	6	625	7	941	7	557	1	806	5	309	2.5	1332	3	1212
56	IC0049966	66	206	72	827	69	516	69	405	6	1130	6	702	8	452	7	616	2	594	4	603	6.5	332	4	274
57	IC0049967	70	565	79	1216	68	460	72	741	6	696	6	932	9	169	7	418	2	377	4	623	7.5	190	5	166
58	IC0049969	67	262	74	981	93	1186	78	1140	6	1116	5	1169	8	594	6	961	2	586	3	1307	5.5	513	3	763
59	IC0049973	77	1151	79	1256	90	1155	82	1253	6	545	7	376	9	274	7	167	2	288	4	474	5.5	477	4	394
60	IC0049974	74	899	79	1240	69	526	74	886	7	269	8	153	8	453	8	138	1	867	6	56	3.5	1042	4	687
61	IC0049976	76	1036	76	1114	89	1120	80	1208	6	955	8	117	7	902	7	419	1	1169	5	128	10.5	32	6	15
62	IC0049977	79	1338	79	1264	67	407	75	963	7	28	7	455	7	757	7	461	2	38	5	378	4.5	791	4	550
63	IC0049979	68	353	76	1092	69	506	71	595	6	1098	6	687	8	450	7	617	1	1241	4	503	6.5	331	4	405
64	IC0049979-X	72	776	68	643	84	1010	75	943	7	79	5	1198	7	879	6	962	2	63	4	743	4.5	805	4	710
65	IC0049981	68	365	68	575	73	706	70	469	7	376	5	1303	6	1130	6	1241	1	904	4	1013	4.5	838	3	1072
66	IC0049982	70	521	73	887	71	633	71	630	6	1246	7	397	6	1116	6	1042	2	651	5	181	8	168	5	74
67	IC0049983	77	1141	58	55	93	1197	76	1026	7	196	8	186	8	597	8	139	2	107	5	281	9.5	59	5	36
68	IC0049986	65	77	79	1179	103	1310	82	1262	6	791	5	1082	7	947	6	1043	2	428	6	53	4	923	4	352
69	IC0049988	71	678	68	630	81	937	73	830	7	92	8	171	8	553	8	119	3	3	6	69	8	145	6	19
70	IC0049991	79	1337	61	118	69	499	70	470	5	1287	5	1069	8	446	6	1010	2	667	5	330	7.5	211	5	126
71	IC0049992	76	1126	61	110	58	186	65	116	6	574	7	583	7	706	7	673	1	1000	5	150	3.5	1086	3	883
72	IC0049993	72	780	61	99	72	655	68	340	7	283	6	996	7	810	6	837	2	148	4	845	7.5	228	4	205
73	IC0049995	69	456	61	96	70	538	67	222	6	725	7	584	8	459	7	420	3	11	5	307	11.5	8	6	5
74	IC0049995-X	70	551	79	1215	90	1147	80	1190	6	697	6	680	7	908	7	785	1	1050	5	193	8	162	5	134
75	IC0049996	75	962	68	674	78	858	74	866	5	1308	5	1038	7	846	6	1183	1	1347	4	848	5.5	554	3	769
76	IC0049999	73	845	79	1236	95	1220	82	1263	5	1319	10	17	8	605	8	91	2	682	3	1104	4	905	3	1023
77	IC0049999-X	77	1175	58	57	91	1169	75	983	6	546	8	147	7	913	7	333	1	988	6	95	7.5	234	5	139
78	IC0050000	79	1293	79	1262	97	1249	85	1338	6	513	5	1248	9	289	7	618	1	974	6	123	6.5	324	4	225
79	IC0050011	76	1053	68	690	83	991	76	1007	6	956	6	718	8	563	7	619	2	510	4	809	4.5	762	3	752
80	IC0050015	71	643	68	622	86	1057	75	964	6	665	6	873	6	1203	6	1118	1	1035	4	965	11.5	14	5	46
81	IC0050015-X	75	937	68	673	106	1335	83	1285	7	244	7	275	8	636	7	196	2	126	5	229	5	655	4	381
82	IC0053739	72	792	74	1026	68	431	71	631	6	1008	7	263	7	763	7	558	2	539	4	467	5	668	4	490
83	IC0065559	78	1264	68	719	71	619	72	742	6	528	5	1040	9	192	7	462	2	276	4	986	5	628	4	666
84	IC0065595	65	67	68	535	103	1308	79	1161	7	436	6	875	7	945	7	786	1	940	4	616	7	297	4	350
85	IC0065632	64	30	64	250	80	900	69	435	6	910	7	575	8	544	7	463	2	485	5	388	3.5	1061	3	824
86	IC0065674	75	976	68	676	78	863	74	867	6	603	7	274	7	847	7	464	2	323	4	776	4.5	801	3	747
87	IC0065694-X	71	623	68	620	102	1306	80	1209	6	1027	8	130	8	626	7	223	2	551	7	24	7.5	222	5	37
88	IC0065698-X1	77	1201	66	422	102	1304	82	1244	7	41	8	177	6	1252	7	465	1	739	5	131	4.5	860	4	601
89	IC0065699	64	16	71	769	81	941	72	711	5	1373	6	784	9	241	7	559	1	1383	4	955	6	375	4	667
90	IC0065699-X	77	1193	65	326	88	1093	77	1068	6	1209	8	142	8	584	7	294	2	634	6	94	7.5	221	5	76
91	IC0065922	65	97	68	538	75	761	69	436	6	792	4	1358	7	826	6	1219	2	429	4	1020	7.5	230	4	234
92	IC0065946	71	627	79	1218	72	666	74	887	7	300	7	532	6	1123	6	838	1	874	4	794	12.5	2	6	12
93	IC0065956	69	451	68	590	97	1251	78	1141	6	1082	8	170	7	929	7	466	2	573	5	279	9.5	64	5	38
94	IC0065966	67	265	68	561	87	1072	74	888	7	401	8	92	8	579	8	102	2	219	3	1107	5	652	3	783
95	IC0065983	72	779	73	912	78	864	74	918	6	650	5	1261	6	1167	6	1262	1	1026	3	1096	4.5	846	3	1122
96	IC0065984	71	665	79	1223	73	702	74	919	6	1028	7	316	7	818	7	620	1	1199	4	470	5.5	546	4	606
97	IC0065985	70	560	73	891	67	388	70	502	6	698	7	400	6	1064	6	839	2	378	5	233	3.5	1147	4	708
98	IC0066048	69	416	73	878	87	1069	76	1045	6	726	5	1175	4	1384	5	1360	1	1062	3	1181	9.5	73	5	175
99	IC0066088-X1	71	648	79	1221	70	555	73	831	5	1330	7	242	8	463	7	467	2	688	5	228	8.5	116	5	64
100	IC0066128	77	1254	73	943	65	324	72	673	6	547	7	335	6	1051	7	787	2	289	4	578	4	931	3	795
101	IC0066132	75	959	79	1243	97	1247	84	1306	7	245	10	13	6	1241	8	120	2	127	3	1023	3.5	1171	3	1089



102	IC0066140-X1	78	1270	73	946	70	552	74	868	7	190	8	163	7	784	7	295	1	822	5	278	4.5	794	3	743
103	IC0066172	70	596	73	893	64	301	69	406	6	875	7	269	10	48	8	72	2	471	6	41	7.5	181	5	50
104	IC0066178-X1	71	650	68	624	77	832	72	712	7	93	7	410	9	231	8	103	1	764	5	298	10.5	26	5	35
105	IC0066255	66	218	79	1191	70	569	72	674	6	1271	7	453	7	789	6	840	2	663	5	140	5	670	4	310
106	IC0069583	71	633	73	898	87	1076	77	1086	7	301	6	865	7	891	7	788	2	162	3	1151	8	158	4	216
107	IC0069594	70	527	68	600	72	650	70	503	6	1061	7	411	8	492	7	421	2	561	4	588	6	391	4	343
108	IC0069598	66	187	73	854	83	990	74	889	6	1131	6	698	5	1335	6	1263	1	1258	2	1386	8	177	4	584
109	IC0069598-X	75	988	70	760	67	397	71	565	6	604	6	871	8	419	7	621	2	324	6	118	6	385	5	181
110	IC0071331	74	891	79	1239	73	707	75	984	6	629	9	38	8	507	8	80	2	343	5	125	6	393	4	191
111	IC0071331-X1	68	319	73	868	80	896	74	869	7	377	8	161	9	239	8	73	2	208	4	665	4.5	730	4	685
112	IC0071333	77	1216	79	1257	70	564	75	985	5	1292	7	241	7	788	7	737	1	1339	3	1034	3.5	1101	3	1261
113	IC0071335	67	296	73	864	70	561	70	504	6	756	5	1095	6	1102	6	1220	2	405	5	260	3	1247	3	862
114	IC0071338	75	987	76	1111	90	1137	80	1210	6	605	7	252	6	1221	7	738	2	325	4	465	7	307	4	193
115	IC0071345	65	111	79	1183	68	449	71	566	7	437	6	933	8	433	7	560	1	941	5	412	7.5	209	4	223
116	IC0071355	76	1088	74	1052	80	920	77	1069	6	575	11	6	8	549	8	16	1	1001	5	273	6.5	337	4	315
117	IC0071357	65	128	79	1185	70	540	71	632	6	905	7	321	7	782	7	561	2	484	5	368	9	86	5	60
118	IC0071359	75	992	68	677	67	394	70	505	5	1309	5	1192	10	51	7	562	2	678	4	637	5.5	441	4	440
119	IC0071365	77	1157	68	697	73	679	73	771	6	548	5	1304	9	204	7	674	1	989	4	550	7.5	194	4	253
120	IC0071365-X	75	982	79	1245	93	1178	82	1264	6	606	7	314	6	1230	7	789	2	326	3	1217	5	693	3	855
121	IC0071373-X	66	225	64	257	77	828	69	407	6	1132	7	293	8	528	7	334	1	1259	4	575	9.5	56	5	99
122	IC0071377	78	1267	74	1069	73	709	75	965	6	828	8	204	9	208	8	121	2	443	4	459	9.5	52	5	51
123	IC0071379	72	809	68	651	76	793	72	713	7	80	8	172	6	1152	7	468	2	64	3	1111	5	688	3	790
124	IC0071380	71	675	74	1016	86	1044	77	1087	6	1029	7	389	9	251	7	224	1	1200	6	106	4.5	732	4	544
125	IC0071381	79	1313	69	748	77	848	75	966	6	514	10	25	8	533	8	47	2	270	4	757	4	901	3	897
126	IC0071382	72	778	79	1230	100	1284	84	1307	7	284	10	12	7	938	8	48	1	871	4	896	2.5	1331	2	1339
127	IC0071383	72	813	68	652	98	1265	79	1181	6	1009	10	22	8	618	8	59	1	1192	5	124	8.5	118	5	88
128	IC0071389	76	1084	64	296	88	1091	76	1027	7	50	9	29	7	896	8	81	2	48	5	215	8	159	5	81
129	IC0071393	71	676	68	629	93	1195	77	1112	6	1241	8	211	8	596	7	372	2	648	5	361	5.5	514	4	365
130	IC0071395	65	69	79	1177	88	1095	77	1113	7	438	6	845	8	585	7	504	2	232	3	1150	4	904	3	1029
131	IC0071396	71	705	79	1226	93	1193	81	1230	7	302	5	1008	9	280	7	373	1	875	4	982	4	890	3	1161
132	IC0071397	66	186	74	974	105	1315	82	1245	7	141	7	387	8	629	7	225	1	794	4	475	7.5	223	4	244
133	IC0071398	75	922	79	1241	93	1190	82	1265	6	976	9	37	9	279	8	49	1	1176	4	657	7	277	4	377
134	IC0071399	80	1361	79	1267	88	1083	82	1266	6	502	9	56	10	89	8	23	1	968	4	449	9.5	49	5	87
135	IC0071401	69	412	64	266	72	657	68	341	6	1083	9	60	6	1121	7	505	1	1231	3	1025	3.5	1155	3	1260
136	IC0071402	66	172	74	970	76	770	72	714	7	142	8	201	9	218	8	74	1	795	3	1113	4.5	727	3	1137
137	IC0071403	64	39	64	251	68	428	65	134	6	1280	7	291	10	57	8	104	1	1332	3	1037	8.5	100	4	243
138	IC0071404	65	121	79	1184	68	425	71	567	6	1145	8	154	8	428	7	258	1	1265	3	1030	6.5	329	4	595
139	IC0071405	67	302	79	1195	70	539	72	715	6	1117	7	244	7	781	7	563	2	587	4	915	2.5	1319	3	1244
140	IC0071406	72	771	80	1269	90	1129	81	1216	6	651	7	313	6	1219	7	790	1	1027	4	923	4	941	3	1165
141	IC0071407	76	1115	74	1055	60	233	70	506	5	1299	7	384	7	716	6	841	2	673	4	784	7.5	224	4	206
142	IC0071408	69	408	79	1206	81	932	76	1046	6	727	7	315	7	863	7	506	1	1063	4	677	5.5	559	4	700
143	IC0071409	76	1113	73	933	65	315	71	633	7	226	6	947	5	1296	6	1242	2	117	3	1075	4.5	863	3	892
144	IC0071410	65	130	74	964	69	489	69	437	7	439	7	261	8	442	7	197	2	233	4	916	3.5	1039	3	1047
145	IC0071411	75	924	68	671	83	970	75	986	6	843	8	174	9	243	6	1221	1	1114	5	360	5.5	472	4	198
146	IC0071412	80	1358	79	1266	100	1279	86	1353	7	22	5	1011	8	624	7	564	2	34	3	1080	5	654	3	731
147	IC0071413	80	1366	73	952	81	950	78	1142	6	503	6	775	6	1187	6	1081	2	266	3	1145	2.5	1351	3	1292
148	IC0071418	66	160	73	853	89	1113	76	1028	7	417	6	779	7	899	7	739	1	925	3	1237	6	410	3	854
149	IC0071419	66	230	79	1192	69	502	71	634	6	1272	5	1010	8	448	6	963	2	664	4	846	3.5	1040	3	1016
150	IC0071420	68	375	79	1202	68	440	72	675	7	378	5	1158	8	431	7	740	2	209	5	162	4.5	752	4	408
151	IC0073541	69	430	79	1207	71	628	73	799	7	360	9	36	6	1114	7	259	2	198	4	560	5.5	573	4	434
152	IC0087466	70	557	68	607	69	505	69	408	6	699	7	354	8	449	7	296	2	379	4	581	3	1216	3	1025
153	IC0087486	76	1055	79	1250	110	1365	88	1367	5	1300	7	530	9	304	7	422	1	1343	5	305	4.5	739	3	745



154	IC0087492	64	35	68	530	73	703	68	342	6	811	6	793	7	819	6	842	1	1100	4	820	2.5	1321	2	1327
155	IC0087497	67	303	79	1196	68	461	71	635	7	402	6	847	9	170	7	297	2	220	4	614	4	883	3	787
156	IC0087500	64	56	79	1176	55	89	66	171	6	911	6	681	7	683	6	843	1	1149	4	602	6	401	4	534
157	IC0087501	66	227	73	857	69	501	69	438	6	770	6	695	8	447	7	507	2	413	5	399	7.5	212	5	140
158	IC0087503	70	545	75	1079	77	842	74	890	7	337	5	1251	9	235	7	508	2	185	5	435	3	1208	3	934
159	IC0087510	68	385	73	874	60	239	67	247	6	889	8	164	8	386	7	226	2	475	4	769	2.5	1287	3	1208
160	IC0087514-X	67	266	68	562	73	688	69	439	6	757	7	483	6	1128	6	904	2	406	5	380	4	936	4	670
161	IC0087522	70	506	79	1212	86	1050	78	1151	6	1062	7	318	10	87	8	93	2	562	4	924	7	272	4	284
162	IC0087523	73	856	79	1237	95	1211	82	1267	6	645	9	35	8	603	8	82	1	1022	5	349	5.5	517	4	541
163	IC0087524	71	668	68	628	75	734	71	636	7	304	6	882	6	1139	6	1044	2	164	5	199	4	937	4	537
164	IC0087525	78	1277	63	238	102	1305	81	1231	6	935	8	99	5	1353	6	905	1	1160	5	218	4	953	3	859
165	IC0087530	65	115	63	170	76	794	68	323	7	156	5	1063	9	224	7	335	2	93	4	988	3.5	991	3	1054
166	IC0087533	75	978	79	1244	88	1081	81	1217	6	977	10	18	8	583	8	60	2	523	4	444	7.5	220	5	150
167	IC0087539	77	1176	71	814	99	1278	82	1268	6	1210	15	2	6	1246	9	11	2	635	4	442	3.5	1172	3	866
168	IC0087540	75	1010	79	1247	53	34	69	409	7	246	7	528	8	335	7	336	1	855	5	142	5.5	482	4	396
169	IC0096774	65	120	62	125	68	463	65	117	7	157	7	300	7	771	7	337	2	94	4	676	4.5	793	4	693
170	IC0096775	75	1004	68	680	55	65	66	172	6	1226	6	888	8	347	6	844	1	1303	3	1072	2.5	1283	2	1355
171	IC0096776	68	356	65	319	67	390	67	223	6	1099	7	289	6	1065	6	845	1	1242	4	920	8.5	130	4	229
172	IC0096777	67	290	58	21	74	719	66	195	6	1118	8	229	9	211	8	140	2	588	4	912	8	140	5	178
173	IC0096781	75	1028	63	222	55	71	64	84	6	607	8	100	7	678	7	298	2	327	3	1109	11.5	10	6	21
174	IC0096782	77	1240	68	715	55	86	67	224	5	1293	8	167	5	1275	6	1119	2	670	3	1212	8.5	135	5	186
175	IC0096783	76	1123	58	54	55	98	63	42	6	576	9	34	7	684	8	141	2	305	4	559	8.5	120	5	95
176	IC0096785	70	581	66	370	55	96	64	56	7	338	8	138	10	41	8	24	1	888	3	1267	5	616	3	1125
177	IC0096793	76	1139	66	420	55	92	66	151	6	836	6	733	6	1005	6	1082	2	449	4	810	6.5	350	4	333
178	IC0096810	64	43	66	331	69	497	66	196	7	167	8	97	6	1087	7	374	3	4	4	452	5.5	571	4	247
179	IC0096815	67	306	79	1197	60	224	69	371	6	1266	7	245	8	381	7	423	2	660	5	135	7.5	203	5	91
180	IC0096817	64	49	58	8	65	335	62	25	6	1163	7	514	9	152	7	260	2	608	6	80	7.5	189	5	69
181	IC0096844	66	190	79	1189	71	625	72	716	7	418	7	529	8	484	7	338	1	926	5	143	10	44	5	30
182	IC0096876	70	568	66	368	63	288	66	197	6	700	8	176	6	1042	7	622	2	380	5	280	4.5	827	4	510
183	IC0141286	67	293	68	567	80	913	72	676	6	895	5	1117	7	858	6	1083	2	480	4	858	6.5	345	4	334
184	IC0141287	72	804	68	650	80	914	73	832	7	81	5	1113	8	548	7	623	1	757	4	737	5.5	505	4	702
185	IC0141289	69	434	63	188	100	1285	77	1114	6	1084	5	1062	6	1248	6	1243	1	1232	3	1248	4	944	3	1257
186	IC0200123	69	440	73	881	75	730	72	743	6	728	6	864	9	213	7	375	2	393	3	1241	5.5	469	4	695
187	IC0354382	68	358	81	1289	70	544	73	800	6	745	6	761	9	185	7	339	2	401	5	313	3.5	986	3	744
188	IC0354385	67	284	75	1078	70	534	71	568	7	403	6	688	8	456	7	424	2	221	5	398	6	388	4	288
189	IC0473254	66	223	66	346	67	389	66	198	6	1133	5	1139	7	754	6	1120	2	595	5	262	5	665	4	389
190	IC0473263	68	383	68	579	66	350	67	269	7	379	5	1267	8	408	7	791	1	905	4	745	7.5	205	4	301
191	IC0473276	68	337	76	1090	70	559	71	637	7	128	5	1160	6	1101	6	1152	2	82	4	866	7.5	248	4	211
192	IC0473422	71	740	62	144	55	106	63	35	6	1242	6	826	8	357	7	792	2	649	3	1148	7.5	202	4	276
193	IC0473423	76	1106	62	157	55	136	64	85	6	957	4	1385	6	1016	5	1347	2	511	4	891	5.5	565	4	526
194	IC0473424	74	890	68	663	76	784	73	772	6	996	6	717	5	1320	6	1264	2	532	3	1140	6	430	4	539
195	IC0473425	72	824	79	1234	55	87	69	372	6	652	8	155	6	1003	7	624	1	1028	4	908	3.5	1136	3	1245
196	IC0473426	71	634	73	899	96	1229	80	1202	5	1331	6	949	7	925	6	1153	1	1359	4	840	5	677	3	904
197	IC0473427	79	1351	58	65	65	337	67	270	6	515	6	831	8	406	7	565	1	975	4	612	3.5	1032	3	1142
198	IC0473429	72	819	68	653	90	1142	77	1070	7	285	6	876	7	905	7	793	2	149	4	966	7	296	4	293
199	IC0473431	76	1073	58	49	76	813	70	507	6	577	5	1289	6	1159	6	1265	2	306	4	1011	3.5	1161	3	1073
200	IC0473432	71	635	73	900	76	812	73	833	7	305	5	1257	8	525	7	794	2	165	4	875	6	394	4	425
201	IC0473433	71	698	73	904	69	482	71	596	6	1030	5	1027	6	1083	6	1244	2	552	5	326	5.5	570	4	337
202	IC0473435	66	229	76	1089	67	391	70	471	7	419	5	1085	6	1066	6	1154	1	927	4	535	6	415	4	494
203	IC0473436	75	972	73	921	71	612	73	801	7	61	5	1025	7	802	6	846	1	750	3	1082	3.5	1105	3	1264
204	IC0473437	80	1376	68	733	101	1303	83	1286	6	914	5	1201	5	1352	5	1348	2	487	4	869	5.5	607	4	527
205	IC0473438	74	903	73	916	69	518	72	717	6	630	5	1254	6	1095	6	1266	2	344	4	874	4.5	835	3	774



206	IC0473440	69	482	63	190	55	142	62	26	7	361	6	817	5	1279	6	1184	2	199	4	959	2.5	1357	3	1252
207	IC0473441	66	244	58	19	53	42	59	1	6	1134	6	756	4	1362	5	1339	2	596	3	1339	6	433	4	680
208	IC0473442	64	37	68	531	111	1374	81	1232	7	168	7	412	6	1259	7	675	2	100	3	1040	3.5	1175	3	1106
209	IC0473444	65	92	63	169	101	1299	76	1047	6	1276	6	744	6	1250	6	1185	1	1328	4	710	4.5	859	3	972
210	IC0473445	67	259	68	560	101	1295	79	1162	6	1119	6	891	7	942	6	1011	2	589	4	830	2.5	1333	3	1221
211	IC0473446	72	831	58	40	55	84	62	19	7	286	7	434	9	121	8	122	2	150	6	108	4	881	4	460
212	IC0473447	76	1077	63	224	83	980	74	891	6	578	7	580	6	1192	6	964	2	307	5	243	4.5	849	4	477
213	IC0473450	69	462	62	138	61	261	64	70	5	1353	5	1066	4	1367	5	1369	2	695	4	851	6	434	4	431
214	IC0473452	65	118	63	171	101	1298	76	1048	6	793	5	1234	5	1351	5	1329	1	1091	3	1190	3.5	1188	3	1295
215	IC0473453	75	996	68	678	68	445	70	533	7	247	5	1033	6	1076	6	1121	2	128	4	847	4.5	832	3	767
216	IC0473454	80	1375	66	431	93	1180	80	1191	6	504	5	1136	7	916	6	1045	1	969	4	862	2.5	1327	2	1330
217	IC0473455	66	196	68	554	95	1209	76	1049	5	1364	7	345	8	602	7	509	2	700	4	580	5.5	516	4	438
218	IC0473456	68	326	62	132	90	1145	73	834	6	746	6	746	6	1223	6	1046	2	402	5	157	6	426	4	197
219	IC0473457	69	435	62	134	75	749	69	373	7	362	6	655	8	516	7	376	2	200	4	701	3.5	1057	3	950
220	IC0473462	73	858	68	659	68	451	70	472	6	646	5	1187	7	766	6	1084	1	1023	5	429	2	1366	3	1300
221	IC0473463	79	1329	68	729	101	1300	83	1280	7	180	6	797	7	944	7	741	1	813	5	315	2	1368	3	1275
222	IC0473464	73	857	68	658	69	511	70	508	6	852	6	892	5	1305	6	1283	1	1120	3	1073	3.5	1184	3	1271
223	IC0473465	79	1321	70	767	77	844	75	987	6	516	5	1102	5	1322	6	1316	1	976	4	990	4.5	869	3	1074
224	IC0473475	75	1005	68	681	55	125	66	173	7	248	5	1199	6	1014	6	1186	1	856	3	1187	2.5	1340	2	1363
225	IC0473479	68	329	63	182	73	705	68	324	5	1359	6	818	8	506	6	847	2	697	5	316	3.5	1053	3	757
226	IC0473482	67	317	58	23	55	80	60	4	6	758	7	512	8	349	7	377	2	407	4	793	5	639	4	620
227	IC0473483	71	760	58	33	55	78	61	14	7	306	7	302	10	40	8	40	1	876	5	293	7	266	4	258
228	IC0473485	66	242	58	18	58	162	61	9	6	771	8	188	9	131	8	94	1	1085	4	570	2.5	1268	3	1280
229	IC0473487	68	346	58	25	72	658	66	174	5	1360	9	63	7	811	7	425	2	698	4	762	8.5	122	5	120
230	IC0473489	68	387	58	26	55	94	60	7	6	747	7	436	6	1006	6	848	1	1073	4	483	7	302	4	311
231	IC0473490	65	148	58	12	55	108	59	3	7	440	8	105	8	358	8	105	2	234	5	219	4	893	4	570
232	IC0473491	79	1346	60	88	60	254	66	199	6	824	7	433	9	140	7	198	1	1108	4	482	5	624	3	724
233	IC0473492	76	1098	60	85	67	410	68	298	6	579	7	507	7	758	7	625	1	1002	4	791	5	666	3	901
234	IC0473493	72	802	58	35	70	576	67	225	7	287	11	5	10	62	9	4	2	151	5	347	3.5	966	3	804
235	IC0473494	64	8	68	528	70	551	67	271	7	458	10	15	8	462	8	25	2	244	4	443	7	285	4	189
236	IC0473496	74	904	68	666	68	454	70	509	6	997	5	1308	8	434	6	1047	1	1187	4	1014	6	387	4	672
237	IC0473497	77	1182	68	704	106	1327	84	1308	7	197	5	1104	9	299	7	426	1	828	3	1174	3.5	1008	3	1285
238	IC0473498	75	967	68	675	98	1261	80	1211	7	62	6	969	7	931	7	795	2	52	3	1161	2	1367	2	1338
239	IC0473500	75	994	62	154	68	437	68	343	6	608	7	429	7	765	7	566	2	328	2	1358	2	1365	2	1367
240	IC0473501	68	367	68	576	79	886	72	677	7	380	8	76	6	1173	7	378	1	906	4	903	6.5	356	4	549
241	IC0473502	67	280	68	565	83	973	73	773	6	1120	7	566	8	560	7	510	2	590	4	942	2.5	1298	3	1240
242	IC0473503	75	1025	68	683	58	167	67	248	7	63	7	571	6	1022	7	796	2	53	3	1051	2	1370	2	1314
243	IC0473504	77	1191	63	231	68	456	69	440	6	1211	8	144	9	168	8	142	1	1296	3	1268	5	626	3	1126
244	IC0473505	67	297	63	181	68	439	66	175	7	404	5	1145	8	430	7	676	1	918	3	1251	4.5	751	3	1183
245	IC0473506	64	41	73	842	67	393	68	325	6	1164	4	1354	9	160	6	906	2	609	3	1199	3.5	980	3	1148
246	IC0473508	66	175	79	1187	71	589	72	718	7	143	6	764	7	796	7	677	1	796	4	953	5	671	3	936
247	IC0473509	70	561	68	609	68	446	69	374	6	1247	6	798	8	432	7	797	1	1313	3	1066	7.5	208	4	412
248	IC0473510	68	380	63	185	60	248	64	57	6	1100	7	365	7	720	7	626	2	579	3	1038	3.5	1090	3	1104
249	IC0473511	67	295	68	568	67	387	67	272	6	1121	9	49	8	418	8	123	2	591	4	760	2.5	1288	3	1204
250	IC0473512	71	673	65	322	72	654	69	441	6	666	5	1221	6	1120	6	1245	1	1036	3	1310	6	420	3	905
251	IC0473513	66	198	66	342	73	700	68	344	5	1365	5	1216	6	1129	5	1330	1	1380	4	871	3	1248	3	1278
252	IC0473514	68	388	63	186	65	317	65	135	6	748	6	914	8	401	7	627	1	1074	2	1366	3.5	1031	2	1350
253	IC0473515	68	376	68	578	69	500	68	345	7	381	7	347	9	179	8	106	2	210	3	1220	2.5	1273	3	1303
254	IC0473516	65	119	68	540	67	395	67	226	6	906	7	277	7	755	7	511	1	1145	3	1116	3	1231	2	1336
255	IC0473518	79	1352	58	66	55	81	64	71	7	29	6	667	6	1002	6	849	1	731	4	704	2.5	1339	3	1310
256	IC0473522	76	1058	68	691	90	1134	78	1143	6	1219	6	720	6	1220	6	1187	2	638	3	1141	3	1252	3	1235
257	IC0473523	72	793	68	646	93	1191	78	1126	6	1010	6	800	7	918	6	965	2	540	3	1067	3.5	1120	3	1113



258	IC0473524	69	400	58	28	98	1260	75	967	7	363	7	303	9	291	8	95	2	201	3	1274	3.5	1004	3	1203
259	IC0473527	75	1027	68	685	65	329	69	442	6	609	8	213	6	1052	7	678	2	329	3	1328	5	684	3	937
260	IC0473528	78	1283	72	838	67	402	72	744	5	1289	7	270	6	1068	6	1012	1	1337	4	917	2.5	1346	2	1347
261	IC0473529	65	149	68	544	66	371	66	200	6	794	7	348	5	1297	6	1048	2	430	3	1221	4	947	3	1084
262	IC0473531	64	32	73	841	76	790	71	597	7	459	5	1301	8	522	6	850	3	7	4	883	5	647	4	427
263	IC0473534	75	935	73	919	73	699	74	870	6	610	6	780	5	1312	6	1246	2	330	2	1364	1	1388	2	1375
264	IC0473535	71	734	79	1228	66	361	72	719	5	1332	8	112	6	1057	6	851	2	689	5	221	8.5	129	5	65
265	IC0473536	78	1260	68	718	85	1014	77	1088	6	529	5	1195	4	1380	5	1361	1	983	3	1308	3.5	1195	2	1334
266	IC0473537	65	152	68	546	61	268	65	97	7	441	7	563	5	1290	6	1085	2	235	3	1049	3	1254	3	1198
267	IC0473539	71	743	68	637	64	303	68	299	6	862	7	489	6	1045	6	966	2	463	3	1045	4.5	828	3	888
268	IC0473543	76	1120	79	1252	63	286	73	774	6	580	5	1294	6	1041	6	1284	2	308	3	1318	4	929	3	1134
269	IC0473544	70	531	76	1098	71	637	72	745	7	339	7	380	8	486	7	261	2	186	6	105	5	644	4	286
270	IC0473553	72	841	79	1235	55	99	69	375	6	854	7	456	8	354	7	427	1	1121	3	1125	6	380	3	788
271	IC0473560	71	693	73	902	79	888	74	920	6	667	5	1022	7	850	6	1013	2	361	3	1081	6	406	4	493
272	IC0473561	79	1314	68	727	78	862	75	968	7	181	8	132	5	1326	7	742	1	814	2	1355	3.5	1186	2	1354
273	IC0473563	72	777	68	644	85	1017	75	969	6	1011	8	214	5	1339	6	1049	2	541	3	1213	4.5	872	3	969
274	IC0473564	72	843	66	391	66	358	68	326	7	288	8	95	8	410	8	107	1	872	3	1108	6	384	3	784
275	IC0473565	76	1083	73	929	77	830	75	988	7	51	7	393	6	1163	7	679	1	743	3	1333	5	690	3	1162
276	IC0473566	71	716	73	907	69	508	71	598	6	1031	5	1176	7	775	6	1155	2	553	3	1182	9.5	62	5	101
277	IC0473568	71	666	68	627	83	977	74	892	6	668	8	75	8	561	8	124	2	362	3	1324	4.5	761	3	1044
278	IC0473570	71	603	70	749	82	960	74	893	6	694	8	148	6	1190	7	611	2	376	3	1210	7	306	4	385
279	IC0473580	69	431	70	754	77	833	72	720	7	364	5	1265	7	842	6	1050	2	202	2	1371	4.5	799	3	1115
280	IC0473583	66	159	70	750	109	1350	82	1246	7	144	7	406	5	1357	6	967	2	87	3	1223	5.5	609	4	711
281	IC0473592	75	934	60	82	73	685	69	443	7	64	7	508	6	1127	7	743	2	54	4	593	6.5	355	4	275
282	IC0473594	64	29	68	529	96	1226	76	1029	6	1165	6	719	8	607	7	628	2	610	2	1375	4.5	771	3	1145
283	IC0473596	65	138	68	542	53	25	62	22	6	795	7	564	7	670	7	680	2	431	3	1227	3	1224	3	1256
284	IC0473598	67	307	68	569	53	43	63	36	7	405	7	485	5	1271	6	1051	1	919	4	790	5	696	3	903
285	IC0473603	72	799	68	648	100	1283	80	1203	6	1012	7	349	6	1247	6	907	2	542	3	1120	8	173	4	218
286	IC0473604	76	1045	68	688	80	903	75	944	7	52	9	50	4	1376	7	744	1	744	4	761	8	178	4	264
287	IC0473614	69	467	73	882	54	62	65	136	6	1255	8	127	8	345	7	299	2	656	3	1029	3.5	1019	3	1094
288	IC0473617	65	135	75	1077	55	90	65	118	6	796	8	118	6	1004	7	567	1	1092	3	1110	4.5	824	3	1143
289	IC0473619	75	946	73	920	99	1272	82	1269	7	249	7	470	9	292	8	143	2	129	4	686	3	1211	3	1077
290	IC0473634	80	1372	76	1122	93	1179	83	1287	6	915	8	87	6	1231	7	629	1	1151	3	1106	5	694	3	1030
291	IC0473642	66	219	73	856	73	684	71	569	7	145	7	557	9	205	8	144	2	88	3	1048	3.5	990	3	1091
292	IC0473651	71	745	65	324	65	309	67	249	6	1032	5	1050	8	398	6	852	2	554	3	1167	4.5	747	3	918
293	IC0473652	79	1327	68	728	69	504	72	721	6	517	5	1109	6	1089	6	1222	2	271	4	993	5.5	572	4	568
294	IC0473654	75	1006	68	682	65	321	69	444	7	250	5	1107	7	734	6	968	1	857	4	992	4.5	787	3	1066
295	IC0473656	78	1274	63	237	90	1127	77	1089	6	530	7	295	7	904	7	469	2	277	4	921	8	161	5	180
296	IC0473657	65	136	63	172	63	278	64	58	7	442	8	224	5	1293	6	853	2	236	5	284	3.5	1181	3	758
297	IC0473659	71	758	68	641	55	70	65	98	6	1033	7	409	6	999	6	969	1	1201	4	587	6.5	349	4	449
298	IC0473666	76	1110	60	86	60	223	65	137	7	53	7	369	7	714	7	379	2	49	3	1276	5	662	3	899
299	IC0473668	74	895	60	80	69	485	68	300	6	1232	7	431	6	1084	6	1052	1	1306	4	934	11.5	13	5	45
300	IC0473669	74	874	73	915	84	1002	77	1090	6	998	7	395	5	1337	6	1156	1	1188	4	682	6	431	4	583
301	IC0473671	77	1198	68	705	77	829	74	894	7	42	6	968	9	230	7	300	2	43	3	1302	3.5	993	3	1209
302	IC0473672	75	1011	66	409	66	373	69	410	6	1227	8	175	7	752	7	568	2	641	3	1271	2	1364	2	1360
303	IC0473673	65	125	73	851	68	477	69	376	6	1146	5	1024	9	173	7	569	1	1266	3	1303	7.5	191	4	508
304	IC0473674	75	1012	76	1112	66	364	72	746	6	978	5	1161	7	748	6	1157	1	1177	3	1348	5.5	533	3	1068
305	IC0473676	71	749	76	1103	60	252	69	411	6	669	5	1087	8	390	7	798	1	1037	3	1085	9.5	53	5	152
306	IC0473680	75	928	76	1108	90	1154	80	1212	6	611	6	770	7	911	6	854	2	331	3	1144	8.5	125	5	170
307	IC0473682	72	822	62	145	69	480	68	301	7	289	3	1388	6	1082	5	1354	2	152	3	1262	4.5	834	3	980
308	IC0473683	71	652	79	1222	73	675	74	921	7	94	6	601	7	813	7	570	1	765	3	1228	8.5	123	4	299
309	IC0473688	76	1097	73	932	68	442	72	747	5	1301	6	866	9	167	7	630	2	674	4	963	3.5	981	3	1059



310	IC0473693	66	197	85	1375	98	1268	83	1288	6	898	5	1001	8	620	7	799	1	1139	4	628	3	1222	3	1233
311	IC0473694	67	310	73	867	63	287	68	302	6	759	6	621	7	729	7	745	1	1080	4	696	6	403	4	576
312	IC0473695	70	489	74	994	100	1282	81	1241	6	701	9	31	7	937	8	145	2	381	6	55	3	1241	4	571
313	IC0473696	77	1253	73	942	65	327	72	678	7	198	6	620	7	738	7	631	1	829	4	695	11	21	5	49
314	IC0473697	68	331	74	988	71	643	71	599	7	382	7	329	8	488	7	227	1	907	4	780	3	1217	3	1272
315	IC0473699	67	316	74	987	64	305	68	346	6	1122	8	159	6	1047	7	746	2	592	5	172	4.5	829	4	445
316	IC0473700	71	706	74	1021	96	1235	80	1213	7	307	6	609	8	610	7	380	2	166	5	190	3.5	1071	4	634
317	IC0473701	79	1315	73	949	70	547	74	895	6	921	7	396	9	186	7	228	2	489	4	930	4.5	726	3	812
318	IC0473702	66	215	74	978	71	629	70	534	7	146	8	198	7	805	7	301	1	797	5	133	4	916	3	726
319	IC0473703	68	362	77	1130	76	806	74	871	6	1101	9	26	6	1156	7	340	2	580	5	274	2	1371	3	1128
320	IC0473706	65	113	71	778	76	808	71	570	7	443	7	476	7	836	7	512	1	942	4	789	3	1234	3	1274
321	IC0473708	79	1298	81	1349	98	1267	86	1351	6	922	7	520	8	619	7	513	2	490	4	488	4	906	3	730
322	IC0473709	76	1089	76	1115	99	1275	84	1309	7	54	7	254	10	103	8	34	1	745	4	774	3.5	973	3	1202
323	IC0473710	72	772	66	387	112	1380	83	1299	6	1237	8	139	7	970	7	514	2	645	5	171	3.5	1130	4	637
324	IC0473711	69	422	66	351	71	636	69	377	6	1085	7	287	8	485	7	341	1	1233	5	291	1.5	1374	2	1322
325	IC0473713	75	932	74	1037	76	802	75	970	7	251	9	46	7	834	8	146	2	130	5	351	5.5	550	4	361
326	IC0473714	78	1269	79	1261	96	1239	84	1322	6	531	8	68	8	612	8	125	1	984	5	169	3	1220	3	1024
327	IC0473715	65	88	79	1181	110	1366	85	1331	5	1368	8	113	7	965	7	571	2	703	6	92	4.5	815	4	367
328	IC0473717	64	4	79	1172	110	1363	84	1323	6	812	9	45	9	303	8	37	1	1101	5	126	3.5	1010	3	867
329	IC0473718	75	964	71	806	110	1354	85	1345	7	252	8	73	6	1258	7	381	2	131	5	275	2.5	1354	3	997
330	IC0473720	78	1276	81	1346	110	1360	90	1373	6	532	6	929	8	640	7	681	2	278	5	158	4.5	778	4	407
331	IC0473723	65	87	78	1150	110	1364	84	1324	7	444	7	248	7	964	7	382	1	943	6	57	3.5	1128	4	696
332	IC0473728	71	610	78	1159	110	1358	86	1354	6	863	7	322	7	961	7	572	2	464	5	176	3	1242	3	791
333	IC0473729	76	1067	77	1142	71	618	75	945	6	581	5	1084	8	481	7	800	1	1003	5	424	3.5	1049	3	1060
334	IC0473730	74	894	78	1163	105	1313	86	1349	7	270	7	535	9	296	7	168	2	139	5	145	3.5	1006	4	590
335	IC0473733	72	808	77	1136	103	1307	84	1315	6	1013	7	540	8	627	7	515	1	1193	4	490	3.5	1072	3	1101
336	IC0473734	71	691	74	1020	108	1343	84	1325	7	308	6	859	7	957	7	801	2	167	6	117	2.5	1336	3	832
337	IC0473735	79	1303	81	1352	99	1276	86	1355	7	30	6	593	6	1245	6	855	1	732	5	151	4.5	858	4	609
338	IC0473739	71	752	68	640	65	338	68	327	7	309	4	1360	9	153	7	682	2	168	4	652	8	139	5	131
339	IC0473740	72	770	81	1316	99	1277	84	1316	6	1014	7	448	8	623	7	470	2	543	4	589	6	399	4	345
340	IC0473742	72	783	81	1318	99	1274	84	1317	6	653	7	522	7	935	7	683	1	1029	5	384	5	679	4	669
341	IC0473748	72	814	58	37	69	481	66	201	6	654	6	663	5	1303	6	1188	1	1030	3	1233	4.5	864	3	1189
342	IC0473750	71	677	58	31	69	510	66	176	6	1034	8	80	5	1304	6	856	1	1202	3	1206	5.5	599	3	963
343	IC0473754	76	1038	81	1334	97	1243	85	1332	7	227	7	236	7	928	7	383	2	118	5	286	4	922	4	621
344	IC0473756	71	702	81	1311	76	789	76	1030	6	1035	6	594	8	521	7	573	1	1203	4	499	11	20	5	31
345	IC0473761	66	162	81	1278	99	1273	82	1254	6	1273	7	450	8	622	7	574	1	1326	5	234	5.5	520	4	474
346	IC0473763	70	494	73	885	88	1096	77	1091	7	340	8	89	6	1210	7	428	1	889	4	661	4.5	851	3	951
347	IC0473764	70	540	73	889	67	413	70	510	7	108	8	72	10	56	8	17	1	775	4	901	7	267	4	457
348	IC0473765	70	553	73	890	106	1337	83	1289	6	1063	5	1259	7	953	6	1189	1	1223	4	1004	9	88	5	183
349	IC0473766	80	1362	81	1357	105	1314	89	1368	7	23	7	373	8	628	7	229	1	729	7	33	3.5	1073	4	545
350	IC0473767	71	735	73	909	53	45	66	152	6	670	8	90	8	338	8	147	2	363	5	353	5	638	4	461
351	IC0473768	72	837	68	655	55	112	65	119	7	290	6	712	6	1010	6	970	2	153	4	708	5	683	4	580
352	IC0473769	74	898	81	1328	107	1340	87	1363	6	999	6	596	7	956	6	857	2	533	6	114	7	298	5	105
353	IC0473770	76	1134	68	694	65	314	70	473	6	958	6	884	8	400	7	747	1	1170	6	84	3.5	1030	3	755
354	IC0473771	67	312	81	1285	50	1	66	177	6	1267	8	111	9	109	8	148	1	1324	5	220	2.5	1266	3	1175
355	IC0473774	72	810	81	1321	111	1372	88	1366	6	1015	9	54	7	968	7	302	2	544	5	167	5	682	4	342
356	IC0473776	70	598	68	615	60	256	66	178	7	341	10	23	6	1037	8	149	2	187	4	756	2.5	1344	3	1205
357	IC0473778	70	548	68	605	68	472	69	378	6	1064	5	1042	6	1081	6	1247	2	563	4	729	4	932	3	863
358	IC0473779	69	457	66	357	67	411	67	273	7	117	5	1135	7	759	6	908	2	77	4	635	5	667	4	535
359	IC0473780	69	419	81	1292	76	787	75	989	6	729	7	451	6	1150	6	909	2	394	4	484	1.5	1382	3	1266
360	IC0473781	70	534	68	602	68	476	69	379	6	1248	6	889	5	1302	5	1331	1	1314	4	828	7.5	259	4	338
361	IC0473783	65	91	66	335	108	1346	80	1192	5	1369	8	137	10	106	8	83	1	1381	4	569	5.5	446	4	633



362	IC0473784	64	20	89	1385	76	811	76	1050	6	1166	6	927	6	1158	6	1223	2	611	5	254	4.5	844	4	481
363	IC0473786	77	1202	68	707	81	947	75	990	7	199	7	407	7	865	7	471	1	830	4	478	3.5	1114	3	1100
364	IC0473787	74	873	89	1387	105	1316	89	1371	6	631	8	81	12	13	9	9	2	345	3	1265	4.5	705	3	990
365	IC0473788	76	1124	63	226	53	24	64	72	5	1302	8	185	7	669	7	632	1	1344	4	667	2.5	1307	3	1307
366	IC0473789	79	1318	63	242	75	751	72	748	6	518	7	424	8	517	7	342	2	272	4	933	1.5	1375	2	1343
367	IC0473790	70	570	73	892	66	369	70	474	7	342	10	21	6	1059	8	150	2	188	4	898	4.5	830	3	809
368	IC0473791	77	1200	73	940	103	1311	84	1326	6	549	7	473	7	948	7	633	2	290	3	1225	8	163	4	238
369	IC0473792	71	659	70	755	76	807	72	749	5	1333	9	48	8	524	7	194	1	1360	4	448	3.5	1058	3	1092
370	IC0473793	77	1230	68	712	55	128	67	227	6	550	6	878	7	689	6	910	2	291	5	410	2.5	1310	3	1063
371	IC0473795	77	1251	76	1120	58	195	70	535	7	200	7	460	8	373	7	303	2	108	4	787	3.5	1025	3	994
372	IC0473797	75	943	63	215	73	710	70	536	6	845	8	101	6	1131	7	575	1	1116	4	662	3	1249	3	1255
373	IC0473798	80	1368	81	1359	106	1324	89	1369	7	176	6	672	6	1254	6	971	1	811	4	601	3.5	1173	3	1150
374	IC0473802	71	624	58	29	70	557	66	202	7	95	5	1244	5	1308	6	1285	2	69	3	1094	3.5	1185	3	1123
375	IC0473804	68	348	77	1129	109	1351	85	1333	6	749	6	937	7	959	6	972	1	1075	5	201	5.5	563	4	450
376	IC0473805	71	697	73	903	84	1007	76	1031	6	671	7	552	8	569	7	429	2	364	3	1131	7	288	4	344
377	IC0473806	69	475	76	1096	66	355	70	537	7	365	8	194	6	1056	7	576	2	203	5	224	2.5	1345	3	954
378	IC0473807	70	484	81	1295	101	1296	84	1318	6	1065	8	191	8	625	7	304	1	1224	5	223	9.5	60	5	63
379	IC0473808	73	863	81	1324	50	5	68	328	7	275	9	52	7	664	7	169	2	142	4	561	8	151	5	129
380	IC0473809	79	1307	81	1353	110	1353	90	1374	7	31	6	763	7	960	7	684	1	733	5	198	4	924	3	793
381	IC0473810	75	952	74	1038	98	1258	82	1270	6	979	6	773	9	290	7	430	1	1178	4	512	4.5	738	3	878
382	IC0473811	77	1166	63	229	70	579	70	511	7	201	6	821	7	791	7	748	1	831	3	1147	4	915	3	1232
383	IC0473813	77	1145	73	937	98	1270	83	1281	6	830	6	956	8	621	7	749	2	445	4	975	4.5	775	3	831
384	IC0473814	71	707	68	633	106	1318	82	1247	6	1243	6	890	8	630	6	858	1	1311	4	829	8	148	4	266
385	IC0473815	74	887	81	1326	100	1281	85	1339	6	632	7	518	9	293	7	230	2	346	5	239	5	636	4	382
386	IC0473816	77	1255	81	1345	52	12	70	512	7	202	8	82	8	330	8	108	1	832	4	563	7	281	4	339
387	IC0473817	75	1017	81	1332	52	10	69	445	6	980	7	521	13	4	9	14	2	524	5	185	3.5	956	4	632
388	IC0473818	69	438	73	880	101	1302	81	1233	6	730	6	619	6	1251	6	1014	1	1064	3	1229	5	695	3	1083
389	IC0473819	71	684	73	901	106	1336	83	1300	7	310	8	206	7	952	7	343	2	169	4	669	4.5	814	4	694
390	IC0473823	75	1000	79	1246	53	26	69	412	6	1228	7	454	7	671	6	859	2	642	6	110	5.5	524	4	230
391	IC0473825	70	599	68	616	65	334	68	303	6	1066	6	893	8	405	7	750	1	1225	5	411	7	284	4	292
392	IC0473826	71	755	78	1161	64	300	71	600	6	1036	7	249	6	1044	6	860	1	1204	4	673	8	165	4	239
393	IC0473827	71	699	68	632	106	1330	82	1248	7	311	8	166	4	1388	6	1053	2	170	5	222	3.5	1196	4	715
394	IC0473829	77	1219	73	941	68	467	73	775	7	43	7	394	7	772	7	431	2	44	4	586	3	1232	3	1028
395	IC0473832	76	1136	78	1166	58	178	71	571	7	228	8	85	8	370	8	109	2	119	6	46	3.5	1024	4	432
396	IC0473833	78	1275	70	764	106	1325	85	1334	6	936	8	209	5	1355	6	1054	2	499	5	226	5.5	608	4	304
397	IC0473835	70	488	73	883	106	1332	83	1290	6	702	5	1172	8	634	6	861	2	382	4	740	1.5	1377	3	1311
398	IC0473837	77	1243	77	1146	55	97	70	475	6	551	5	1014	8	353	7	751	1	990	5	255	6	379	4	386
399	IC0473838	77	1236	74	1064	57	155	69	446	7	203	7	257	9	130	8	96	1	833	6	70	3.5	977	3	740
400	IC0473841	71	682	74	1018	84	997	76	1051	6	672	8	70	8	566	8	126	1	1038	5	216	2.5	1299	3	1174
401	IC0473842	71	733	73	908	55	79	66	203	7	312	6	697	7	680	7	685	1	877	4	806	4	908	3	1130
402	IC0473844	71	646	74	1013	106	1323	84	1310	5	1334	7	260	7	950	7	752	1	1361	5	288	1.5	1381	2	1324
403	IC0473845	70	595	77	1134	52	14	66	204	6	703	10	10	7	666	8	61	1	1051	5	214	4.5	781	4	683
404	IC0473846	70	556	68	606	67	422	68	347	7	109	4	1338	6	1072	6	1248	1	776	4	750	8	166	4	241
405	IC0473847	70	571	76	1099	57	156	68	304	7	343	8	69	6	1021	7	384	1	890	5	170	7.5	239	5	165
406	IC0473850	68	360	68	574	106	1331	81	1218	6	1259	7	352	8	633	7	472	1	1320	4	927	4.5	776	3	1058
407	IC0473851	67	260	73	862	106	1334	82	1255	7	406	8	162	8	635	8	151	1	920	4	768	6.5	338	4	497
408	IC0473853	75	926	73	918	85	1029	78	1127	7	65	6	623	6	1199	6	862	1	751	4	801	8.5	134	4	207
409	IC0473854	64	50	73	843	55	95	64	73	7	169	7	398	6	1007	7	686	1	807	4	683	3.5	1137	3	1184
410	IC0473855	67	309	73	866	53	35	64	86	6	1268	7	556	4	1361	5	1340	2	661	3	1132	8.5	136	5	174
411	IC0473856	64	23	73	840	83	978	73	835	6	1167	7	334	7	875	7	634	2	612	4	925	7.5	232	4	226
412	IC0473857	70	522	81	1301	76	783	76	1008	6	876	7	526	9	223	7	262	1	1128	5	385	5.5	471	4	546
413	IC0473859	66	210	73	855	67	385	69	380	6	1135	5	1258	6	1063	6	1299	1	1260	3	1192	9.5	66	5	173



414	IC0473863	70	533	73	888	106	1319	83	1291	6	704	5	1177	8	631	6	863	2	383	3	1183	11.5	9	6	23
415	IC0473864	77	1245	74	1065	50	6	67	250	7	204	8	196	8	328	7	170	1	834	6	97	7.5	201	5	138
416	IC0473865	74	876	74	1033	79	887	76	1009	7	75	8	199	7	849	7	305	2	60	5	225	4	918	4	572
417	IC0473866	68	336	68	572	106	1326	81	1219	5	1361	5	1193	9	298	6	864	2	699	3	1186	5.5	479	4	649
418	IC0473867	67	301	73	865	68	443	69	447	6	760	7	472	6	1075	6	911	1	1081	3	1128	6	416	3	797
419	IC0473868	76	1087	74	1051	70	568	73	836	6	959	7	264	8	467	7	344	1	1171	6	103	4.5	754	4	547
420	IC0473872	77	1203	81	1344	96	1228	85	1335	6	941	8	109	9	283	8	110	2	502	5	127	3.5	1002	4	587
421	IC0473873	71	754	79	1229	63	281	71	601	7	313	7	243	5	1294	6	912	2	171	3	1330	3.5	1182	3	1249
422	IC0473875	66	165	68	549	80	904	71	638	6	899	5	1118	5	1331	5	1332	1	1140	2	1368	4	951	2	1316
423	IC0473876	68	323	73	869	106	1320	82	1271	7	129	5	1178	9	297	7	432	2	83	4	868	3.5	1007	3	999
424	IC0473877	71	689	78	1160	94	1201	81	1234	7	96	7	377	8	598	7	231	1	766	5	374	1.5	1376	2	1341
425	IC0473878	77	1194	74	1061	98	1259	83	1292	6	1212	9	32	7	930	7	293	2	636	5	348	3.5	1124	3	818
426	IC0473883	77	1146	81	1340	96	1230	85	1336	6	552	8	189	6	1238	7	687	1	991	5	283	4	943	3	902
427	IC0473884	77	1169	81	1341	95	1212	84	1327	7	205	6	591	7	921	7	635	1	835	4	498	3.5	1121	3	1105
428	IC0473885	69	404	81	1291	97	1242	82	1272	6	1086	5	1156	9	286	7	688	1	1234	3	1178	4	891	3	1231
429	IC0473887	78	1291	78	1170	50	4	69	381	6	533	7	537	6	991	6	973	1	985	4	489	4	926	3	985
430	IC0473888	70	519	78	1157	72	649	73	837	5	1345	7	247	7	808	7	753	1	1368	6	102	5.5	543	4	370
431	IC0473889	71	756	78	1162	66	362	72	679	6	673	8	193	7	746	7	433	1	1039	5	174	7	292	4	214
432	IC0473890	66	201	77	1125	71	607	71	639	7	420	8	115	7	801	7	263	1	928	6	93	2.5	1320	3	1052
433	IC0473892	70	587	78	1158	55	105	68	305	6	877	7	378	6	1009	6	913	1	1129	5	179	3.5	1138	3	919
434	IC0473916	75	1019	74	1045	58	187	69	413	6	981	7	467	8	372	7	473	2	525	5	141	5	640	4	307
435	IC0473919	70	589	71	797	53	23	65	99	5	1346	5	1264	8	332	6	1122	3	20	4	547	9	80	5	33
436	IC0473920	76	1112	66	416	53	17	65	120	6	582	7	574	7	668	7	689	2	309	5	189	7	289	5	132
437	IC0473921-X	64	59	66	332	54	61	61	15	7	460	7	359	7	676	7	434	1	950	5	295	8.5	119	5	121
438	IC0473922	67	311	77	1128	57	159	67	251	6	761	6	684	8	364	7	516	2	408	5	312	4.5	744	4	507
439	IC0473923	64	13	73	839	71	632	69	448	5	1374	7	333	9	194	7	306	3	21	5	371	8.5	105	5	42
440	IC0473924	66	185	74	973	75	748	72	680	6	772	6	772	7	825	6	865	2	414	4	815	4.5	798	3	759
441	IC0473925	70	537	74	1001	76	799	73	838	7	344	8	197	9	225	8	84	1	891	6	98	6	373	4	283
442	IC0473927	67	258	81	1280	71	620	73	802	6	762	7	441	8	482	7	385	3	12	5	377	2.5	1293	3	823
443	IC0473928	71	753	81	1314	61	267	71	602	7	314	8	110	7	725	7	264	2	172	6	91	3	1228	4	663
444	IC0473929	66	211	81	1279	71	640	73	776	6	900	7	312	9	195	7	171	1	1141	4	469	5.5	465	4	591
445	IC0473930	68	399	74	991	58	205	67	228	6	750	8	119	7	710	7	345	2	403	5	129	3	1226	3	727
446	IC0473931	68	333	81	1288	71	603	73	839	7	383	7	310	6	1107	7	690	2	211	7	25	4	933	4	263
447	IC0473932	65	153	74	967	53	41	64	74	6	1147	7	330	7	673	7	636	2	602	7	26	5	658	5	158
448	IC0473933	79	1355	71	825	65	332	72	681	7	182	7	271	8	404	7	199	1	815	5	365	1.5	1373	2	1340
449	IC0473936	69	425	71	793	110	1367	83	1301	6	731	6	703	8	641	7	517	2	395	5	400	3.5	1076	3	825
450	IC0473937	75	1009	73	922	66	372	71	640	7	253	7	554	7	751	7	577	2	132	5	242	7	293	5	147
451	IC0473942	68	354	73	872	75	759	72	722	6	1260	9	27	5	1318	7	691	1	1321	3	1204	7	312	4	574
452	IC0473943	65	110	81	1276	109	1349	85	1340	7	158	10	24	6	1257	8	152	2	95	7	23	3.5	1174	4	318
453	IC0473944	64	18	81	1270	108	1344	84	1328	6	1281	8	190	8	637	7	386	3	19	5	132	4.5	777	4	248
454	IC0473945	75	938	81	1330	107	1339	88	1364	7	254	7	444	7	955	7	518	2	133	5	301	2.5	1335	3	1005
455	IC0473946	71	617	81	1305	91	1162	81	1235	7	97	6	842	9	275	7	265	1	767	4	613	3.5	1000	3	1139
456	IC0473952	78	1281	81	1347	81	935	80	1204	6	937	7	449	6	1180	6	1015	2	500	5	302	8	171	5	93
457	IC0473954	65	123	81	1277	86	1043	77	1115	6	797	8	107	8	575	7	172	2	432	6	67	3.5	1065	4	498
458	IC0473955	65	105	58	11	106	1328	76	1052	6	1148	5	1292	7	951	6	1190	1	1267	3	1259	5	681	3	1085
459	IC0473956	79	1308	68	725	75	756	74	896	7	183	5	1105	6	1144	6	1158	2	106	4	991	5	687	4	677
460	IC0473958	76	1080	68	693	68	475	71	572	6	583	5	1116	9	172	7	519	2	310	4	857	2.5	1271	3	1211
461	IC0473962	72	803	58	36	76	788	69	382	5	1322	7	587	6	1151	6	1159	1	1354	4	796	3.5	1158	3	1225
462	IC0473963	69	411	73	876	75	738	72	750	6	732	5	1094	5	1315	6	1317	1	1065	3	1171	8	175	4	356
463	IC0473965	75	1033	73	924	55	101	68	306	7	255	8	124	8	355	8	127	1	858	3	1208	6.5	326	4	686
464	IC0473966	78	1273	68	720	114	1388	87	1357	6	534	5	1271	7	972	6	1123	2	279	4	877	3	1243	3	1132
465	IC0473967	71	618	81	1306	91	1161	81	1236	7	315	9	53	7	912	7	173	2	173	6	88	9	87	6	24



466	IC0473968	65	82	79	1180	114	1384	86	1352	5	1370	7	531	7	971	6	974	1	1382	3	1046	4.5	817	3	1114
467	IC0473969	64	55	83	1361	55	93	67	274	6	813	6	670	8	352	7	520	1	1102	3	1337	3.5	1020	2	1344
468	IC0473972	75	947	79	1242	71	622	75	971	7	256	5	1296	6	1112	6	1249	2	134	3	1193	4	934	3	1040
469	IC0473975	71	631	79	1219	111	1370	87	1359	6	864	5	1083	9	305	7	578	2	465	3	1084	11	17	5	32
470	IC0473976	78	1292	81	1348	55	76	71	641	6	535	6	930	6	1001	6	1160	2	280	3	1343	3.5	1135	3	1251
471	IC0473980	65	108	79	1182	70	542	71	642	7	445	6	678	7	783	7	692	2	237	3	1283	5.5	538	3	753
472	IC0473981	71	700	79	1225	69	523	73	803	6	865	6	682	9	180	7	346	1	1124	3	1234	5	627	3	1078
473	IC0473982	76	1094	73	930	66	376	72	682	6	584	7	332	7	753	7	521	2	311	3	1118	2.5	1316	3	1288
474	IC0473984	74	914	83	1369	58	189	72	683	7	271	4	1350	6	1027	6	1286	3	6	3	1352	7.5	240	4	236
475	IC0473985	76	1059	74	1047	110	1352	87	1358	6	960	10	20	8	638	8	62	2	512	5	165	2.5	1304	3	908
476	IC0473992	72	820	83	1366	55	77	70	513	6	1016	4	1328	9	120	6	866	2	545	3	1322	2.5	1267	2	1328
477	IC0473998	71	717	68	634	55	118	65	100	7	316	6	791	7	686	7	754	2	174	3	1289	5.5	526	3	756
478	IC0474000	79	1312	68	726	70	580	72	751	7	32	6	794	7	792	7	693	1	734	3	1290	7.5	226	4	511
479	IC0474001	72	769	83	1364	74	726	76	1053	6	1017	6	671	10	69	7	200	2	546	3	1282	2.5	1262	2	1318
480	IC0474002	66	193	62	127	106	1317	78	1144	6	1136	5	1324	7	949	6	1224	2	597	4	551	6.5	348	4	257
481	IC0474003	72	800	76	1105	72	671	73	840	6	655	7	459	8	496	7	387	2	355	3	1127	5.5	502	4	635
482	IC0474004	76	1074	79	1251	112	1376	89	1370	7	229	5	1295	7	969	6	1086	2	120	4	645	7.5	236	5	172
483	IC0474006	71	671	79	1224	73	695	74	922	6	1037	6	852	9	206	7	474	1	1205	4	826	5.5	467	3	748
484	IC0474007	71	664	83	1362	81	938	78	1152	7	98	7	372	6	1182	7	694	1	768	4	473	3.5	1164	3	1107
485	IC0474009	75	953	60	83	70	562	68	348	7	257	6	662	6	1103	6	914	1	859	4	702	3.5	1152	3	1186
486	IC0474011	80	1367	83	1373	68	448	77	1092	7	24	7	305	4	1370	6	1124	2	35	3	1331	9.5	72	5	144
487	IC0474012	74	884	83	1368	81	944	79	1182	6	1000	7	306	6	1185	6	915	1	1189	3	1216	10.5	39	5	113
488	IC0474013	69	426	86	1382	96	1238	84	1311	6	1087	6	590	7	927	6	867	1	1235	4	797	7.5	235	4	331
489	IC0474017	74	867	74	1032	111	1369	86	1356	7	76	7	267	7	966	7	347	2	61	5	136	3.5	1129	4	599
490	IC0474018	66	183	84	1374	98	1263	83	1282	6	773	6	838	7	932	6	916	2	415	3	1149	10.5	33	5	56
491	IC0474019	64	28	83	1360	114	1385	87	1360	5	1375	6	759	8	643	6	868	2	706	3	1143	5.5	521	4	650
492	IC0474020	65	71	79	1178	84	1009	76	1032	6	798	8	192	7	878	7	435	2	433	3	1112	8.5	124	5	167
493	IC0474021	67	252	73	859	85	1027	75	972	7	407	9	47	8	572	8	75	2	222	4	759	4.5	764	3	739
494	IC0474022	75	993	63	218	78	859	72	723	6	982	8	225	5	1324	6	1055	2	526	4	670	4.5	870	4	716
495	IC0474023	72	806	81	1320	76	771	76	1054	6	1238	7	240	7	830	7	695	2	646	6	101	3.5	1109	4	555
496	IC0474024	72	796	85	1379	85	1019	81	1220	6	855	7	233	6	1197	7	802	2	458	4	914	6.5	358	4	371
497	IC0474026	76	1070	68	692	112	1381	85	1346	6	585	8	210	6	1260	7	696	2	312	3	1327	12	5	6	25
498	IC0474027	71	641	81	1307	76	776	76	1033	6	1038	7	237	8	520	7	348	2	555	5	134	2.5	1294	3	874
499	IC0474028	69	441	68	588	85	1020	74	897	7	366	6	883	7	880	7	803	2	204	3	1294	9.5	63	5	123
500	IC0474029	65	84	73	845	83	989	74	872	6	1149	6	954	8	562	7	804	2	603	3	1158	5	650	3	796
501	IC0474030	75	917	63	214	98	1269	79	1163	7	258	6	816	6	1244	6	1016	2	135	4	958	7.5	256	4	233
502	IC0474031	80	1363	73	951	100	1291	84	1329	7	25	16	1	5	1349	9	5	2	36	4	656	4.5	873	4	681
503	IC0474032	73	859	76	1106	55	132	68	329	7	78	8	195	6	1015	7	522	1	756	4	668	3.5	1140	3	1180
504	IC0474033	79	1357	63	244	55	138	66	153	6	1198	7	425	4	1365	6	1318	2	629	3	1277	5.5	611	3	778
505	IC0474034	70	580	68	612	53	52	64	59	6	1067	11	3	8	341	8	18	1	1226	4	558	8	141	4	212
506	IC0474035	79	1326	71	823	71	602	74	873	6	923	7	404	9	190	7	232	2	491	7	18	5.5	464	5	110
507	IC0474038	72	812	77	1137	71	597	73	841	6	656	8	116	7	798	7	349	2	356	6	68	3.5	1104	4	503
508	IC0474043	71	683	68	631	69	507	69	449	7	317	7	484	6	1090	7	805	2	175	3	1226	5	685	3	856
509	IC0474046	78	1289	68	722	53	51	66	205	5	1290	6	713	7	675	6	1056	2	669	4	808	2.5	1308	3	1222
510	IC0474048	80	1369	68	732	73	678	74	874	6	505	4	1380	9	203	6	869	1	970	3	1103	6	372	3	732
511	IC0474055	72	829	74	1029	53	37	66	206	5	1323	7	259	6	996	6	1017	2	685	6	40	2.5	1338	4	614
512	IC0474056	76	1117	73	934	66	374	72	684	6	586	6	622	8	414	7	475	2	313	7	13	3.5	1034	4	272
513	IC0474058	71	670	77	1135	71	626	73	804	6	1039	7	538	7	804	7	806	1	1206	5	146	3.5	1106	3	885
514	IC0474061	71	764	81	1315	66	365	73	777	6	1040	5	1007	7	749	6	1087	1	1207	6	119	4	914	4	673
515	IC0474062	66	213	74	977	71	614	70	538	6	774	8	121	8	479	7	174	1	1086	7	9	9	82	6	9
516	IC0474063	75	969	78	1165	96	1233	83	1293	5	1310	10	19	9	284	8	38	2	679	6	38	5	635	4	190
517	IC0474067	80	1359	74	1075	97	1250	84	1312	6	506	7	386	6	1242	6	870	1	971	6	73	7.5	255	5	124



518	IC0474068	65	102	71	777	86	1037	74	898	6	1150	6	958	7	886	6	1057	1	1268	5	324	8	157	5	161
519	IC0474072	72	827	81	1322	58	165	70	539	7	82	5	1004	7	700	6	871	1	758	6	51	5	661	4	351
520	IC0474073	76	1128	74	1056	59	213	70	476	6	961	7	549	6	1031	6	1058	2	513	4	493	2.5	1343	3	1116
521	IC0474074	69	468	74	993	59	215	67	275	6	733	7	543	7	713	7	697	1	1066	5	187	3.5	1089	3	915
522	IC0474075	65	144	74	966	53	39	64	75	7	446	7	546	9	115	7	175	2	238	4	492	5.5	450	4	395
523	IC0474076	74	897	68	665	67	382	70	477	5	1316	4	1336	8	416	6	1191	1	1351	3	1197	8.5	113	4	280
524	IC0474077	75	1007	74	1043	54	60	68	307	6	983	6	946	8	344	7	807	1	1179	6	64	3.5	1018	4	706
525	IC0474079	80	1379	74	1076	69	512	74	923	7	26	5	1020	8	451	7	579	2	37	6	52	3.5	1041	4	441
526	IC0474080	66	178	69	737	76	804	70	540	6	1274	7	273	7	835	7	698	1	1327	6	47	7	295	5	133
527	IC0474081	68	341	69	739	77	838	71	643	6	1102	6	961	9	233	7	523	2	581	4	976	8.5	107	5	141
528	IC0474082	69	466	66	359	50	3	62	20	7	367	6	639	6	990	6	917	1	898	5	245	6	412	4	388
529	IC0474083	70	572	74	1006	50	2	65	101	6	705	6	616	8	327	7	476	1	1052	5	244	5.5	481	4	471
530	IC0474084	73	865	66	394	50	7	63	43	5	1320	7	418	7	665	6	872	2	683	5	376	3	1223	3	941
531	IC0474086	79	1344	71	824	50	8	67	229	6	519	6	626	8	329	7	477	2	273	4	697	2	1362	3	1254
532	IC0474089	73	864	77	1139	55	100	68	349	7	276	6	938	9	122	7	350	2	143	5	202	5.5	453	4	271
533	IC0474090	79	1330	66	429	71	639	72	724	6	520	6	810	7	807	6	873	1	977	4	611	7.5	227	4	278
534	IC0474091	75	963	66	406	71	598	71	573	5	1311	5	1279	9	189	6	918	2	680	4	548	3.5	988	3	886
535	IC0474092	74	881	74	1034	74	721	74	899	6	633	5	1167	7	821	6	1088	1	1017	6	87	4.5	797	4	517
536	IC0474093	77	1252	74	1066	61	266	71	574	7	206	8	157	8	392	8	153	2	109	4	664	8.5	111	5	109
537	IC0474094	75	986	74	1041	71	604	73	842	6	846	6	863	10	64	7	233	1	1117	4	516	7.5	184	4	245
538	IC0474095	65	89	71	775	71	635	69	414	6	799	6	783	7	806	6	874	2	434	4	818	8	154	5	159
539	IC0474096	75	958	71	805	76	779	74	900	7	259	7	338	9	220	8	111	1	860	6	72	4.5	728	4	496
540	IC0474097	68	357	69	740	76	773	71	603	6	890	6	962	8	519	7	755	2	476	4	523	5.5	504	4	409
541	IC0474098	67	276	74	984	71	593	71	575	6	763	7	463	8	476	7	388	1	1082	6	59	9.5	55	6	27
542	IC0474099	75	1003	85	1380	66	346	75	991	7	260	8	149	7	743	7	307	2	136	5	356	3.5	1094	3	819
543	IC0474100	77	1156	74	1058	71	590	74	901	6	942	7	551	8	473	7	524	1	1163	5	149	2.5	1291	3	1102
544	IC0474101	76	1140	81	1339	61	264	73	778	7	230	7	443	9	142	8	154	2	121	6	109	3.5	979	4	543
545	IC0474102	70	502	81	1298	71	591	74	902	7	110	5	1005	8	474	7	580	1	777	5	325	5.5	499	4	509
546	IC0474103	76	1071	81	1336	72	659	76	1055	6	962	7	447	11	26	8	63	2	514	7	34	4.5	707	4	221
547	IC0474104	64	53	81	1273	66	348	70	541	6	814	5	1154	7	744	6	1089	2	439	7	15	6.5	342	5	57
548	IC0474105	67	278	81	1281	71	595	73	805	7	408	6	840	9	188	7	308	2	223	6	44	9	79	6	10
549	IC0474107	66	179	74	972	76	767	72	725	7	147	8	202	10	71	8	29	1	798	6	99	5	619	4	458
550	IC0474108	70	503	74	997	71	609	72	685	6	1249	6	690	8	477	7	756	2	652	6	61	2.5	1292	4	705
551	IC0474109	68	370	78	1154	70	531	72	726	7	384	4	1331	8	455	6	919	1	908	6	65	7.5	213	5	114
552	IC0474110	67	292	74	986	76	774	72	752	7	134	5	1018	7	831	6	875	1	790	5	256	5.5	548	4	476
553	IC0474111	71	630	76	1100	71	599	73	779	6	1041	6	857	6	1106	6	1192	2	556	5	407	9	89	5	62
554	IC0474113	66	236	74	979	57	150	66	154	6	775	7	382	8	363	7	351	1	1087	7	27	5.5	485	4	202
555	IC0474114	68	378	77	1132	66	354	70	542	7	385	6	855	10	50	8	155	2	212	5	321	3.5	964	3	741
556	IC0474115	68	351	76	1091	71	600	72	686	6	1103	6	604	7	799	6	876	2	582	6	115	5.5	541	4	231
557	IC0474116	65	73	71	773	96	1241	77	1116	7	159	5	1029	9	285	7	352	1	803	5	422	3.5	1003	3	1055
558	IC0474117	79	1294	71	822	96	1236	82	1256	6	1199	5	1183	8	611	6	1059	2	630	5	210	4.5	773	4	452
559	IC0474119	72	787	81	1319	97	1248	83	1302	6	1018	7	519	9	288	7	309	1	1194	5	240	2.5	1280	3	1178
560	IC0474120	69	413	85	1377	98	1256	84	1319	6	734	10	9	8	616	8	26	2	396	6	66	5.5	519	4	200
561	IC0474121	75	930	81	1329	87	1062	81	1237	5	1312	7	308	7	889	7	808	1	1348	7	32	3.5	1116	4	558
562	IC0474122	78	1259	77	1147	106	1321	87	1361	6	536	7	326	8	632	7	310	2	281	5	369	3.5	1074	3	820
563	IC0474123	65	107	81	1275	96	1227	81	1221	7	447	7	445	7	924	7	525	2	239	6	42	3.5	1123	4	402
564	IC0474124	64	6	74	955	72	665	70	514	6	912	5	1171	9	200	7	637	1	1150	7	16	4	885	4	348
565	IC0474125	75	1008	74	1044	53	21	67	276	7	66	6	692	8	331	7	389	1	752	5	194	3	1213	3	1026
566	IC0474126	76	1082	77	1144	93	1175	82	1257	5	1303	7	379	7	915	6	877	1	1345	7	11	8.5	126	6	16
567	IC0474127	74	902	78	1164	69	494	74	875	6	634	5	1298	6	1086	6	1287	1	1018	8	5	10.5	37	7	4
568	IC0474128	72	811	74	1027	68	455	71	644	7	291	6	943	7	769	6	878	2	154	9	3	14	1	8	1
569	IC0474129	71	685	74	1019	68	429	71	604	6	674	6	617	9	164	7	266	2	365	6	49	5.5	462	5	164



570	IC0474130	79	1304	74	1072	74	723	76	1010	5	1288	6	613	8	511	7	757	2	668	5	154	3.5	1055	4	607
571	IC0474132	72	773	81	1317	86	1034	80	1193	7	292	6	841	8	574	7	526	1	873	8	4	5.5	511	5	92
572	IC0474133	76	1065	81	1335	90	1125	82	1273	6	837	6	674	6	1217	6	1090	2	450	7	35	9.5	69	6	7
573	IC0474134	71	663	74	1015	76	795	74	876	6	675	7	544	10	73	8	112	1	1040	7	12	7.5	186	5	54
574	IC0474135	71	607	74	1007	88	1079	78	1128	7	318	7	548	7	893	7	581	2	176	7	20	6	409	5	84
575	IC0474136	66	177	74	971	73	687	71	605	6	901	6	693	8	500	7	582	1	1142	7	22	6.5	335	5	111
576	IC0474137	75	941	77	1140	72	653	75	946	6	612	7	458	6	1119	6	920	2	332	6	48	9.5	67	6	8
577	IC0474139	74	900	76	1107	69	488	73	806	6	1001	6	605	8	441	7	583	2	534	6	81	7.5	210	5	71
578	IC0474140	69	402	73	875	93	1176	78	1153	7	368	6	776	6	1229	6	1018	2	205	6	62	6.5	360	5	115
579	IC0474141	66	240	77	1127	60	232	68	308	7	148	7	539	8	383	7	311	1	799	5	147	4.5	745	4	598
580	IC0474142	64	51	76	1085	67	381	69	415	6	1168	7	253	9	159	7	176	2	613	8	6	8.5	104	6	6
581	IC0474143	65	131	73	852	69	503	69	416	6	800	6	618	6	1088	6	1019	2	435	7	21	7.5	246	6	28
582	IC0474144	67	289	73	863	69	491	70	478	7	409	6	777	9	176	7	267	2	224	5	250	4.5	724	4	469
583	IC0474145	72	797	73	913	73	689	73	780	6	1019	6	951	8	501	7	809	1	1195	6	85	5.5	503	4	329
584	IC0474146	76	1092	75	1081	70	530	74	877	7	55	6	858	9	181	7	268	1	746	5	408	3.5	984	3	1053
585	IC0474148	65	85	73	846	73	692	70	543	7	448	6	696	7	816	7	699	1	944	7	14	5.5	545	5	169
586	IC0474149	75	1035	73	925	67	384	72	687	7	67	5	1256	8	417	7	758	2	55	7	31	3.5	1035	4	328
587	IC0474150	80	1373	73	953	70	536	74	924	6	916	6	624	9	183	7	353	1	1152	7	29	4.5	725	4	320
588	IC0474153	68	390	66	350	55	75	63	44	7	386	7	417	7	679	7	478	1	909	6	76	3.5	1081	3	749
589	IC0474154	69	477	66	360	64	299	66	207	6	1088	7	285	9	148	7	177	1	1236	7	17	5.5	458	5	184
590	IC0474156	73	855	66	393	68	432	69	417	6	1236	6	643	6	1074	6	1161	2	644	6	60	4.5	831	4	305
591	IC0474158	75	960	66	404	73	701	71	645	6	984	6	642	10	67	7	178	1	1180	4	501	2.5	1261	3	1258
592	IC0474160	77	1225	63	233	70	578	70	515	5	1294	7	296	8	469	7	479	2	671	5	292	3.5	1047	3	750
593	IC0474161	75	1002	66	408	60	236	67	252	6	613	6	981	9	138	7	436	1	1011	6	45	3	1205	3	729
594	IC0474162	65	83	66	334	93	1183	75	947	7	160	7	362	11	35	8	21	1	804	7	10	5	614	4	188
595	IC0474163	75	966	74	1040	91	1163	80	1205	6	1229	7	550	8	591	7	638	1	1304	5	148	5.5	512	4	406
596	IC0474164	71	721	74	1023	68	424	71	606	6	1042	6	861	7	761	6	1020	1	1208	6	63	3.5	1098	4	714
597	IC0474166	67	305	71	787	64	304	67	277	6	764	5	1098	6	1046	6	1225	2	409	5	426	6.5	353	4	235
598	IC0474167	77	1142	71	812	86	1053	78	1145	5	1295	7	477	8	576	7	639	1	1340	6	112	4.5	765	4	553
599	IC0474168	77	1217	71	817	70	575	73	781	6	553	7	559	11	25	8	50	1	992	8	8	5.5	437	5	136
600	IC0474169	77	1228	71	818	66	368	71	646	6	943	7	337	7	750	7	640	2	503	5	231	3.5	1096	4	703
601	IC0474171	71	687	66	380	73	708	70	516	6	1043	6	982	8	508	7	810	1	1209	6	50	3.5	1054	4	647
602	IC0474173	71	701	66	381	86	1052	74	925	6	676	6	644	9	255	7	269	1	1041	5	191	2.5	1279	3	1140
603	IC0474175	70	535	66	364	73	704	70	479	6	706	6	806	10	68	7	179	2	384	3	1068	5.5	443	4	592
604	IC0474183	71	625	74	1009	73	697	73	782	6	866	8	122	8	504	7	201	2	466	5	130	3.5	1052	4	593
605	IC0474185	70	554	81	1303	72	648	74	926	6	707	7	307	6	1118	7	811	1	1053	4	468	2.5	1348	3	1263
606	IC0474187	74	893	61	102	90	1126	75	973	6	635	6	827	7	903	6	879	2	347	5	251	3	1239	3	857
607	IC0474188	76	1037	66	411	90	1124	77	1117	7	231	6	730	9	271	7	234	1	846	7	30	5.5	476	4	201
608	IC0474190	70	485	78	1156	90	1123	79	1183	7	111	5	1012	9	270	7	354	1	778	4	529	3	1210	3	1195
609	IC0474191	77	1158	78	1167	90	1122	82	1249	6	1213	7	536	10	92	7	202	2	637	6	113	4.5	712	4	362
610	IC0474192	71	704	81	1312	90	1128	81	1222	6	1044	7	524	6	1218	6	1060	1	1210	7	28	2.5	1353	3	766
611	IC0474194	77	1223	74	1063	77	822	76	1034	6	554	8	203	8	527	7	235	2	292	4	458	3.5	1059	3	871
612	IC0474198	71	694	81	1310	90	1130	81	1223	6	677	6	673	9	272	7	312	2	366	5	396	8.5	108	5	77
613	IC0474199	77	1196	78	1169	90	1138	82	1250	7	207	9	30	8	587	8	51	1	836	3	1105	4.5	768	3	1135
614	IC0474201	77	1167	78	1168	73	676	76	1035	6	555	8	86	7	814	7	313	2	293	3	1026	3.5	1107	3	1095
615	IC0474202	69	463	76	1095	60	229	68	350	5	1354	7	251	6	1034	6	1021	1	1374	4	464	5.5	566	4	615
616	IC0474204	70	514	81	1300	90	1133	80	1214	7	345	6	592	10	93	8	97	1	892	4	693	3.5	971	3	1173
617	IC0474205	70	510	68	595	114	1386	84	1320	6	708	7	486	8	644	7	390	1	1054	3	1129	3.5	1077	3	1284
618	IC0474214	66	181	79	1188	112	1382	86	1350	6	776	6	854	6	1261	6	1125	2	416	4	827	5.5	593	4	519
619	IC0474215	66	188	68	551	106	1333	80	1206	6	1137	5	1270	5	1356	5	1355	1	1261	4	876	3.5	1189	3	1228
620	IC0474216	70	538	74	1002	96	1234	80	1207	6	878	5	1253	8	609	6	975	1	1130	4	1003	2.5	1303	2	1346
621	IC0474219	70	539	74	1003	108	1345	84	1321	6	1068	5	1021	9	301	7	584	2	564	4	728	3.5	1009	3	955



622	IC0474222	68	373	81	1290	70	556	73	807	7	387	8	108	7	785	7	270	1	910	4	663	5.5	539	4	689
623	IC0474223	67	282	81	1282	77	831	75	974	7	135	7	238	8	529	7	180	2	84	4	572	8	144	5	130
624	IC0474224	75	1031	81	1333	65	331	74	878	6	985	7	239	7	739	7	585	1	1181	4	672	4.5	789	3	956
625	IC0474225	70	491	73	884	111	1371	85	1337	5	1347	5	1255	7	967	6	1267	1	1369	3	1191	4.5	816	3	1155
626	IC0474228	68	377	73	873	55	131	65	138	6	751	5	1174	9	127	7	586	1	1076	2	1370	8.5	102	4	404
627	IC0474229	77	1218	86	1383	70	554	78	1129	6	556	7	439	6	1100	6	921	2	294	3	1043	5	686	3	734
628	IC0474230	67	257	58	20	114	1387	80	1194	7	410	6	924	8	645	7	527	2	225	4	837	8	149	5	157
629	IC0474233	75	998	68	679	58	203	67	253	6	847	4	1339	7	709	6	1226	2	454	4	1017	4.5	785	3	842
630	IC0474234	70	495	85	1378	92	1173	82	1274	6	1069	7	516	8	593	7	528	2	565	4	487	4.5	770	4	603
631	IC0474236	76	1081	74	1049	91	1168	80	1215	7	56	7	266	6	1228	7	587	1	747	3	1035	5.5	589	3	879
632	IC0474237	64	42	74	959	68	465	69	383	6	1282	6	691	11	22	8	128	1	1333	4	504	3.5	961	3	1090
633	IC0474238	67	273	78	1152	74	724	73	808	7	411	7	534	9	212	7	181	1	921	5	241	5.5	468	4	467
634	IC0474239	64	34	81	1272	97	1253	81	1224	7	170	6	762	8	614	7	437	1	808	5	249	3	1221	3	1079
635	IC0474241	70	516	74	999	93	1192	79	1173	6	709	6	607	10	99	8	129	1	1055	3	1135	2.5	1264	2	1361
636	IC0474243	77	1227	68	711	67	383	71	576	6	557	4	1335	6	1062	6	1300	1	993	4	1016	6	414	4	678
637	IC0474244	76	1076	58	50	68	447	67	278	7	232	5	1290	6	1077	6	1227	1	847	4	1012	4.5	833	3	1071
638	IC0474245	70	542	68	604	68	471	69	384	6	879	5	1311	4	1371	5	1370	1	1131	4	646	11	24	5	40
639	IC0474250	64	40	68	532	62	275	65	102	7	461	5	1269	9	144	7	529	1	951	4	746	5	625	3	851
640	IC0474251	67	253	73	860	70	574	70	517	6	1123	6	868	8	468	7	759	1	1252	4	964	3.5	1046	3	1248
641	IC0474254	64	64	68	534	55	102	62	27	7	462	5	1190	6	1008	6	1193	1	952	4	998	5.5	564	3	838
642	IC0474255	66	239	58	16	60	253	61	16	7	149	6	832	5	1287	6	1162	2	89	4	960	5.5	597	4	565
643	IC0474256	70	593	66	371	55	103	64	60	6	1070	7	420	8	356	7	438	2	566	5	299	3.5	1021	3	746
644	IC0474257	68	398	68	581	53	36	63	45	6	752	6	789	6	995	6	1091	1	1077	4	610	7	300	4	353
645	IC0474258	67	267	63	178	73	711	68	309	7	412	5	1144	6	1132	6	1163	1	922	3	1177	8	169	4	354
646	IC0474259	67	275	74	983	71	624	71	577	6	1124	8	88	7	803	7	391	2	593	4	564	5.5	542	4	437
647	IC0474260	71	613	66	373	93	1187	77	1071	7	99	6	908	9	277	7	271	1	769	4	619	1	1386	2	1373
648	IC0474261	66	249	71	785	58	172	65	121	6	1275	7	339	8	367	7	480	2	665	3	1119	2.5	1286	3	1287
649	IC0474262	71	759	83	1363	58	196	71	578	6	1045	4	1349	7	708	6	1268	1	1211	4	888	5.5	528	3	775
650	IC0474263	68	342	78	1153	96	1231	81	1225	6	1104	7	457	7	926	7	760	1	1243	3	1126	5	678	3	1032
651	IC0474273	66	228	85	1376	55	147	69	385	7	150	6	837	7	695	7	761	1	800	5	319	3.5	1084	3	1008
652	IC0474274	68	392	79	1205	67	408	71	647	6	1261	7	246	10	54	8	113	2	657	5	287	6	368	4	260
653	IC0474275	65	95	71	776	93	1185	76	1056	6	801	7	272	10	98	8	64	2	436	4	674	4.5	713	4	684
654	IC0474277	68	382	79	1204	55	146	67	279	7	388	8	152	6	1018	7	530	2	213	4	767	4	927	3	900
655	IC0474280	76	1054	66	413	95	1210	79	1174	6	587	8	96	9	281	8	76	1	1004	4	904	6	377	4	661
656	IC0474284	65	129	79	1186	57	158	67	254	7	161	6	848	7	699	7	762	2	96	4	615	6	402	4	349
657	IC0474285	69	444	71	794	96	1224	79	1164	6	883	8	165	8	606	7	236	2	472	5	173	2.5	1302	3	910
658	IC0474288	75	961	66	405	90	1131	77	1093	7	68	7	286	12	10	9	12	2	56	4	777	3.5	959	3	991
659	IC0474289	79	1319	79	1263	68	459	75	992	6	924	6	602	8	435	7	588	2	492	5	390	3.5	1037	3	827
660	IC0474290	76	1125	79	1253	58	200	71	607	6	588	6	853	10	44	7	203	1	1005	4	962	8	137	4	285
661	IC0474291	78	1265	74	1068	95	1216	82	1275	6	1201	6	615	6	1235	6	1164	2	631	4	800	5.5	590	4	520
662	IC0474292	72	790	79	1232	68	450	73	809	7	293	8	84	6	1078	7	439	2	155	4	660	5.5	569	4	470
663	IC0474293	65	75	71	774	91	1165	76	1011	6	1151	8	129	9	276	8	114	1	1269	4	454	5	634	3	722
664	IC0474294	64	24	74	957	93	1181	77	1094	7	463	6	608	7	917	7	641	1	953	3	1136	3.5	1119	3	1290
665	IC0474295	69	433	79	1208	69	525	72	753	6	1089	6	851	5	1306	6	1301	1	1237	4	961	9.5	71	5	145
666	IC0474296	71	750	71	800	60	242	67	280	6	678	6	785	6	1036	6	1092	1	1042	4	609	4.5	826	3	923
667	IC0474298	74	883	74	1035	73	690	74	879	6	636	7	464	8	502	7	392	2	348	4	788	7.5	215	4	203
668	IC0474301	79	1332	81	1354	70	545	77	1072	6	521	6	839	10	61	7	204	2	274	5	406	3.5	965	3	810
669	IC0474303	75	949	63	216	67	400	68	351	7	69	5	1147	8	422	7	642	2	57	3	1086	4.5	749	3	881
670	IC0474304	78	1286	63	240	55	135	65	139	6	1202	5	1287	4	1364	5	1374	1	1291	4	881	5.5	610	3	780
671	IC0474306	65	94	68	537	68	458	67	255	6	1152	5	1039	6	1079	6	1250	2	604	4	630	6	417	4	355
672	IC0474307	64	54	68	533	55	91	62	28	6	1169	5	1200	4	1363	5	1366	2	614	4	638	3.5	1191	3	928
673	IC0474308	75	923	68	670	70	585	71	608	6	614	6	967	6	1105	6	1165	2	333	4	524	2.5	1347	3	1118



674	IC0474309	71	672	63	204	71	641	68	352	5	1335	6	989	5	1310	5	1349	1	1362	4	843	4.5	866	3	1021
675	IC0474310	78	1271	63	236	75	741	72	727	6	537	7	501	7	823	7	643	2	282	5	382	1	1387	3	1296
676	IC0474311	65	100	66	338	74	727	68	353	7	449	7	496	6	1137	7	812	2	240	4	938	4.5	840	3	833
677	IC0474313	71	612	68	618	75	752	71	648	6	867	5	1119	6	1142	6	1251	1	1125	5	335	2.5	1349	3	1226
678	IC0474314	72	844	71	804	66	347	70	480	6	856	7	479	11	20	8	52	2	459	5	236	5	613	4	378
679	IC0474316	76	1046	66	412	109	1347	84	1313	6	589	7	416	7	958	7	589	1	1006	6	75	5.5	562	4	324
680	IC0474318	74	896	68	664	67	418	70	481	6	1233	6	721	6	1071	6	1194	1	1307	3	1235	5.5	568	3	973
681	IC0474319	72	791	63	210	96	1240	77	1095	6	1020	5	1236	5	1347	5	1350	1	1196	5	267	3.5	1187	3	979
682	IC0474320	71	723	81	1313	65	312	72	754	7	319	7	311	6	1049	7	700	2	177	5	367	3.5	1144	3	830
683	IC0474321	71	620	71	799	90	1135	77	1118	6	1046	7	340	10	94	8	98	1	1212	5	294	8	138	5	156
684	IC0474322	66	161	74	969	97	1244	79	1175	7	421	5	1088	8	613	7	701	2	228	5	207	4.5	774	4	443
685	IC0474323	75	925	74	1036	88	1092	79	1176	7	70	7	328	7	897	7	393	1	753	5	370	3.5	1118	3	1056
686	IC0474324	80	1364	81	1358	107	1338	89	1372	6	917	7	374	7	954	7	702	1	1153	5	297	2.5	1334	3	1216
687	IC0474325	74	888	81	1327	91	1167	82	1258	6	637	7	234	8	592	7	272	1	1019	6	100	3.5	1068	3	816
688	IC0474326	69	450	74	992	110	1356	84	1330	7	369	6	611	9	302	7	205	2	206	5	308	1.5	1372	3	1206
689	IC0474327	64	21	81	1271	88	1085	78	1130	7	171	7	525	7	895	7	531	2	101	8	7	3	1238	4	290
690	IC0474329-X	67	291	81	1284	101	1297	83	1294	7	413	5	1293	7	943	6	1093	1	923	5	436	4.5	813	3	837
691	IC0474330	71	640	68	621	97	1254	79	1165	7	320	4	1375	8	615	6	1022	1	878	4	890	5.5	518	3	765
692	IC0474331	79	1347	68	730	62	276	70	482	6	522	6	724	12	8	8	30	1	978	5	156	3	1199	3	982
693	IC0474337	76	1085	74	1050	82	961	77	1119	6	963	6	862	8	557	7	763	1	1172	5	409	5.5	508	4	556
694	IC0474338	72	801	68	649	68	478	69	450	5	1324	5	1037	11	23	7	273	1	1355	5	257	6	367	4	383
695	IC0474340	65	132	74	965	69	517	69	451	7	450	6	612	6	1094	6	922	2	241	5	391	3.5	1150	3	834
696	IC0474343	76	1040	63	223	100	1287	80	1195	7	233	5	1232	7	939	6	1023	1	848	4	744	4.5	812	3	968
697	IC0474346	80	1385	77	1148	67	405	75	948	7	27	6	766	9	161	7	237	1	730	5	314	5.5	461	4	500
698	IC0474350	69	410	68	584	90	1149	76	1012	7	370	6	886	4	1385	6	1319	2	207	4	518	7.5	263	5	154
699	IC0474351	66	180	63	175	90	1159	73	810	6	902	6	994	6	1227	6	1195	1	1143	5	418	4.5	854	3	839
700	IC0474352	64	25	63	166	80	915	69	418	6	815	5	1231	5	1332	5	1333	2	440	3	1092	4.5	871	3	895
701	IC0474354	65	78	66	333	86	1055	72	755	7	451	6	808	4	1382	6	1302	2	242	3	1341	5.5	612	3	846
702	IC0474355	67	272	68	564	77	852	71	579	6	1125	5	1310	8	535	6	1061	1	1253	2	1372	7	287	3	736
703	IC0474357	72	798	68	647	78	875	73	783	7	294	6	792	6	1170	6	1024	2	156	4	819	6	423	4	429
704	IC0474358	76	1039	68	686	87	1071	77	1096	7	57	5	1306	8	578	7	813	1	748	3	1320	3.5	1066	2	1325
705	IC0474359	69	437	68	586	78	874	72	688	6	1090	6	887	6	1169	6	1196	2	574	13	1	8.5	133	8	2
706	IC0474360	65	81	68	536	89	1115	74	903	6	802	5	1103	7	901	6	1062	1	1093	3	1173	4.5	809	3	1153
707	IC0474362	75	916	58	42	75	758	69	452	7	261	6	754	9	216	7	238	1	861	2	1362	7.5	195	4	594
708	IC0474365	69	446	78	1155	92	1174	80	1196	6	1091	6	936	7	914	6	1063	2	575	4	974	3	1240	3	1167
709	IC0474366	70	550	74	1004	88	1087	77	1120	6	710	5	1090	9	261	7	532	1	1056	4	989	3.5	997	3	1241
710	IC0474367	73	849	74	1030	95	1221	81	1226	5	1321	6	860	10	100	7	394	2	684	6	83	4.5	714	4	323
711	IC0474368	68	318	58	24	78	871	68	330	6	1262	7	586	4	1375	5	1341	1	1322	4	944	7.5	261	4	375
712	IC0474369	69	417	68	585	90	1153	76	1013	7	371	5	1191	7	910	6	1025	1	899	3	1185	5	676	3	1035
713	IC0474370	70	529	68	601	89	1117	76	1014	7	112	5	1305	6	1216	6	1228	1	779	4	747	3.5	1169	3	1192
714	IC0474371	73	850	68	657	90	1136	77	1097	7	277	4	1359	9	273	7	703	2	144	4	1021	10.5	27	5	43
715	IC0474373	70	492	74	995	94	1204	79	1184	6	711	5	1166	8	600	6	880	2	385	4	542	5	653	4	492
716	IC0474376	79	1311	73	948	75	754	76	1015	6	925	4	1355	5	1317	5	1364	1	1156	3	1260	7	311	4	586
717	IC0474379	77	1172	74	1059	98	1262	83	1295	6	944	4	1352	10	102	7	644	2	504	4	554	5	622	4	491
718	IC0474380	70	497	76	1097	90	1148	79	1166	7	346	6	685	7	909	7	704	1	893	3	1059	2.5	1326	2	1352
719	IC0474381	64	9	79	1173	84	1004	76	1016	7	172	6	849	4	1379	6	1303	2	102	3	1240	5	702	3	865
720	IC0474382	77	1170	68	700	77	840	74	904	6	945	7	351	9	234	7	206	2	505	4	926	3.5	994	3	1048
721	IC0474383	78	1272	74	1070	93	1194	82	1251	6	538	5	1091	8	595	7	814	2	283	5	160	3.5	1069	4	608
722	IC0474384	74	872	73	914	85	1016	77	1121	6	638	8	205	10	85	8	53	2	349	3	1114	2	1361	2	1335
723	IC0474385	70	508	71	795	91	1166	77	1122	5	1348	5	1180	12	12	7	182	2	694	5	264	4.5	704	4	468
724	IC0474386	76	1041	73	926	90	1151	80	1197	7	234	8	125	12	11	9	8	2	122	4	766	6	365	4	416
725	IC0474387	71	722	76	1102	58	183	68	354	6	679	5	1299	8	371	6	976	1	1043	5	269	6.5	328	4	303



726	IC0474388	79	1317	70	766	87	908	76	1057	6	926	5	1266	7	857	6	1197	1	1157	3	1097	3.5	1112	3	1270
727	IC0474389	70	498	73	886	87	1074	77	1073	7	113	5	1262	8	581	7	764	2	73	3	1317	3.5	1067	3	1219
728	IC0474390	77	1187	73	939	85	1030	78	1154	6	1214	5	1260	7	883	6	1252	3	17	4	1005	8	156	5	106
729	IC0474391	71	647	68	623	90	1141	76	1058	7	321	5	1189	6	1222	6	1198	2	178	4	997	5.5	587	4	567
730	IC0474392	66	207	77	1126	95	1219	79	1185	7	422	7	324	7	923	7	440	1	929	4	679	2.5	1328	3	1306
731	IC0474393	77	1168	68	699	81	939	75	993	7	44	5	1196	6	1183	6	1166	2	45	3	1090	4	939	3	986
732	IC0474394	70	487	81	1297	110	1357	87	1362	6	880	5	1078	8	639	6	881	1	1132	5	333	3.5	1075	3	1011
733	IC0474395	77	1179	68	703	84	1005	76	1059	6	946	5	1112	8	568	6	923	1	1164	4	856	7.5	219	4	332
734	IC0474397	75	936	76	1110	79	890	77	1074	6	615	5	1162	9	238	7	590	2	334	3	1179	6	374	4	531
735	IC0474398	68	327	81	1287	86	1045	78	1155	6	753	5	1077	9	252	7	533	1	1078	5	206	4.5	733	4	638
736	IC0474400	67	268	74	982	74	722	72	689	7	414	7	388	8	510	7	274	1	924	4	585	6.5	336	4	435
737	IC0474401	71	655	68	625	83	987	74	905	7	322	5	1108	4	1378	5	1351	2	179	4	855	3.5	1194	3	1022
738	IC0474404	77	1163	66	421	76	803	73	811	6	947	6	907	6	1155	6	1199	2	506	4	723	3.5	1160	3	974
739	IC0474405	69	401	70	753	81	949	73	843	5	1355	6	628	6	1186	6	1200	2	696	3	1230	3.5	1165	3	1190
740	IC0474407	77	1173	68	702	85	1024	77	1075	7	45	5	1203	8	571	7	705	1	740	3	1189	3	1219	2	1337
741	IC0474410	69	414	73	877	89	1118	77	1098	6	1256	6	701	9	267	7	481	1	1317	4	807	4.5	736	3	1002
742	IC0474411	71	622	73	896	78	869	74	906	6	1047	7	471	11	30	8	65	2	557	4	687	3	1201	3	1076
743	IC0474412	70	500	68	594	77	849	72	690	6	1071	5	1111	6	1165	6	1269	1	1227	3	1305	4.5	845	3	1227
744	IC0474413	71	619	66	374	77	850	71	649	6	680	5	1282	8	534	6	924	2	367	3	1350	4	902	3	1166
745	IC0474415	77	1164	68	698	83	985	76	1036	5	1296	8	168	5	1334	6	1126	1	1341	3	1269	5.5	604	3	1018
746	IC0474416	78	1258	73	944	82	963	78	1131	6	539	6	950	10	80	7	239	1	986	3	1301	3.5	968	2	1319
747	IC0474418	70	490	63	191	76	786	70	483	7	347	6	990	7	833	6	882	2	189	3	1164	6.5	344	4	446
748	IC0474419	71	611	73	894	76	809	73	844	6	868	5	1096	6	1157	6	1253	2	467	3	1172	5	689	3	801
749	IC0474420	66	199	68	555	88	1102	74	907	7	151	6	723	6	1212	6	925	2	90	3	1285	2.5	1352	2	1329
750	IC0474423	70	524	68	598	76	818	71	650	6	1250	7	570	7	837	6	926	2	653	3	1133	5.5	551	4	652
751	IC0474424	66	194	63	176	78	857	69	419	6	777	5	1320	6	1166	6	1288	2	417	4	749	6	422	4	391
752	IC0474425	77	1177	81	1342	73	696	77	1099	7	208	6	760	9	207	7	275	2	110	5	248	2.5	1275	3	948
753	IC0474426	64	7	76	1083	96	1225	79	1167	6	1170	6	686	6	1237	6	1127	1	1277	3	1060	4.5	856	3	1117
754	IC0474427	68	340	63	184	79	891	70	518	6	1105	5	1064	8	542	6	883	2	583	4	734	5	648	4	578
755	IC0474429	67	256	73	861	89	1121	76	1060	7	415	7	392	9	269	8	130	2	226	3	1039	11	16	5	29
756	IC0474434	77	1149	68	696	85	1025	77	1076	5	1297	7	346	9	247	7	314	2	672	3	1332	5.5	473	3	821
757	IC0474435	76	1049	73	927	88	1098	79	1177	6	590	4	1372	10	90	7	591	2	314	3	1354	8.5	101	4	224
758	IC0474436	70	499	79	1211	78	866	76	1017	7	348	8	151	10	75	8	31	2	190	3	1211	7	269	4	376
759	IC0474437	66	200	79	1190	77	847	74	908	6	903	6	765	8	532	7	645	1	1144	3	1236	2.5	1295	2	1365
760	IC0474438	65	137	76	1087	60	249	67	256	6	1153	6	767	8	389	7	706	1	1270	4	954	7.5	204	4	369
761	IC0474440	70	566	81	1304	68	462	73	812	6	1072	6	595	8	436	7	592	2	567	4	694	3.5	1038	3	957
762	IC0474441	67	255	68	559	95	1217	77	1077	6	765	8	133	5	1345	6	884	1	1083	3	1326	5.5	606	3	1061
763	IC0474443	70	518	68	597	75	763	71	609	6	712	6	874	6	1147	6	1128	2	386	3	1154	4.5	843	3	924
764	IC0474444	68	324	73	870	86	1058	76	1018	7	389	6	867	9	256	7	315	1	911	3	1152	3.5	996	3	1283
765	IC0474448	64	31	74	958	94	1203	77	1123	7	464	6	944	8	599	7	593	2	245	5	323	5.5	515	4	325
766	IC0474450	64	63	76	1086	55	124	65	122	7	173	5	1300	8	362	7	815	1	809	7	36	9	81	6	26
767	IC0474453	72	781	79	1231	96	1232	82	1276	5	1325	6	844	8	608	6	927	2	686	3	1293	4.5	772	3	1012
768	IC0474454	67	281	68	566	80	919	72	691	6	896	6	725	6	1176	6	1094	2	481	3	1286	3	1251	3	1276
769	IC0474455	71	605	63	201	90	1143	75	949	6	681	6	815	8	590	7	594	1	1044	3	1238	4.5	769	3	1181
770	IC0474456	66	189	68	552	85	1028	73	813	7	423	5	1307	7	882	6	1095	2	229	3	1321	4	920	3	1131
771	IC0474457	66	171	76	1088	97	1252	80	1198	6	778	6	941	10	101	7	240	2	418	3	1299	2.5	1265	2	1320
772	IC0474460	68	363	74	989	69	493	70	544	7	390	4	1332	8	444	6	928	1	912	6	54	4.5	753	4	447
773	IC0474462	65	154	74	968	67	412	69	386	5	1371	5	1165	8	424	6	1096	2	704	6	121	5	643	4	295
774	IC0474463	79	1333	74	1074	77	824	77	1078	6	523	5	1016	6	1160	6	1201	1	979	5	420	3.5	1162	3	1069
775	IC0474464	76	1075	77	1143	85	1022	79	1186	7	235	5	1013	7	881	6	929	1	849	5	203	4.5	806	4	653
776	IC0474465	72	818	74	1028	110	1362	85	1347	6	857	5	1170	7	963	6	1129	2	460	6	122	3.5	1127	4	563
777	IC0474466	69	428	76	1093	88	1080	78	1132	6	735	6	940	8	582	7	707	1	1067	5	322	2.5	1300	3	1217



778	IC0474467	75	991	77	1141	95	1215	82	1277	7	262	6	856	9	282	7	316	2	137	4	719	4.5	737	4	690
779	IC0474468	78	1279	76	1121	97	1255	84	1314	6	829	5	1163	6	1243	6	1270	2	444	4	541	7	309	4	199
780	IC0474470	64	36	77	1123	95	1214	79	1168	7	465	6	603	8	604	7	395	2	246	4	947	3.5	1070	3	1057
781	IC0474472	68	322	68	570	78	872	71	651	6	1106	6	966	9	237	7	534	1	1244	3	1160	3.5	995	3	1289
782	IC0474473	68	332	79	1198	83	988	77	1079	7	391	6	675	6	1193	6	977	2	214	2	1385	5.5	583	3	967
783	IC0474474	65	98	68	539	90	1152	74	927	7	162	6	879	4	1386	6	1304	2	97	2	1365	2.5	1360	2	1358
784	IC0474476	79	1295	73	947	82	965	78	1146	6	927	7	268	6	1191	6	885	1	1158	4	775	1.5	1383	2	1369
785	IC0474477	71	642	74	1012	98	1264	81	1238	7	323	7	545	8	617	7	355	1	879	4	491	6	398	4	488
786	IC0474478	78	1263	74	1067	97	1246	83	1296	7	37	7	465	6	1240	7	765	2	40	4	590	4.5	857	4	645
787	IC0474479	65	117	74	962	80	906	73	814	6	1154	7	390	7	856	7	708	2	605	6	74	3.5	1111	4	512
788	IC0474480	76	1057	73	928	77	853	75	994	6	591	6	774	8	536	7	595	1	1007	3	1340	3.5	1060	2	1345
789	IC0474481	72	788	58	34	76	815	69	387	7	295	7	585	9	228	7	183	2	157	4	597	2.5	1277	3	1138
790	IC0474484	74	879	62	147	95	1213	77	1100	6	1002	8	103	7	922	7	396	2	535	3	1207	3.5	1122	3	1179
791	IC0474485	72	839	62	146	60	246	65	103	7	83	7	505	8	388	7	276	1	759	3	1278	5.5	487	3	993
792	IC0474487	79	1306	62	160	85	1026	75	995	7	184	7	366	10	86	8	54	1	816	4	584	5	621	3	781
793	IC0474488	72	816	64	284	70	565	69	388	7	84	8	221	8	465	8	156	1	760	3	1214	5.5	498	3	945
794	IC0474490	69	406	68	583	78	870	72	692	6	1092	6	796	5	1327	6	1289	2	576	2	1387	7.5	260	4	483
795	IC0474491	75	955	58	45	90	1139	74	928	7	71	8	230	8	588	8	157	1	754	3	1273	2.5	1301	2	1368
796	IC0474492	78	1257	79	1260	78	865	78	1156	6	1203	7	319	6	1168	6	1026	1	1292	3	1218	4.5	847	3	1188
797	IC0474493	65	104	73	848	89	1116	76	1019	7	452	7	553	9	266	7	184	1	945	3	1335	3	1209	2	1364
798	IC0474494	76	1064	64	295	72	662	71	580	6	592	8	98	8	495	8	158	1	1008	4	565	4.5	756	3	909
799	IC0474495	64	2	58	6	80	916	67	281	7	174	6	755	10	76	8	99	2	103	2	1363	2.5	1263	2	1349
800	IC0474497	71	703	64	278	88	1082	74	929	7	324	9	59	10	88	8	19	2	180	3	1264	3.5	969	3	1201
801	IC0474499	66	221	66	345	68	444	67	230	7	152	7	421	10	58	8	55	2	91	3	1042	6	369	4	486
802	IC0474500	75	940	62	149	90	1140	76	1020	6	1230	7	367	8	589	7	482	1	1305	2	1382	8.5	117	4	472
803	IC0474501	80	1378	62	164	69	495	70	545	6	918	8	145	9	177	8	115	2	488	3	1209	2.5	1272	3	1304
804	IC0474503	71	629	73	897	80	909	75	950	6	1048	6	699	13	5	8	22	1	1213	4	707	3.5	957	3	1172
805	IC0474504	74	906	62	148	58	173	65	104	6	1003	7	428	8	368	7	441	2	536	3	1123	8.5	110	5	168
806	IC0474505	69	448	62	136	70	571	67	257	6	736	6	656	9	187	7	277	1	1068	3	1138	3.5	987	3	1282
807	IC0474506	78	1268	73	945	80	918	77	1101	6	540	5	1026	10	77	7	278	1	987	3	1245	4.5	711	3	1177
808	IC0474507	65	156	59	68	53	46	59	2	7	453	5	1151	7	674	6	978	1	946	3	1252	3	1225	2	1348
809	IC0474508	65	90	73	847	75	740	71	610	5	1372	5	1173	11	28	7	356	2	705	3	1087	8.5	98	5	151
810	IC0474509	71	606	68	617	75	743	71	652	6	682	7	565	8	514	7	442	2	368	3	1050	12	3	6	11
811	IC0474510	76	1072	66	415	71	613	71	611	6	593	5	1317	6	1111	6	1290	1	1009	4	647	3.5	1153	3	1156
812	IC0474511	76	1048	68	689	85	1018	76	1061	7	236	6	714	6	1196	6	979	1	850	2	1360	7.5	253	4	611
813	IC0474512	74	868	68	661	75	755	72	756	6	851	7	355	6	1143	6	886	1	1119	3	1275	9.5	68	4	208
814	IC0474513	72	768	68	642	90	1156	77	1080	6	657	9	58	6	1224	7	443	1	1031	3	1263	5.5	588	3	1000
815	IC0474517	71	657	63	203	90	1146	75	951	7	325	7	579	7	907	7	596	1	880	3	1280	4.5	810	3	1213
816	IC0474518	66	243	68	557	60	251	65	105	6	779	11	7	7	722	8	39	2	419	3	1022	3.5	1092	3	1088
817	IC0474519	79	1299	63	241	89	1119	77	1102	6	928	7	298	9	268	7	185	2	493	4	922	3.5	999	3	1046
818	IC0474520	69	474	63	189	60	245	64	76	7	372	5	1061	7	719	6	930	1	900	4	733	5	664	3	860
819	IC0474776	64	66	61	91	55	82	60	5	6	1283	6	659	8	350	7	709	1	1334	3	1054	2.5	1284	2	1353
820	IC0474778	67	269	56	2	87	1075	70	519	6	766	6	1000	7	890	6	980	2	410	5	419	3.5	1117	3	835
821	IC0474782	66	167	78	1151	71	630	72	693	6	1138	7	250	10	65	8	85	1	1262	4	463	7.5	185	4	242
822	IC0474786	68	369	77	1131	70	567	72	694	7	130	7	325	8	466	7	207	1	786	4	779	3.5	1045	3	1207
823	IC0474789	66	217	66	344	71	605	68	310	6	904	6	979	6	1108	6	1202	2	483	4	979	4.5	837	3	840
824	IC0474791	71	638	74	1011	88	1100	78	1133	6	683	7	256	8	586	7	279	1	1045	5	363	4.5	767	3	817
825	IC0474801	66	248	74	980	55	85	65	123	7	424	7	262	7	682	7	397	2	230	4	466	2.5	1309	3	1098
826	IC0474802	68	384	77	1133	55	109	67	231	6	1107	7	327	8	359	7	398	1	1245	5	137	5.5	484	4	399
827	IC0474821	71	713	74	1022	68	436	71	612	5	1336	6	945	8	429	6	981	2	690	4	521	5.5	493	4	413
828	IC0474844	75	1001	71	809	66	366	71	581	6	616	5	1099	8	412	7	816	1	1012	4	536	3.5	1033	3	1110
829	IC0474867	69	445	66	353	76	792	70	546	7	373	6	809	4	1373	6	1305	1	901	3	1069	3	1257	2	1315



830	IC0474872	65	140	66	339	66	367	66	155	6	803	6	641	6	1058	6	1027	2	437	4	699	5.5	567	4	479
831	IC0474874	70	496	74	996	81	943	75	975	6	1073	7	391	6	1184	6	982	1	1228	4	476	5.5	582	4	612
832	IC0474882	73	851	74	1031	71	638	73	784	7	278	7	469	8	487	7	317	2	145	5	235	3.5	1050	4	691
833	IC0474899	79	1322	74	1073	110	1361	88	1365	7	33	5	1019	7	962	6	887	1	735	5	421	3.5	1126	3	1062
834	IC0474906	64	10	74	956	76	819	71	653	6	816	5	1168	7	838	6	1097	1	1103	4	867	7.5	231	4	335
835	IC0474912	67	287	72	829	70	532	70	484	6	897	5	1028	6	1097	6	1229	2	482	5	327	3.5	1151	3	773
836	IC0474927	76	1095	73	931	70	541	73	815	6	964	6	700	9	184	7	399	2	515	4	505	3.5	985	3	876
837	IC0474929	74	892	66	398	71	644	70	547	6	1004	6	645	8	489	7	597	1	1190	4	700	4.5	755	3	958
838	IC0474950	75	1018	71	810	53	38	66	208	7	263	7	402	9	114	8	131	1	862	4	477	5.5	449	4	588
839	IC0474953	77	1154	69	745	81	936	76	1021	7	209	7	480	6	1181	7	817	2	111	3	1044	3.5	1163	3	1111
840	IC0474956	75	968	71	807	81	946	76	1022	6	986	7	403	8	554	7	444	1	1182	5	138	5.5	507	4	401
841	IC0474970	72	766	66	386	93	1189	77	1103	6	858	7	419	9	278	7	208	2	461	4	684	3.5	1001	3	946
842	IC0475002	77	1241	71	820	52	13	67	232	7	210	6	707	6	993	6	983	1	837	3	1062	2.5	1337	2	1357
843	IC0475007	68	355	67	459	95	1206	77	1081	7	392	7	283	8	601	7	209	1	913	4	573	8	147	4	213
844	IC0475012	76	1068	69	744	81	934	75	996	7	58	7	560	7	864	7	535	2	50	5	387	3.5	1113	3	826
845	IC0475022	67	283	74	985	82	964	74	930	6	767	7	468	7	872	7	646	1	1084	4	935	3	1237	3	1297
846	IC0475038	71	696	67	486	75	729	71	613	7	326	7	493	6	1138	7	818	2	181	5	381	4.5	841	4	559
847	IC0475055	66	195	74	975	78	876	73	785	6	1139	6	771	8	538	7	710	2	598	4	814	2.5	1296	3	1218
848	IC0475057	68	379	67	462	58	163	64	87	6	1108	6	727	5	1282	6	1271	1	1246	4	709	6.5	363	4	482
849	IC0475059	66	176	67	446	86	1039	73	816	6	780	6	897	9	249	7	400	1	1088	3	1155	7	276	4	528
850	IC0475064	68	321	62	131	82	952	71	582	6	754	7	503	8	555	7	401	2	404	5	383	8	146	5	103
851	IC0475072	68	328	71	789	76	810	72	695	5	1386	6	710	9	226	7	598	2	711	4	507	4.5	729	4	604
852	IC0475073	67	263	69	738	71	627	69	420	6	1126	5	1302	6	1113	6	1320	1	1254	5	437	7.5	249	4	237
853	IC0475074	66	166	66	341	88	1104	73	845	7	425	6	640	7	898	7	647	1	930	5	394	5.5	561	4	554
854	IC0475085	65	101	74	961	71	608	70	520	6	1155	6	694	9	191	7	402	1	1271	4	706	2.5	1274	3	1305
855	IC0475094	79	1310	66	426	71	611	72	728	6	524	6	983	6	1110	6	1167	1	980	5	417	6	419	4	465
856	IC0475095	72	789	69	743	71	631	71	583	6	1021	6	872	6	1115	6	1203	1	1197	4	517	3.5	1154	3	1120
857	IC0475112	72	826	61	100	58	177	64	61	6	1022	6	751	6	1023	6	1130	2	547	3	1288	2.5	1341	2	1331
858	IC0475120	68	386	66	349	55	114	63	46	7	487	5	1138	9	124	7	483	2	257	5	261	3.5	975	4	699
859	IC0475124	75	973	88	1384	72	660	78	1157	6	1180	6	669	9	198	7	445	2	616	3	1057	4	884	3	983
860	IC0475127	65	99	66	337	74	725	68	355	6	1156	5	1134	6	1136	6	1272	1	1272	5	337	8.5	132	5	128
861	IC0475143	72	835	67	493	59	208	66	179	6	658	7	494	6	1029	6	931	2	357	11	2	6.5	351	7	3
862	IC0475145	65	96	66	336	76	816	69	421	7	494	5	1214	4	1374	5	1357	2	261	5	340	3	1258	3	906
863	IC0475150	80	1388	64	312	60	250	68	331	7	5	6	910	7	721	7	648	1	722	4	972	3.5	1091	3	1246
864	IC0475154	68	397	71	791	62	272	67	258	5	1362	5	1184	5	1291	5	1362	1	1378	4	741	7.5	258	4	306
865	IC0475156	69	459	67	469	77	820	71	614	6	737	7	358	7	839	7	536	1	1069	4	582	5.5	552	4	639
866	IC0475162	69	447	66	354	70	550	68	356	7	374	7	497	8	461	7	318	1	902	4	939	8.5	115	4	222
867	IC0475164	70	523	66	362	70	558	69	389	6	1074	5	1049	7	786	6	1098	2	568	4	531	10.5	30	6	18
868	IC0475167	68	394	74	990	64	296	69	390	6	1263	5	1089	4	1369	5	1371	2	658	4	736	3.5	1193	3	981
869	IC0475170	64	14	67	433	71	617	67	282	7	175	6	633	8	480	7	357	1	810	4	500	6.5	334	4	397
870	IC0475184	64	47	71	771	61	270	65	140	7	466	6	708	9	143	7	241	1	954	4	949	5.5	457	3	813
871	IC0475187	66	250	71	786	58	171	65	124	6	781	7	478	17	2	10	2	2	420	4	485	4	876	3	720
872	IC0475202	65	76	67	436	81	931	71	615	6	1277	5	1314	8	552	6	1131	1	1329	5	438	6	396	4	464
873	IC0475225	70	578	71	796	59	211	67	233	7	349	6	705	7	712	7	711	2	191	4	948	3	1227	3	1163
874	IC0475226	68	320	71	788	86	1048	75	976	6	1109	8	74	11	33	8	20	1	1247	4	902	7.5	180	4	358
875	IC0475231	66	234	67	449	62	274	65	125	7	493	6	894	9	309	7	457	2	260	3	1242	5.5	480	4	698
876	IC0475250	79	1349	65	330	58	168	67	283	5	1378	4	1364	7	701	5	1334	2	707	4	752	3.5	1085	3	978
877	IC0475264	74	901	66	399	70	560	70	521	7	272	8	140	8	464	8	132	2	140	5	355	9.5	54	5	41
878	IC0475265	72	833	66	390	61	265	66	209	6	1023	7	495	8	391	7	484	1	1198	5	304	5.5	488	4	506
879	IC0475267	72	821	66	389	68	457	69	391	7	296	7	284	7	770	7	403	2	158	4	919	8	153	5	179
880	IC0475294	76	1104	61	109	58	176	65	126	7	59	6	658	4	1366	6	1254	1	749	3	1139	3.5	1192	3	1293
881	IC0475298	76	1114	66	417	55	74	66	156	6	1220	5	1280	6	1000	5	1335	1	1299	5	163	2	1369	3	1200



882	IC0475300	71	720	66	382	68	469	68	357	6	869	7	361	8	437	7	358	1	1126	5	373	5.5	494	4	548
883	IC0475302	77	1205	74	1062	82	953	78	1134	7	211	5	1017	7	867	6	932	3	5	4	629	6.5	346	5	171
884	IC0475307	77	1165	61	112	71	601	70	485	6	948	7	506	7	800	7	766	2	507	4	690	3	1233	3	1081
885	IC0475310	71	654	74	1014	78	856	74	931	6	1187	7	547	5	1323	6	1255	2	623	6	43	5.5	602	5	153
886	IC0475316	77	1224	61	115	68	473	69	392	7	212	4	1368	8	438	6	984	1	838	4	555	5.5	495	4	613
887	IC0475325	79	1343	67	523	59	220	68	358	7	34	6	729	8	379	7	404	1	736	4	509	5	642	3	728
888	IC0475332	76	1062	74	1048	96	1223	82	1259	5	1304	6	689	6	1236	6	1230	1	1346	3	1061	4.5	855	3	1121
889	IC0475348	77	1214	61	114	80	905	73	786	7	46	4	1386	8	545	6	985	1	741	5	346	7.5	218	4	209
890	IC0475351	78	1285	71	821	58	201	69	422	6	1204	4	1374	5	1284	5	1373	1	1293	3	1102	2.5	1358	2	1359
891	IC0475352	69	476	61	97	58	175	63	37	6	738	8	146	7	703	7	359	2	397	4	456	2.5	1314	3	1097
892	IC0475354	76	1043	67	506	88	1089	77	1104	6	838	5	1121	6	1209	6	1256	2	451	4	537	4	940	3	738
893	IC0475355	69	423	72	832	81	942	74	909	5	1385	7	474	7	982	6	1075	1	1388	4	936	7.5	238	4	373
894	IC0475357	75	979	71	808	71	610	72	757	6	987	6	704	8	478	7	649	2	527	4	506	3.5	1048	3	882
895	IC0475361	65	74	69	736	81	929	72	696	7	454	6	630	7	862	7	650	1	947	4	598	5.5	558	4	642
896	IC0475364	77	1221	66	424	68	438	70	548	6	831	5	1129	12	9	8	86	2	446	4	738	3.5	958	3	943
897	IC0475369	69	418	67	465	77	823	71	616	7	6	6	898	7	840	7	651	1	723	4	721	1.5	1379	2	1366
898	IC0475385	66	205	71	781	73	680	70	522	7	426	6	706	6	1126	6	986	1	931	5	195	3.5	1156	3	921
899	IC0475390	77	1192	67	517	72	670	72	729	6	558	7	415	9	311	7	255	1	994	4	932	3.5	1012	3	1238
900	IC0475391	69	449	66	355	80	901	72	697	6	1093	7	360	7	854	7	652	1	1238	5	296	2.5	1324	3	1214
901	IC0475398	75	965	67	501	78	860	73	846	6	1181	4	1341	5	1325	5	1365	2	617	5	344	4	949	4	631
902	IC0475403	79	1300	81	1350	87	1068	82	1278	6	525	5	1003	9	259	7	485	2	275	4	527	4.5	734	4	602
903	IC0475407	67	261	67	452	73	681	69	423	7	19	5	1205	8	499	7	653	2	31	5	430	3.5	1051	3	828
904	IC0475410	72	825	59	73	57	153	63	38	6	859	7	510	7	697	7	712	1	1122	4	691	2.5	1312	3	1309
905	IC0475416	76	1044	68	687	76	785	73	847	6	594	7	356	6	1149	7	819	2	315	4	680	3.5	1157	3	962
906	IC0475417	64	65	71	772	59	218	65	106	6	1284	4	1356	5	1285	5	1372	1	1335	4	651	4.5	862	3	929
907	IC0475420	74	915	67	498	67	403	69	453	7	273	5	1315	10	53	7	360	1	868	3	1098	5.5	442	3	875
908	IC0475423	72	785	64	282	88	1105	75	952	6	860	5	1286	9	265	7	713	2	462	4	1009	4	889	3	938
909	IC0475425	71	727	72	834	59	216	67	284	7	327	7	401	6	1032	7	767	1	881	2	1357	4.5	825	3	1262
910	IC0475435	66	158	68	548	86	1035	73	848	7	153	7	490	6	1200	7	768	1	801	4	591	3.5	1167	3	1146
911	IC0475444	67	254	67	451	84	993	73	787	7	416	7	282	8	564	7	210	2	227	4	918	4.5	763	3	811
912	IC0475469	65	103	67	438	71	592	68	311	6	907	8	94	8	475	7	186	1	1146	4	764	6	390	4	619
913	IC0475474	66	163	67	443	87	1063	73	849	6	782	5	1274	6	1206	6	1273	2	421	3	1258	5	692	3	864
914	IC0475479	71	674	64	276	72	668	69	424	7	100	8	180	9	201	8	66	1	770	4	457	6.5	318	4	393
915	IC0475500	74	882	63	213	75	739	71	584	5	1317	6	652	5	1316	6	1306	1	1352	4	502	4.5	868	3	894
916	IC0475506	70	511	65	321	73	694	69	454	6	713	7	363	7	817	7	537	2	387	5	232	4.5	796	4	473
917	IC0475507	75	945	58	44	76	791	70	486	6	617	5	1326	7	981	6	1239	1	1013	4	886	4.5	820	3	1019
918	IC0475526	71	686	67	483	76	780	71	654	5	1337	6	971	9	221	7	714	1	1363	3	1162	5	629	3	1031
919	IC0475529	77	1174	64	301	77	825	73	788	6	559	5	1054	6	1161	6	1204	2	295	4	532	5.5	579	4	415
920	IC0475534	69	453	66	356	71	621	69	393	7	118	8	219	8	483	8	159	1	780	4	462	5.5	500	4	589
921	IC0475547	72	775	66	388	112	1383	83	1303	5	1326	5	1141	6	1262	6	1321	2	687	5	338	3.5	1176	3	779
922	IC0475550	71	738	69	742	59	222	66	210	5	1383	6	787	8	380	6	933	2	709	4	513	3.5	1028	3	887
923	IC0475555	71	708	67	487	81	922	73	817	7	328	7	491	7	860	7	538	1	882	5	237	5	674	4	573
924	IC0475565	65	127	74	963	68	470	69	425	6	804	8	158	5	1301	6	934	1	1094	4	909	6.5	364	4	560
925	IC0475566	66	209	70	751	87	1060	74	932	6	783	7	341	6	1205	7	820	2	422	4	781	6.5	359	4	330
926	IC0475570	71	736	66	384	66	356	68	312	6	684	5	1140	9	157	7	539	2	369	5	427	6	371	4	291
927	IC0475581	80	1374	67	524	76	817	74	933	6	919	6	634	9	229	7	361	1	1154	5	310	3.5	992	3	995
928	IC0475601	79	1341	61	120	60	244	67	234	7	14	5	1073	6	1265	6	1144	2	27	4	534	5.5	594	4	414
929	IC0475602	75	942	62	150	60	247	66	157	6	618	5	1237	5	1286	5	1336	1	1014	3	1093	5	697	3	989
930	IC0475610	68	334	67	457	92	1170	76	1023	6	755	5	1126	10	97	7	319	1	1079	4	538	3.5	972	3	1096
931	IC0475613	65	68	74	960	92	1171	77	1105	7	455	5	1164	5	1343	6	1307	1	948	3	1180	4	952	3	1236
932	IC0475614	65	134	61	92	58	193	61	17	7	495	6	828	9	308	7	416	2	262	5	317	4.5	740	4	505
933	IC0475618	77	1206	61	113	79	885	72	758	6	1215	6	919	9	315	7	731	1	1297	4	519	3.5	1015	3	1109



934	IC0475619	74	878	70	758	72	651	72	730	6	1234	6	960	7	809	6	1132	1	1308	5	415	5	672	4	675
935	IC0475627	75	1023	64	292	58	202	66	158	7	473	5	1058	8	376	7	715	2	251	5	159	5	641	4	309
936	IC0475632	69	424	71	792	86	1056	75	997	6	1257	6	869	4	1383	5	1363	1	1318	3	1153	1.5	1384	2	1374
937	IC0475643	64	38	71	770	68	426	68	313	6	1196	6	870	5	1300	6	1322	1	1288	4	720	6	429	4	585
938	IC0475653	72	838	71	803	57	149	67	235	6	659	6	709	6	1019	6	1064	1	1032	5	401	3	1245	3	1168
939	IC0475657	72	774	72	835	84	1006	76	1037	7	85	4	1333	10	83	7	362	2	65	3	1099	3	1203	3	1196
940	IC0475660	79	1325	66	427	69	492	71	655	7	185	5	1128	8	443	7	716	1	817	3	1176	6.5	330	4	644
941	IC0475664	76	1130	74	1057	53	31	68	314	6	965	7	255	7	672	7	599	2	516	6	39	1.5	1378	3	880
942	IC0475666	77	1210	69	746	70	537	72	731	6	949	7	481	8	458	7	486	1	1165	5	183	3.5	1044	3	912
943	IC0475668	76	1105	71	811	65	318	71	585	6	839	6	786	7	733	6	935	1	1112	4	712	4	913	3	1082
944	IC0475670	67	274	67	453	72	674	69	394	5	1387	6	902	8	497	6	987	2	712	4	832	8	143	5	160
945	IC0475674	71	741	59	72	63	290	64	88	6	1049	5	1152	8	394	6	936	1	1214	4	864	5.5	489	3	760
946	IC0475680	76	1093	70	761	82	957	76	1038	5	1381	5	1032	6	1189	6	1323	2	708	4	530	4.5	848	4	618
947	IC0475689	66	168	67	444	72	669	68	359	7	20	6	972	6	1124	6	1028	2	32	4	525	4	935	3	735
948	IC0475694	76	1050	60	84	83	983	73	818	6	1176	6	752	9	318	7	550	3	16	3	1142	4.5	741	4	640
949	IC0475695	77	1256	67	520	55	120	66	211	6	560	5	1209	9	307	7	732	2	296	5	265	3.5	1011	4	704
950	IC0475697	69	403	67	463	83	972	73	819	5	1356	5	1276	8	559	6	1133	1	1375	4	643	5.5	509	4	658
951	IC0475698	71	690	67	484	86	1040	75	953	5	1338	6	895	9	250	7	654	2	691	4	618	4	887	3	792
952	IC0475699	75	919	59	74	96	1237	77	1082	6	988	5	1075	6	1239	6	1257	2	528	4	634	6.5	361	4	281
953	IC0475703	70	577	67	475	59	217	65	141	6	1189	5	1212	9	136	7	769	1	1285	4	870	6	370	4	625
954	IC0475708	79	1316	64	307	76	782	73	820	6	825	7	578	7	832	7	770	2	441	4	496	5.5	549	4	410
955	IC0475716	69	427	66	352	76	800	70	549	6	1094	5	1318	6	1154	6	1324	1	1239	4	748	3.5	1159	3	1193
956	IC0475718	67	314	67	455	61	262	65	127	7	136	6	899	5	1289	6	1205	2	85	4	831	5	698	4	628
957	IC0475754	69	421	61	95	85	1023	72	698	7	119	6	661	6	1198	6	888	2	78	5	246	5.5	584	4	302
958	IC0475755	71	763	74	1025	60	240	68	360	6	685	7	466	7	718	7	655	1	1046	5	379	5	663	4	668
959	IC0475757	77	1232	71	819	58	166	69	395	6	1175	5	1182	8	366	6	1029	1	1281	4	636	3.5	1023	3	1151
960	IC0475761	79	1340	61	119	59	219	66	212	7	15	6	997	9	137	7	280	1	728	4	727	4.5	719	3	949
961	IC0475763	76	1100	67	509	67	386	70	523	6	595	5	1044	5	1299	6	1308	2	316	3	1166	3.5	1183	3	1157
962	IC0475766	71	651	64	275	77	837	71	586	6	870	6	813	7	843	6	937	2	468	6	116	4.5	800	4	372
963	IC0475773	72	842	67	494	64	298	68	315	7	86	9	51	8	396	8	67	1	761	3	1024	6	383	3	721
964	IC0475775	75	1029	67	505	61	263	68	316	6	619	6	976	7	724	6	988	2	335	4	978	5.5	529	4	562
965	IC0475780	75	944	67	500	83	984	75	977	6	1182	4	1381	10	82	7	771	2	618	3	1202	5.5	444	4	646
966	IC0475784	69	452	67	468	79	883	72	699	7	120	9	41	6	1172	7	242	2	79	5	350	3	1250	3	932
967	IC0475787	70	513	64	271	75	753	70	487	7	481	7	577	7	980	7	783	1	961	4	596	3.5	1131	3	1147
968	IC0475788	77	1143	67	512	84	1001	76	1039	6	561	6	977	9	319	7	551	2	297	3	1163	7	278	4	347
969	IC0475789	75	921	66	401	82	962	74	934	6	620	5	1220	7	871	6	1099	2	336	4	1002	5	675	4	674
970	IC0475791	70	536	59	70	71	647	67	236	6	714	5	1076	9	196	7	487	1	1057	4	735	7.5	193	4	298
971	IC0475793	77	1197	64	302	77	855	73	789	6	832	5	1228	9	236	7	656	2	447	3	1254	2.5	1278	3	1308
972	IC0475795	70	546	64	272	77	845	70	550	7	482	6	650	8	655	7	552	3	8	5	192	4.5	780	4	273
973	IC0475797	75	927	67	499	82	956	75	954	6	621	7	492	8	556	7	405	2	337	4	592	5	649	4	529
974	IC0475798	78	1261	67	521	84	1000	76	1062	7	191	5	1120	6	1194	6	1168	1	823	4	859	6.5	357	4	521
975	IC0475802	65	151	67	442	53	20	62	21	7	163	5	1313	10	37	7	320	2	98	5	270	3.5	962	4	692
976	IC0475813	77	1188	74	1060	72	667	74	935	5	1380	7	385	7	812	6	938	1	1387	3	1222	5.5	544	3	964
977	IC0475816	71	649	67	481	71	623	70	488	5	1339	4	1382	9	193	6	1100	2	692	5	271	3.5	989	4	717
978	IC0475817	72	832	77	1138	60	228	70	489	6	1024	6	683	7	715	6	939	2	548	3	1058	4	911	3	984
979	IC0475828	75	1034	61	104	63	280	66	213	7	474	5	1070	12	14	8	79	1	957	5	331	5.5	436	4	495
980	IC0475832	76	1138	67	511	63	284	69	396	7	237	6	903	7	728	7	821	1	851	4	970	3	1230	3	1298
981	IC0475834	80	1377	67	525	77	836	75	955	7	11	5	1277	9	314	7	553	1	726	4	1008	3.5	1014	3	1243
982	IC0475837	66	169	64	255	81	933	70	551	8	3	6	987	6	1179	6	889	2	23	4	526	6	425	4	312
983	IC0475839	68	335	64	261	76	796	69	455	7	131	5	1230	8	654	7	835	1	787	4	642	5.5	523	4	648
984	IC0475841	71	644	67	480	75	745	71	617	5	1340	6	801	8	515	6	890	2	693	4	713	4	900	3	858
985	IC0475844	71	653	67	482	80	910	73	790	5	1341	5	1211	6	1174	5	1337	1	1364	4	999	6	424	4	679



986	IC0475845	70	525	59	69	79	884	69	456	5	1349	6	753	8	541	7	822	1	1370	4	813	2.5	1297	2	1326
987	IC0475846	71	660	68	626	81	926	73	850	7	329	7	487	10	78	8	77	1	883	4	937	7	270	4	459
988	IC0475851	71	739	67	489	60	231	66	180	6	686	6	900	10	47	7	211	2	370	4	969	3.5	963	3	1049
989	IC0475856	73	862	58	41	59	212	63	54	6	1186	7	511	8	377	7	540	2	622	5	184	6	381	4	215
990	IC0475860	70	594	62	141	65	320	66	159	7	483	4	1348	7	976	6	1240	2	255	4	650	4.5	818	4	660
991	IC0475864	70	493	66	361	86	1042	74	910	7	350	5	1046	6	1201	6	1134	2	192	4	632	8	172	5	135
992	IC0475866	74	907	66	400	57	160	66	160	6	1235	5	1215	5	1281	5	1358	1	1309	4	1000	3.5	1179	3	1253
993	IC0475868	77	1220	64	303	70	566	70	552	6	833	8	77	5	1360	6	956	2	448	4	763	3.5	1190	3	1015
994	IC0475872	71	762	67	490	60	235	66	181	6	687	7	572	7	717	7	717	1	1047	5	188	4	912	3	794
995	IC0475873	69	420	67	466	89	1110	75	978	6	884	5	1125	6	1214	6	1258	1	1135	3	1249	5.5	586	3	977
996	IC0475880	74	871	64	287	81	928	73	821	7	77	6	812	9	240	7	243	2	62	4	957	4.5	731	3	814
997	IC0475882	77	1235	67	519	59	214	68	317	7	213	6	636	8	378	7	406	1	839	5	155	5.5	486	4	400
998	IC0475884	65	114	62	124	74	720	67	259	7	496	5	1065	6	1135	6	1169	2	263	3	1168	5.5	577	4	659
999	IC0475888	69	471	67	471	60	258	65	142	5	1357	7	414	6	1039	6	1101	1	1376	3	1041	6.5	352	4	617
1000	IC0475892	69	455	62	137	68	434	66	214	6	739	4	1365	9	165	7	823	2	398	5	164	1	1385	3	1197
1001	IC0475896	75	1032	64	293	60	241	66	215	6	989	5	1229	9	139	7	718	1	1183	3	1255	4.5	720	3	1185
1002	IC0475898	70	515	67	473	81	945	73	791	7	484	5	1123	9	316	7	612	2	256	5	209	2.5	1281	3	914
1003	IC0475914	68	396	64	265	58	192	63	55	6	891	6	738	10	43	7	187	2	477	4	511	4	878	3	723
1004	IC0475934	76	1133	66	419	58	182	67	237	6	1221	5	1047	9	132	7	719	1	1300	5	258	3.5	978	3	961
1005	IC0475950	71	609	72	833	86	1046	76	1063	7	101	6	782	11	32	8	56	1	771	4	608	9.5	48	5	94
1006	IC0475959	71	636	64	274	75	747	70	524	7	478	5	1226	8	653	6	957	2	253	4	641	3.5	1078	3	920
1007	IC0475962	74	875	66	395	77	839	72	759	6	639	6	909	6	1164	6	1135	1	1020	3	1156	4	938	3	1234
1008	IC0475964	66	216	67	448	89	1111	74	911	7	154	4	1363	5	1342	5	1342	1	802	5	213	7	314	4	220
1009	IC0475965	76	1109	67	510	62	273	68	361	7	238	6	805	5	1292	6	1206	1	852	4	822	5.5	598	3	770
1010	IC0475966	68	374	67	461	80	898	72	700	7	132	8	215	5	1330	7	824	1	788	5	362	4	950	3	940
1011	IC0475968	66	237	67	450	66	359	66	216	6	1140	6	975	9	158	7	541	2	599	4	624	5.5	460	4	439
1012	IC0475970	66	220	61	93	76	769	68	318	6	784	5	1068	7	829	6	1030	2	423	5	329	6	405	4	267
1013	IC0475974	70	582	67	476	65	325	67	285	6	715	6	728	7	736	7	825	1	1058	5	196	6.5	341	4	277
1014	IC0475976	77	1162	67	515	73	715	72	760	7	47	4	1343	8	509	6	891	2	46	4	1018	4	899	3	942
1015	IC0475979	77	1183	70	762	86	1047	78	1135	6	562	4	1334	6	1202	6	1309	1	995	3	1100	5	691	3	988
1016	IC0475980	77	1249	68	717	64	295	70	490	6	834	5	1194	8	395	6	940	1	1110	4	742	4.5	746	3	965
1017	IC0475985	75	977	67	502	95	1207	79	1178	7	475	5	1206	6	1234	6	1231	1	958	4	639	4	942	3	1038
1018	IC0475995	70	586	62	140	60	225	64	77	7	485	8	227	6	1264	7	784	1	962	4	773	7	310	4	424
1019	IC0475997	74	880	67	496	76	775	72	761	7	17	5	1273	5	1319	6	1291	2	29	4	878	5.5	600	4	525
1020	IC0476003	64	45	67	434	55	104	62	23	6	817	6	637	8	647	7	613	1	1104	3	1053	4.5	779	3	1103
1021	IC0476011	71	695	67	485	93	1200	77	1106	5	1384	5	1043	7	987	6	1278	2	710	4	849	4.5	822	3	776
1022	IC0476013	67	264	66	348	86	1051	73	822	7	490	5	1045	9	254	7	446	1	964	4	631	5	633	3	789
1023	IC0476015	77	1180	67	516	93	1198	79	1179	6	1216	6	973	7	986	6	1217	3	18	4	842	3.5	1132	3	772
1024	IC0476018	64	11	64	248	83	974	70	553	7	467	7	422	8	659	7	367	1	955	4	785	2.5	1306	2	1323
1025	IC0476020	67	288	67	454	81	930	72	701	6	1127	5	1122	8	551	6	941	1	1255	5	336	3.5	1064	3	1013
1026	IC0476021	75	957	74	1039	87	1061	79	1169	7	16	5	1252	7	888	6	989	2	28	3	1256	5.5	560	4	712
1027	IC0476022	65	116	67	439	84	992	72	732	6	1278	7	278	5	1336	6	1170	1	1330	5	289	3	1255	3	1133
1028	IC0476024	69	478	81	1294	66	363	72	733	7	121	9	55	7	747	8	160	1	781	4	899	3.5	1095	3	1237
1029	IC0476025	68	338	64	262	96	1222	76	1040	7	393	6	739	4	1387	6	1292	2	215	5	197	3	1259	3	802
1030	IC0476031	68	350	62	133	90	1132	73	851	7	488	6	825	12	15	8	46	2	258	3	1342	4	877	3	1159
1031	IC0476043	70	504	64	270	83	976	72	762	6	881	5	1057	6	1267	6	1279	1	1133	4	850	6	428	4	629
1032	IC0476044	77	1160	71	813	91	1164	80	1199	7	214	5	1181	10	96	7	281	2	112	3	1349	4	880	3	1160
1033	IC0476046	76	1135	63	227	55	73	65	107	6	1177	4	1384	11	18	7	488	1	1282	5	272	3.5	960	3	952
1034	IC0476055	72	834	64	285	55	107	64	62	5	1382	6	737	9	123	7	600	3	22	4	950	5.5	454	4	368
1035	IC0476063	77	1152	64	300	75	735	72	734	6	1217	6	734	8	512	7	772	4	2	4	510	5	646	4	194
1036	IC0476066	76	1060	72	837	80	897	76	1041	6	966	6	957	7	852	6	1065	2	517	3	1076	5.5	556	4	616
1037	IC0476068	78	1266	65	328	83	986	75	998	6	1205	6	985	7	877	6	1136	2	632	3	1077	2.5	1325	3	1268



1038	IC0476074	71	645	66	375	76	797	71	618	7	102	5	1132	5	1321	6	1274	2	70	3	1250	5.5	601	4	719
1039	IC0476077	76	1107	62	158	63	282	67	260	5	1305	5	1325	5	1295	5	1367	2	675	4	885	4	946	3	907
1040	IC0476084	64	19	65	316	84	1008	71	619	7	499	7	288	8	570	7	244	1	967	3	1036	5.5	510	3	872
1041	IC0476093	67	279	62	129	92	1172	74	880	7	8	4	1366	9	320	7	666	2	24	4	889	7	279	4	262
1042	IC0476095	65	142	67	440	57	151	63	47	6	1279	6	804	6	1020	6	1232	1	1331	4	714	4	928	3	1086
1043	IC0476098	67	308	62	130	58	197	62	29	7	491	6	748	6	1263	6	1114	1	965	4	711	4.5	861	3	970
1044	IC0476104	70	588	67	477	58	180	65	128	6	716	4	1362	7	704	6	1233	2	388	4	653	5.5	527	4	456
1045	IC0476125	68	364	67	460	93	1184	76	1042	7	7	6	632	6	1232	7	773	1	724	4	698	7	308	4	387
1046	IC0476126	68	352	67	458	73	691	69	457	7	489	7	357	9	312	7	192	1	963	4	782	7.5	200	4	319
1047	IC0476135	70	517	74	1000	80	895	75	956	6	717	6	614	8	543	7	489	2	389	4	799	9.5	57	5	70
1048	IC0476142	75	948	72	836	84	994	77	1107	7	72	7	558	8	565	7	321	1	755	5	386	5	651	4	664
1049	IC0476147	79	1339	62	162	59	209	67	238	6	826	6	749	7	711	6	892	1	1109	2	1361	3.5	1088	2	1356
1050	IC0476153	72	815	64	283	93	1188	76	1064	8	2	8	179	9	322	8	33	1	720	4	770	7	280	4	418
1051	IC0476161	69	415	64	267	81	925	71	656	6	885	4	1346	7	861	6	1234	1	1136	5	345	5.5	557	4	523
1052	IC0476166	70	530	66	363	71	616	69	426	6	1075	6	811	5	1309	6	1293	1	1229	4	715	4	948	3	1087
1053	IC0476168	71	729	65	323	58	179	65	108	7	18	5	1143	6	1024	6	1102	2	30	4	863	2.5	1342	3	1224
1054	IC0476170	75	929	61	103	112	1379	83	1283	5	1313	7	301	8	663	7	614	1	1349	4	577	3.5	1080	3	1144
1055	IC0476176	77	1239	61	116	64	302	67	286	6	563	5	1072	10	49	7	282	2	298	5	332	5	617	4	420
1056	IC0476180	71	658	66	377	74	728	70	554	7	103	5	1133	7	822	6	942	1	772	4	861	5.5	547	3	761
1057	IC0476181	79	1296	64	306	83	969	75	999	6	526	7	290	7	873	7	490	1	981	4	574	6	407	4	530
1058	IC0476183	77	1222	67	518	68	427	71	587	6	950	7	281	6	1073	6	893	1	1166	3	1117	6.5	354	4	651
1059	IC0476193	65	72	62	122	93	1177	73	852	7	164	7	427	5	1344	6	990	1	805	4	685	5.5	605	4	713
1060	IC0476204	67	277	64	259	87	1065	73	792	5	1388	7	576	6	1207	6	1207	2	713	5	389	3.5	1168	3	841
1061	IC0476211	65	126	64	252	68	464	66	161	7	21	5	1056	10	59	8	161	2	33	5	259	5	618	4	379
1062	IC0476213	75	985	64	291	81	921	73	853	6	622	6	814	7	859	6	894	2	338	4	716	5	673	4	579
1063	IC0476225	76	1069	66	414	75	731	72	763	6	1222	6	905	5	1313	5	1338	1	1301	4	971	4.5	867	3	1075
1064	IC0476227	71	667	62	142	78	868	70	555	6	1050	6	995	8	658	6	958	1	1215	3	1165	6.5	339	4	654
1065	IC0476235	65	70	67	435	88	1088	73	854	7	456	5	1278	9	262	7	542	1	949	4	880	5.5	475	3	751
1066	IC0476239	71	680	59	71	68	430	66	182	6	1051	7	509	7	762	7	774	1	1216	4	792	4.5	792	3	1009
1067	IC0476240	75	989	67	504	81	927	74	936	6	623	6	638	8	550	7	491	1	1015	3	1137	5.5	506	3	913
1068	IC0476241	68	344	72	830	72	664	71	588	6	892	7	475	9	199	7	245	2	478	6	111	3	1206	4	662
1069	IC0476245	67	315	67	456	55	88	63	48	7	492	5	1210	8	351	7	826	2	259	5	431	6.5	325	4	227
1070	IC0476249	77	1226	63	234	68	441	69	458	6	835	6	653	8	650	7	667	1	1111	3	1231	6	400	3	852
1071	IC0476261	77	1144	67	513	88	1078	77	1124	6	951	7	279	9	260	7	188	2	508	4	675	6	376	4	380
1072	IC0476267	79	1342	62	163	66	344	69	427	7	471	6	745	9	155	7	283	2	249	4	606	4	882	3	786
1073	IC0476272	66	232	60	76	80	899	69	397	6	1191	5	1242	7	853	6	1208	1	1286	4	546	4	919	3	987
1074	IC0476278	76	1061	64	294	76	772	72	735	6	596	6	740	9	219	7	322	1	1010	4	605	6.5	321	4	436
1075	IC0476286	72	817	58	38	79	889	70	491	8	4	6	922	16	3	10	3	1	721	4	621	2.5	1260	3	1279
1076	IC0476294	71	709	60	78	83	979	71	657	6	1188	5	1241	7	876	6	1209	2	624	4	873	4.5	804	3	771
1077	IC0476301	66	191	68	553	82	959	72	736	6	1192	5	1272	10	79	7	543	1	1287	4	1007	5	620	3	935
1078	IC0476302	68	366	64	264	88	1097	73	855	6	893	5	1285	6	1268	6	1327	2	479	4	549	2.5	1355	3	1124
1079	IC0476303	75	981	67	503	74	717	72	737	7	264	8	93	9	210	8	57	1	863	5	354	4	886	3	930
1080	IC0476307	68	343	64	263	88	1094	73	856	6	1264	6	912	7	983	6	1181	2	659	4	620	4	925	3	800
1081	IC0476310	65	86	67	437	82	955	71	658	6	1157	5	1312	7	869	6	1235	2	606	5	343	4.5	802	4	524
1082	IC0476313	75	950	64	288	81	924	73	857	6	990	6	647	6	1178	6	1103	1	1184	4	599	5.5	581	4	657
1083	IC0476316	79	1328	66	428	89	1109	78	1147	6	827	5	1131	8	661	6	1004	2	442	4	860	3.5	1079	3	1017
1084	IC0476318	75	920	57	5	94	1202	75	1000	6	624	5	1245	6	1233	6	1259	2	339	3	1095	3	1253	3	1199
1085	IC0476323	80	1370	63	245	73	682	72	738	7	12	8	143	10	107	8	28	2	26	4	907	7	274	4	282
1086	IC0476324	72	784	67	491	111	1368	83	1304	6	1239	5	1316	9	323	6	1038	1	1310	3	1194	6	378	3	798
1087	IC0476326	74	908	57	4	67	378	66	183	7	477	9	64	6	1061	7	407	2	252	4	562	3.5	1146	3	911
1088	IC0476332	69	436	62	135	75	733	69	398	7	122	7	430	7	979	7	554	1	782	4	481	7.5	237	4	252
1089	IC0476333	66	174	58	14	112	1377	79	1170	7	9	6	835	9	324	7	256	1	725	4	515	3	1212	3	1194



1090	IC0476337	77	1148	64	299	84	998	75	979	7	215	5	1223	9	245	7	492	1	840	5	341	5	631	4	623
1091	IC0476340	64	17	58	7	71	594	64	89	7	500	7	513	8	651	7	458	2	265	5	238	8	150	5	83
1092	IC0476341	77	1195	76	1117	86	1036	80	1200	6	564	7	542	7	885	7	720	1	996	5	306	6	408	4	423
1093	IC0476342	77	1161	67	514	89	1112	78	1136	6	565	7	280	6	1215	7	775	2	299	5	290	4.5	853	4	513
1094	IC0476345	65	80	57	3	110	1355	77	1125	7	10	6	668	8	662	7	368	2	25	4	804	6.5	340	4	321
1095	IC0476350	64	22	64	249	84	995	71	589	6	1285	7	500	8	660	7	733	1	1336	4	940	5	657	3	939
1096	IC0476360	71	692	64	277	86	1038	74	881	6	871	8	222	10	108	8	90	3	13	4	772	5.5	447	4	316
1097	IC0476362	74	885	66	396	71	615	70	556	6	1005	8	141	8	652	7	329	2	537	4	906	9	84	5	102
1098	IC0476363	72	795	67	492	74	718	71	620	7	297	4	1342	6	1134	6	1275	2	159	5	440	4.5	839	4	569
1099	IC0476364	76	1099	61	108	70	548	69	428	6	840	6	998	7	978	6	1115	1	1113	3	1078	8.5	127	4	254
1100	IC0476376	79	1335	62	161	70	533	70	557	5	1379	10	11	9	182	8	32	1	1386	4	895	7.5	192	4	359
1101	IC0476385	80	1384	62	165	63	279	68	362	7	13	7	299	7	727	7	323	1	727	4	576	3	1229	3	1229
1102	IC0476387	66	222	62	128	81	923	70	492	6	785	6	654	6	1177	6	1031	2	424	4	600	2.5	1350	3	1152
1103	IC0476392	69	458	68	591	80	902	72	764	7	486	4	1337	7	855	6	1171	3	9	3	1198	3.5	1110	3	926
1104	IC0476397	76	1090	67	508	95	1208	79	1187	6	841	4	1340	7	988	6	1280	2	452	4	887	3.5	1133	3	1020
1105	IC0476398	71	714	67	488	68	452	69	399	7	479	6	726	7	767	7	776	2	254	4	508	5.5	535	4	411
1106	IC0476399	73	846	64	286	77	854	71	659	6	647	6	736	8	656	7	668	1	1024	3	1064	2.5	1305	2	1351
1107	IC0476401	66	192	67	447	98	1257	77	1108	7	427	6	803	5	1348	6	1210	1	932	5	405	3	1256	3	1170
1108	IC0476408	70	573	64	273	57	154	64	63	6	718	7	498	7	698	7	657	2	390	4	688	2.5	1313	3	1182
1109	IC0476450	70	597	67	478	61	260	66	184	7	351	6	896	5	1288	6	1236	1	894	5	253	3.5	1180	3	976
1110	IC0476478	71	661	66	378	74	716	70	558	6	688	5	1281	9	209	7	658	1	1048	4	644	3	1207	3	1230
1111	IC0476501	66	246	71	784	65	310	67	287	6	1193	8	208	8	648	7	459	2	626	4	461	5	656	4	489
1112	IC0476502	69	407	67	464	86	1032	74	912	6	740	6	974	8	573	7	721	1	1070	4	726	6	397	4	575
1113	IC0476514	66	164	60	75	93	1182	73	823	6	786	6	921	9	321	7	503	2	425	4	724	3.5	1017	3	953
1114	IC0476530	68	395	72	831	58	161	66	185	7	394	9	39	8	365	8	68	1	914	5	166	2.5	1285	3	1136
1115	IC0476545	65	112	62	123	83	968	70	525	7	497	7	368	9	317	7	193	1	966	4	681	3.5	1016	3	1176
1116	IC0476549	76	1086	67	507	112	1378	85	1341	6	1178	6	970	11	36	7	189	1	1283	4	841	7	265	4	419
1117	IC0476553	71	614	67	479	82	958	73	858	6	689	5	1207	7	870	6	1104	2	371	4	640	3	1236	3	1036
1118	IC0476568	71	731	63	209	58	164	64	78	7	480	5	1059	7	974	6	1076	1	960	3	1247	7	299	4	582
1119	IC0476587	66	247	66	347	66	357	66	186	6	1194	6	984	8	649	6	1005	2	627	4	626	5.5	522	4	451
1120	IC0476599	75	974	62	152	78	879	72	702	6	625	5	1238	7	848	6	1105	1	1016	3	1313	2.5	1323	2	1371
1121	IC0476602	78	1287	64	305	63	283	68	363	8	1	6	735	9	145	8	78	1	719	4	811	2.5	1269	2	1317
1122	IC0476605	72	805	63	211	109	1348	81	1242	6	1025	8	226	7	989	7	669	2	549	3	1272	10.5	34	5	72
1123	IC0476611	76	1051	62	156	77	835	72	703	6	1223	5	1239	9	313	6	959	2	639	5	342	3.5	1013	3	762
1124	IC0476626	71	712	60	79	70	529	67	261	6	690	5	1150	9	310	7	670	2	372	4	739	4	892	3	853
1125	IC0476633	79	1331	61	117	80	894	73	859	6	1174	6	918	7	851	6	1066	1	1280	5	200	5.5	555	4	453
1126	IC0476642	76	1121	58	53	67	379	67	262	6	1179	6	926	7	977	6	1145	1	1284	4	622	4.5	819	3	925
1127	IC0476648	74	870	67	495	82	951	74	937	6	1183	8	134	6	1188	7	777	2	619	4	568	3.5	1166	3	916
1128	IC0476649	66	202	66	343	78	867	70	526	5	1366	5	1127	8	657	6	1146	2	701	4	995	2	1363	3	1301
1129	IC0476651	69	429	67	467	88	1077	75	957	6	741	5	1204	7	892	6	1106	2	399	5	339	4.5	807	4	518
1130	IC0476695	75	954	64	289	73	693	71	590	6	626	5	1053	8	503	7	778	2	340	5	328	6	392	4	265
1131	IC0476696	80	1360	64	310	91	1160	78	1158	6	1173	5	1222	7	985	6	1261	1	1279	4	544	4.5	821	3	893
1132	IC0476705	74	905	65	325	55	137	65	109	6	1184	5	1052	5	1359	5	1356	2	620	4	633	5	701	4	540
1133	IC0476710	69	470	62	139	55	83	62	24	6	886	9	62	7	681	7	284	2	473	4	450	5	659	4	487
1134	IC0476761	69	472	67	472	55	66	64	64	6	742	8	216	7	677	7	447	1	1071	4	571	5.5	525	4	636
1135	IC0476769	66	203	71	780	76	768	71	621	6	1195	6	959	7	828	6	1107	2	628	4	522	8	155	5	118
1136	IC0476776	79	1324	64	308	75	746	73	793	6	929	6	986	7	824	6	1067	2	494	4	627	3.5	1108	3	922
1137	IC0476788	80	1381	67	526	55	69	67	288	6	507	6	635	8	348	7	493	1	972	4	803	3	1214	3	1273
1138	IC0476828	70	544	67	474	75	732	71	591	7	114	6	901	9	214	7	285	2	74	4	722	6.5	320	4	297
1139	IC0476842	69	465	67	470	59	210	65	129	6	1095	6	802	6	1030	6	1172	1	1240	4	514	3.5	1142	3	1119
1140	IC0476849	73	853	66	392	73	683	71	592	6	853	5	1217	7	815	6	1137	2	457	5	432	4	917	4	676
1141	IC0476927	77	1238	65	327	60	226	67	289	6	566	8	220	10	46	8	58	1	997	4	911	5.5	440	3	807



1142	IC0476955	65	146	64	253	64	297	64	90	7	498	5	1227	7	975	6	1147	2	264	4	872	6	411	4	430
1143	IC0477070	75	939	66	402	83	971	75	958	7	476	5	1219	6	1266	6	1281	1	959	4	1001	4	945	3	1171
1144	IC0477199	74	913	60	81	55	72	63	49	6	1185	5	1074	10	39	7	408	2	621	4	852	5	615	4	622
1145	IC0478047	65	155	64	254	58	185	62	30	7	457	5	1225	9	133	7	494	2	243	3	1311	4.5	718	3	1003
1146	IC0478110	65	141	63	173	55	134	61	11	6	908	6	916	5	1278	6	1294	1	1147	3	1297	2.5	1356	2	1372
1147	IC0478181	67	304	58	22	69	487	65	110	6	1128	5	1243	7	774	6	1173	1	1256	5	433	5.5	536	4	566
1148	IC0478230	72	782	68	645	70	577	70	527	7	87	6	722	10	63	8	100	2	66	4	604	4	879	3	782
1149	IC0478233	76	1137	68	695	53	15	66	162	6	1224	6	631	9	111	7	448	1	1302	4	802	4.5	715	3	1001
1150	IC0478252	75	1021	63	221	55	129	64	91	6	627	6	741	9	126	7	324	2	341	5	403	5.5	455	4	363
1151	IC0478289	80	1380	68	734	69	490	72	765	7	177	6	885	6	1085	6	1068	2	104	3	1295	3.5	1148	3	1223
1152	IC0478308	70	526	68	599	73	713	70	559	7	352	6	881	6	1133	6	1069	1	895	4	617	5.5	576	4	656
1153	IC0478319	69	460	76	1094	53	19	66	187	6	1096	7	461	11	16	8	69	2	577	5	303	6	366	4	259
1154	IC0478334	76	1078	58	51	69	519	68	319	6	967	6	999	6	1096	6	1237	2	518	4	981	4.5	836	3	843
1155	IC0478337	69	409	63	187	82	966	71	660	7	123	5	1323	8	558	7	827	2	80	3	1196	10.5	29	5	55
1156	IC0478348	71	748	66	385	60	257	66	163	7	330	8	217	6	1038	7	601	2	182	4	910	8.5	128	5	142
1157	IC0478367	64	48	62	121	55	141	60	8	7	468	7	581	9	128	7	190	2	247	2	1384	6.5	317	4	688
1158	IC0478378	67	285	81	1283	67	415	72	704	7	137	5	1006	8	425	7	602	1	791	4	528	5.5	492	4	605
1159	IC0478389	77	1229	58	61	64	307	66	217	7	216	11	8	9	149	9	10	2	113	4	894	4.5	721	3	805
1160	IC0478403	64	62	73	844	63	294	67	239	6	1171	8	126	9	147	8	116	2	615	3	1325	9	76	5	177
1161	IC0478406	66	245	68	558	62	277	65	143	6	787	5	1186	7	726	6	1108	1	1089	3	1089	5.5	530	3	891
1162	IC0478409	77	1237	64	304	55	121	65	144	7	48	8	78	9	125	8	35	1	742	6	90	3.5	976	3	806
1163	IC0478418	68	345	79	1199	70	543	72	766	7	395	9	44	5	1307	7	544	1	915	4	758	4.5	865	3	1006
1164	IC0478429	70	592	63	200	66	375	66	218	6	1251	5	1235	6	1060	6	1325	1	1315	3	1312	3.5	1145	2	1332
1165	IC0478430	77	1231	68	713	55	115	67	240	6	952	5	1114	8	361	6	943	1	1167	4	994	6.5	327	4	561
1166	IC0478442	68	339	63	183	95	1218	75	1001	7	396	4	1347	5	1346	5	1343	2	216	5	212	2.5	1359	3	927
1167	IC0478443	73	847	68	656	71	642	71	593	7	279	5	1188	6	1117	6	1211	2	146	3	1253	5.5	574	4	718
1168	IC0478444	75	1015	66	410	67	414	69	459	7	265	5	1130	6	1069	6	1174	1	864	3	1306	7.5	244	4	522
1169	IC0478451	79	1336	73	950	69	524	74	882	7	35	4	1373	7	779	6	1175	1	737	4	556	5	669	3	737
1170	IC0478465	69	481	64	269	60	234	64	92	6	743	7	292	8	384	7	286	1	1072	5	230	4	895	3	849
1171	IC0478468	75	1022	76	1113	55	122	69	400	6	991	6	769	5	1276	6	1295	2	529	5	404	5.5	595	4	374
1172	IC0478469	80	1386	73	954	67	401	73	860	6	508	8	123	10	52	8	36	3	10	3	1028	7.5	182	5	149
1173	IC0478474	66	170	58	13	70	582	65	111	7	428	8	104	4	1372	6	991	1	933	3	1266	7	316	4	626
1174	IC0478499	70	547	63	196	67	396	67	241	7	353	5	1060	7	756	6	944	2	193	4	732	3.5	1097	3	966
1175	IC0478500	70	575	68	611	58	169	65	145	5	1350	8	169	5	1283	6	1138	1	1371	5	359	5.5	596	4	564
1176	IC0478506	68	368	68	577	90	1157	75	1002	6	1110	5	1110	6	1225	6	1276	1	1248	6	86	6	427	4	269
1177	IC0478507	73	848	70	757	70	570	71	622	6	648	6	629	6	1104	6	1032	1	1025	5	393	6	418	4	463
1178	IC0478515	66	251	73	858	58	190	66	164	6	1141	6	955	7	707	6	1070	1	1263	2	1377	3.5	1087	2	1362
1179	IC0478518	68	347	61	94	72	672	67	263	6	1111	6	750	6	1125	6	1139	2	584	4	812	7.5	250	4	210
1180	IC0478520	69	439	68	587	71	645	69	460	7	124	8	212	8	490	8	162	1	783	3	1115	10.5	28	5	96
1181	IC0478526	67	271	68	563	75	760	70	528	7	138	5	1202	6	1145	6	1176	2	86	3	1188	8	170	4	219
1182	IC0478529	71	710	62	143	69	528	67	290	6	1244	7	504	8	454	7	603	1	1312	4	689	8.5	114	5	185
1183	IC0478537	71	656	66	376	77	851	71	661	7	104	6	807	7	845	7	722	1	773	3	1146	10.5	31	5	100
1184	IC0478538	70	486	81	1296	80	917	77	1109	6	1252	6	597	5	1333	6	1296	2	654	3	1336	5.5	603	3	845
1185	IC0478540	79	1348	58	64	61	269	66	188	7	186	8	187	8	393	8	163	1	818	5	282	4	896	3	898
1186	IC0478542	76	1111	64	298	53	22	64	93	6	1225	7	364	6	994	6	1033	2	640	4	583	4.5	823	4	655
1187	IC0478543	75	970	62	151	73	712	70	529	6	848	8	228	7	820	7	495	1	1118	5	285	7.5	229	4	204
1188	IC0478544	66	204	58	15	67	423	64	65	7	429	6	664	9	163	7	212	1	934	3	1056	10	42	5	116
1189	IC0478551	74	877	68	662	107	1341	83	1297	6	640	8	91	6	1256	7	545	2	350	3	1027	9	93	5	117
1190	IC0478552	68	391	68	580	53	54	63	50	7	133	5	1268	11	17	8	133	1	789	4	1006	4.5	706	3	1045
1191	IC0478557	73	860	81	1323	53	27	69	429	7	280	7	442	5	1269	6	1071	1	869	5	300	9.5	70	5	73
1192	IC0478559	68	359	68	573	75	765	70	560	6	1112	6	965	10	70	7	325	1	1249	4	977	7	268	4	462
1193	IC0478561	68	361	79	1200	87	1070	78	1148	7	397	5	1080	6	1208	6	1177	1	916	4	853	9	92	5	162



1194	IC0478563	77	1215	58	60	90	1150	75	980	6	953	6	925	10	95	7	287	2	509	3	1243	7	273	4	384
1195	IC0478571	77	1155	62	159	70	581	70	493	7	217	6	747	8	470	7	449	2	114	4	952	6.5	333	4	366
1196	IC0478572	75	975	62	153	68	435	68	364	6	849	7	582	9	166	7	288	2	455	4	497	4.5	722	4	596
1197	IC0478573	74	912	73	917	55	143	67	291	6	641	6	952	7	693	6	992	2	351	5	413	4	910	4	671
1198	IC0478576	70	532	63	195	69	514	67	292	6	1076	7	502	7	776	7	779	2	569	4	941	5.5	537	4	557
1199	IC0478585	68	349	70	752	80	907	73	794	7	398	9	28	8	546	8	41	1	917	3	1205	3.5	1062	3	1302
1200	IC0478587	77	1244	63	235	65	333	68	365	6	567	6	988	7	740	6	993	1	998	2	1388	5.5	532	3	1187
1201	IC0478588	65	79	58	9	82	967	68	366	6	805	7	515	9	242	7	213	1	1095	3	1279	11.5	6	5	68
1202	IC0478591	64	60	63	168	65	330	64	79	6	818	8	102	8	403	8	164	1	1105	2	1373	7	283	3	785
1203	IC0478593	79	1350	81	1356	53	59	71	623	7	187	6	931	8	343	7	604	1	819	3	1344	11	18	5	104
1204	IC0478602	76	1056	74	1046	76	798	75	1003	7	239	8	120	6	1153	7	496	2	123	4	566	6	421	4	346
1205	IC0478604	65	145	63	174	60	237	63	39	6	806	8	223	8	385	7	246	1	1096	3	1329	3.5	1029	2	1342
1206	IC0478606	77	1233	55	1	67	409	66	219	7	218	7	588	10	55	8	87	1	841	4	945	9	75	5	176
1207	IC0478607	77	1178	71	815	70	586	73	795	7	219	5	1263	7	794	6	1072	1	842	3	1257	7	294	4	581
1208	IC0478611	64	33	79	1174	70	573	71	624	6	1172	6	677	7	790	6	945	1	1278	5	397	3.5	1102	3	1064
1209	IC0478618	67	298	79	1193	76	805	74	913	7	139	7	320	10	74	8	42	1	792	4	471	4.5	710	3	868
1210	IC0478620	74	909	68	667	65	322	69	430	6	1006	8	131	8	402	7	247	1	1191	4	905	4.5	748	3	1050
1211	IC0478626	76	1118	73	935	58	170	69	431	7	60	7	399	7	702	7	450	2	51	4	931	7	290	4	289
1212	IC0478627	72	836	68	654	53	16	64	94	7	298	8	173	7	667	7	326	2	160	3	1270	8	152	4	261
1213	IC0478629	76	1102	58	52	55	68	63	51	6	968	7	304	9	119	7	191	2	519	4	778	5.5	452	4	499
1214	IC0478632	70	512	68	596	87	1073	75	981	7	115	4	1379	8	580	6	994	2	75	4	755	4	903	3	861
1215	IC0478635	76	1127	79	1254	65	342	73	861	6	969	5	1081	9	154	7	659	1	1173	2	1367	9	77	4	308
1216	IC0478638	72	830	58	39	53	29	61	12	7	88	4	1387	10	38	7	451	1	762	4	557	5.5	439	4	600
1217	IC0478640	69	469	68	593	60	227	66	165	7	375	6	790	6	1033	6	1034	1	903	6	82	7.5	241	5	127
1218	IC0478643	64	52	79	1175	54	63	66	166	6	1286	8	67	9	118	8	117	2	666	5	352	3	1204	3	931
1219	IC0478644	69	442	68	589	78	882	72	705	6	1258	4	1377	8	540	6	1238	1	1319	2	1381	6	395	3	1039
1220	IC0478645	66	224	71	782	69	522	69	401	7	430	7	336	7	778	7	452	1	935	4	579	2.5	1318	3	1286
1221	IC0478646	75	1013	73	923	53	53	67	264	6	992	4	1353	6	997	5	1344	1	1185	3	1323	3.5	1134	2	1333
1222	IC0478649	78	1278	68	721	67	416	71	625	6	938	4	1361	6	1070	5	1345	1	1161	3	1353	10.5	36	5	146
1223	IC0478650	71	728	68	635	65	340	68	332	6	1245	4	1376	7	741	6	1326	2	650	3	1261	2.5	1315	3	1313
1224	IC0478651	70	590	71	798	67	399	69	461	7	116	6	627	8	421	7	363	2	76	5	392	6	386	4	287
1225	IC0478652	79	1320	60	87	76	778	72	706	6	1200	7	432	6	1148	6	1073	1	1290	3	1224	9	91	4	240
1226	IC0478655	68	389	71	790	65	328	68	333	6	1113	7	405	9	151	7	248	1	1250	6	107	2.5	1270	3	1051
1227	IC0478656	70	562	60	77	67	404	66	167	6	1077	6	920	8	423	7	780	2	570	4	836	3.5	1036	3	1010
1228	IC0478660	65	143	66	340	63	291	65	112	6	807	4	1383	7	730	6	1260	1	1097	3	1203	4.5	786	3	1154
1229	IC0478662	69	473	79	1210	53	33	67	265	7	125	5	1159	5	1270	6	1297	1	784	2	1369	9	94	4	314
1230	IC0478669	64	3	76	1082	84	1011	75	959	5	1376	4	1370	5	1338	5	1375	1	1384	3	1201	5	700	3	1041
1231	IC0478670	77	1185	58	58	70	549	68	367	6	954	6	833	6	1098	6	1178	1	1168	3	1239	7.5	247	4	480
1232	IC0478671	75	951	66	403	86	1059	76	1024	6	628	4	1344	6	1204	6	1310	2	342	4	751	7.5	254	5	187
1233	IC0478673	71	730	63	208	53	55	62	31	7	105	7	426	6	998	7	723	2	71	4	480	7	301	4	192
1234	IC0478676	75	1020	63	220	67	419	68	368	6	993	5	1146	9	162	7	660	1	1186	4	996	9	78	5	182
1235	IC0478680	71	732	64	280	65	323	67	242	7	331	9	43	7	735	8	134	1	884	4	447	4.5	788	3	870
1236	IC0478683	66	235	71	783	58	191	65	130	6	1142	9	33	9	134	8	43	2	600	4	445	5.5	456	4	392
1237	IC0478686	75	1024	58	48	65	343	66	189	6	1231	7	437	7	742	7	828	2	643	3	1124	6	404	4	532
1238	IC0478689	65	139	68	543	65	308	66	190	7	165	7	488	7	732	7	497	2	99	4	486	9	85	5	66
1239	IC0478691	78	1288	65	329	53	57	65	146	6	1206	4	1345	5	1273	5	1368	1	1294	3	1351	6.5	362	3	847
1240	IC0478693	71	632	76	1101	75	737	74	914	6	691	7	541	6	1140	6	995	2	373	3	1047	4.5	842	3	889
1241	IC0478694	68	381	79	1203	55	110	67	293	6	1265	7	533	7	685	6	946	1	1323	5	144	4.5	782	4	610
1242	IC0478696	65	93	58	10	111	1375	78	1149	6	1158	4	1369	8	642	6	1140	2	607	3	1200	4	907	3	1037
1243	IC0478698	75	918	58	43	83	981	72	739	6	994	5	1327	9	244	7	829	2	530	4	648	5	630	4	533
1244	IC0478702	71	681	63	205	76	814	70	530	6	1052	5	1321	9	227	7	830	1	1217	5	439	7.5	196	4	228
1245	IC0478703	76	1079	83	1371	78	873	79	1180	6	597	5	1246	8	537	6	947	2	317	5	434	7.5	217	5	143



1246	IC0478704	74	869	79	1238	70	588	74	938	5	1318	5	1009	7	795	6	1212	1	1353	4	983	4.5	795	3	1070
1247	IC0478706	72	807	79	1233	68	479	73	824	6	660	5	1249	9	174	7	661	2	358	3	1315	3.5	983	3	1215
1248	IC0478707	76	1119	63	225	53	44	64	80	6	970	6	991	8	337	7	831	3	14	4	844	5	637	4	426
1249	IC0478710	77	1211	68	709	69	484	71	662	5	1298	7	408	8	439	7	605	1	1342	5	375	5.5	496	4	552
1250	IC0478715	77	1247	68	716	53	49	66	191	7	220	4	1357	8	339	6	996	1	843	4	1019	11.5	7	5	44
1251	IC0478716	71	742	73	910	53	40	66	168	6	1053	4	1371	8	336	6	1179	2	558	3	1101	2.5	1282	3	1269
1252	IC0478718	80	1365	68	731	82	954	77	1083	6	509	6	963	7	868	6	997	1	973	4	725	6.5	347	4	478
1253	IC0478720	79	1356	79	1265	60	255	73	796	6	930	6	679	7	723	6	948	2	495	4	805	3.5	1093	3	1014
1254	IC0478725	79	1305	68	724	108	1342	85	1342	6	931	6	795	9	300	7	453	2	496	4	821	10	43	5	53
1255	IC0478726	78	1290	68	723	52	11	66	192	7	38	5	1197	6	992	6	1180	2	41	3	1309	6	413	4	627
1256	IC0478727	72	794	71	801	90	1144	78	1137	5	1327	9	40	7	906	7	364	1	1356	4	446	7.5	233	4	246
1257	IC0478729	70	591	89	1386	58	199	72	767	6	1078	7	438	8	375	7	498	2	571	3	1334	3.5	1027	3	1239
1258	IC0478730	66	241	58	17	65	313	63	52	7	431	6	923	8	399	7	546	2	231	4	973	5.5	490	4	551
1259	IC0478734	67	294	63	180	93	1199	74	939	6	1269	5	1322	7	920	6	1277	2	662	4	1015	4.5	811	3	844
1260	IC0478739	72	786	83	1365	73	677	76	1043	6	661	5	1002	8	498	7	781	2	359	3	1079	10	45	5	67
1261	IC0478740	68	330	68	571	73	686	70	494	6	1114	7	276	5	1311	6	1109	1	1251	5	366	10	47	5	61
1262	IC0478741	77	1242	79	1258	60	259	72	740	6	568	5	1297	9	141	7	724	2	300	3	1319	9.5	51	5	122
1263	IC0478742	75	997	63	219	79	892	72	768	5	1314	8	184	5	1329	6	1141	1	1350	4	666	7	313	4	390
1264	IC0478746	77	1248	76	1119	67	417	73	862	7	221	5	1086	7	760	6	998	4	1	5	334	5.5	534	5	125
1265	IC0478750	69	461	66	358	53	56	63	40	7	126	8	218	8	342	8	165	2	81	5	227	5.5	483	4	296
1266	IC0478751	77	1212	76	1118	67	392	73	863	6	569	7	381	6	1067	6	895	2	301	4	929	7.5	243	4	232
1267	IC0478753	77	1171	68	701	70	587	72	707	6	570	6	715	8	472	7	547	2	302	3	1284	6	389	4	624
1268	IC0478760	75	933	68	672	70	572	71	626	7	266	10	16	11	24	9	6	2	138	6	37	3	1200	4	485
1269	IC0478764	65	150	68	545	58	198	64	66	6	808	7	343	8	374	7	327	1	1098	6	104	3.5	1026	3	822
1270	IC0478765	75	1016	79	1248	65	339	73	825	7	267	8	114	11	19	9	13	1	865	4	765	7	264	4	417
1271	IC0478768	72	828	83	1367	53	32	69	462	5	1328	7	371	9	113	7	365	1	1357	3	1122	4.5	716	3	1141
1272	IC0478786	76	1132	83	1372	65	311	75	960	6	598	7	517	6	1048	6	999	2	318	3	1130	4	930	3	1034
1273	IC0478788	71	637	63	202	76	781	70	531	7	332	6	819	9	222	7	289	1	885	4	823	2.5	1276	2	1321
1274	IC0478789	71	757	74	1024	67	406	71	594	7	333	6	610	11	21	8	44	2	183	4	798	10.5	25	5	34
1275	IC0478792	71	761	76	1104	53	28	67	243	6	872	5	1250	8	333	6	1000	2	469	3	1316	7	282	4	428
1276	IC0478793	65	157	68	547	63	292	65	147	6	1159	7	567	9	146	7	328	1	1273	4	943	7.5	188	4	364
1277	IC0478800	70	600	61	98	65	336	65	148	6	1253	5	1149	6	1053	6	1311	2	655	3	1347	11.5	12	5	48
1278	IC0478801	71	724	63	207	53	58	62	32	6	873	6	823	9	117	7	409	1	1127	3	1070	5.5	451	3	877
1279	IC0478807	66	233	63	177	53	47	61	10	6	788	8	182	5	1272	6	949	1	1090	3	1032	3.5	1177	3	1267
1280	IC0478808	71	621	73	895	85	1013	76	1065	6	874	8	128	6	1195	7	662	2	470	4	567	4.5	850	4	643
1281	IC0478809	76	1131	61	111	55	139	64	81	5	1306	6	657	6	1017	6	1213	2	676	3	1232	3.5	1141	3	1191
1282	IC0478810	76	1108	74	1054	64	306	71	663	7	240	7	258	8	397	7	214	2	124	5	364	8.5	112	5	75
1283	IC0478813	70	559	68	608	77	827	72	708	5	1351	5	1036	7	841	6	1214	1	1372	3	1246	5.5	553	3	975
1284	IC0478814	70	583	68	613	63	293	67	266	6	1079	5	1115	7	731	6	1142	3	15	3	1175	5.5	531	4	455
1285	IC0478816	70	567	68	610	69	520	69	432	7	354	5	1035	10	60	7	215	2	194	5	205	7.5	183	5	98
1286	IC0478817	71	751	68	639	67	420	69	402	6	692	5	1309	8	426	6	1001	2	374	4	884	4.5	750	3	764
1287	IC0478819	64	27	61	89	78	878	68	320	6	819	5	1240	8	539	6	896	1	1106	3	1314	4.5	760	3	1220
1288	IC0478821	77	1184	73	938	106	1329	85	1348	7	49	8	207	6	1255	7	548	2	47	4	460	5.5	592	4	403
1289	IC0478823	72	840	70	756	55	133	66	169	7	89	6	711	7	691	7	663	2	67	5	402	3.5	1082	3	829
1290	IC0478824	75	980	81	1331	69	498	75	982	6	850	6	598	8	445	7	549	2	456	4	946	2.5	1290	3	1242
1291	IC0478826	77	1213	68	710	101	1301	82	1260	6	1218	7	569	9	295	7	410	1	1298	4	495	7.5	198	4	249
1292	IC0478827	69	405	68	582	84	999	74	883	6	1097	6	799	8	567	7	725	2	578	4	956	9.5	58	5	78
1293	IC0478831	70	552	66	365	73	714	70	495	5	1352	6	904	11	27	7	216	1	1373	4	833	5.5	438	3	742
1294	IC0478834	71	746	68	638	55	127	65	113	7	334	10	14	7	688	8	70	1	886	4	897	9.5	61	5	137
1295	IC0478838	79	1354	64	309	66	370	70	496	6	932	8	181	8	413	7	290	1	1159	2	1356	7.5	207	4	597
1296	IC0478842	72	823	71	802	59	221	67	294	6	662	5	1030	10	45	7	291	1	1033	2	1378	9	74	4	341
1297	IC0478844	70	579	63	198	55	144	63	41	6	1254	7	297	9	129	7	249	1	1316	6	71	4.5	717	4	501



1298	IC0478846	76	1103	64	297	58	204	66	193	5	1307	5	1319	12	7	7	250	2	677	3	1195	11	15	5	39
1299	IC0478847	73	852	63	212	75	764	70	561	7	281	7	423	7	827	7	499	1	870	4	479	2.5	1322	3	1259
1300	IC0478848	64	15	65	315	90	1158	73	826	6	913	8	178	6	1226	7	726	2	486	3	1031	3.5	1170	3	1108
1301	IC0478850	70	558	66	366	68	474	68	334	6	719	6	906	9	171	7	411	2	391	4	834	3.5	982	3	998
1302	IC0478851	71	726	64	279	66	377	67	267	6	693	5	1284	8	415	6	950	2	375	5	268	8	142	5	85
1303	IC0478852	73	854	61	101	70	583	68	335	6	649	5	1071	8	471	7	782	2	354	3	1169	4	898	3	1033
1304	IC0478853	79	1334	63	243	67	421	70	497	7	36	6	651	8	427	7	366	2	39	5	311	2.5	1289	3	996
1305	IC0478854	75	1026	68	684	55	145	66	194	6	995	7	568	7	694	7	832	2	531	4	595	3.5	1083	3	917
1306	IC0478855	70	509	63	193	75	742	69	463	6	720	8	79	8	513	8	135	1	1059	5	276	3.5	1056	3	992
1307	IC0478856	71	744	58	32	55	116	61	18	5	1342	7	435	6	1012	6	1110	1	1365	4	786	3	1244	3	1277
1308	IC0478857	75	1014	83	1370	55	126	71	627	7	268	8	65	7	687	7	217	1	866	4	451	5	660	3	725
1309	IC0478858	77	1159	63	228	110	1359	83	1305	6	571	9	61	5	1358	7	727	1	999	4	659	4	954	3	1080
1310	IC0478859	71	737	68	636	55	140	65	114	7	335	5	1034	7	692	6	951	1	887	4	985	4.5	783	3	1065
1311	IC0478861	80	1383	58	67	53	30	64	67	6	920	6	666	8	334	7	606	1	1155	4	703	4.5	742	3	959
1312	IC0478862	74	910	68	668	58	184	67	244	7	274	7	562	6	1025	6	897	2	141	4	494	7	304	4	195
1313	IC0478863	74	911	68	669	53	50	65	131	6	642	7	482	8	340	7	412	1	1021	6	78	4.5	743	4	504
1314	IC0478865	70	541	68	603	88	1099	75	1004	6	721	4	1378	9	264	6	898	2	392	4	754	4.5	735	4	709
1315	IC0478869	78	1282	63	239	67	398	69	464	7	192	8	183	8	420	8	166	1	824	4	771	4	897	3	1127
1316	IC0478871	64	61	61	90	55	123	60	6	5	1377	5	1148	5	1277	5	1359	1	1385	5	428	9	95	5	107
1317	IC0478873	75	984	64	290	75	757	71	664	5	1315	6	911	8	518	6	952	2	681	2	1376	7	286	4	536
1318	IC0478874	80	1387	64	311	55	113	66	220	6	510	6	649	6	1011	6	1035	2	267	2	1374	3.5	1139	3	1291
1319	IC0478875	77	1209	63	232	77	826	72	769	6	572	6	820	6	1162	6	1111	2	303	3	1291	7.5	251	4	336
1320	IC0478878	77	1234	68	714	55	130	67	245	7	222	7	344	7	690	7	454	1	844	5	372	4	909	3	933
1321	IC0478879	69	480	64	268	58	206	64	68	6	887	7	294	6	1028	7	833	1	1137	3	1215	7	305	4	577
1322	IC0478881	66	214	64	256	78	881	69	465	6	789	6	648	5	1328	6	1215	2	426	2	1359	8	176	4	313
1323	IC0478883	70	585	68	614	55	67	64	95	6	722	7	353	5	1274	6	1074	1	1060	4	928	8	174	4	294
1324	IC0478885	79	1301	69	747	97	1245	82	1252	7	188	7	342	9	287	8	118	1	820	3	1219	5.5	478	3	944
1325	IC0478886	70	555	63	197	98	1271	77	1110	6	882	6	917	7	934	6	1002	1	1134	4	835	1.5	1380	2	1370
1326	IC0478888	70	501	63	192	75	766	69	466	7	355	6	742	9	217	7	251	1	896	4	951	5.5	470	3	815
1327	IC0478889	64	5	68	527	88	1106	73	864	7	469	6	716	6	1213	6	1003	1	956	3	1338	5.5	585	3	1067
1328	IC0478891	79	1297	70	765	86	1054	78	1159	7	189	5	1100	8	577	7	728	1	821	3	1345	4.5	766	3	1247
1329	IC0478892	76	1052	61	105	70	563	69	433	6	842	6	660	7	787	7	834	2	453	3	1055	3.5	1100	3	1112
1330	IC0478894	69	464	68	592	60	230	66	170	7	127	6	880	8	382	7	500	1	785	4	968	11	19	5	59
1331	IC0478895	79	1309	66	425	93	1196	79	1188	6	527	5	1213	7	919	6	1112	1	982	5	266	11	22	6	14
1332	IC0478896	68	393	58	27	57	157	61	13	6	894	8	231	5	1280	6	1036	1	1138	4	913	3.5	1178	3	1250
1333	IC0478897	71	715	73	906	77	843	74	884	5	1343	7	555	8	530	7	729	1	1366	4	795	4.5	758	3	1007
1334	IC0478898	65	124	68	541	69	521	67	295	6	909	7	413	7	777	7	664	1	1148	2	1383	6.5	343	3	960
1335	IC0478903	66	208	68	556	69	513	68	321	6	790	6	877	6	1092	6	1143	2	427	4	967	10.5	38	5	47
1336	IC0478904	67	299	64	260	69	527	67	246	6	768	5	1224	7	780	6	1113	2	411	2	1379	8.5	121	4	279
1337	IC0478905	66	238	65	318	65	316	65	149	6	1143	5	1051	9	150	7	607	2	601	4	731	8.5	103	5	112
1338	IC0478907	70	569	66	369	65	326	67	268	7	356	6	980	7	737	6	899	2	195	4	625	7	291	4	217
1339	IC0478912	76	1116	66	418	54	64	65	150	6	599	9	42	8	346	8	88	2	319	4	658	8.5	109	5	108
1340	IC0478920	80	1382	63	247	66	353	70	498	6	511	6	824	8	409	7	608	2	268	3	1292	7.5	206	4	326
1341	IC0478922	75	956	70	759	81	940	75	1005	7	73	5	1185	4	1377	5	1352	2	58	3	1088	9	97	5	119
1342	IC0478922-A	80	1371	63	246	88	1086	77	1111	6	1197	6	992	5	1341	5	1346	1	1289	3	1244	11	23	5	86
1343	IC0478923	74	886	66	397	84	996	75	961	6	1007	6	732	11	31	8	101	2	538	3	1287	7.5	179	4	317
1344	IC0478935	64	44	65	317	66	345	65	132	6	820	6	646	6	1055	6	1037	1	1107	5	395	9.5	65	5	80
1345	IC0478937	76	1122	81	1338	66	360	74	940	6	600	8	66	8	411	8	136	2	320	4	900	5.5	491	4	542
1346	IC0478938	66	182	68	550	71	646	68	369	7	432	5	1106	8	491	7	730	1	936	3	1346	5	645	3	1164
1347	IC0478940	74	866	81	1325	87	1066	81	1227	6	643	7	527	9	258	7	252	2	352	4	594	6.5	323	4	270
1348	IC0478942	76	1091	81	1337	70	553	76	1025	7	241	5	1155	6	1099	6	1216	1	853	5	263	8	167	5	148
1349	IC0478943	78	1284	74	1071	57	152	70	499	6	541	7	462	7	696	7	665	2	284	7	19	2.5	1311	4	475



1350	IC0478944	70	543	81	1302	71	596	74	915	7	357	7	375	7	797	7	501	2	196	4	783	3.5	1103	3	1004
1351	IC0478948	76	1101	77	1145	66	349	73	827	6	971	7	323	8	407	7	413	1	1174	5	177	3	1215	3	1027
1352	IC0478950	64	58	81	1274	66	351	70	562	7	470	7	235	7	745	7	414	2	248	4	671	4.5	790	4	697
1353	IC0478951	79	1345	81	1355	58	174	73	797	6	933	7	452	8	369	7	502	2	497	6	77	4	894	4	422
1354	IC0478955	67	313	81	1286	66	352	71	665	7	140	8	150	9	156	8	71	1	793	6	96	5.5	459	4	360
1355	IC0478975	71	688	81	1309	86	1041	79	1189	6	1054	6	600	7	887	6	900	1	1218	5	153	4	921	3	733
1356	IC0479006	68	372	65	320	69	515	67	296	6	1115	5	1283	6	1093	6	1312	2	585	2	1380	3.5	1149	3	1294
1357	IC0479020	66	212	74	976	71	606	70	563	5	1367	8	160	6	1109	6	953	2	702	5	358	8.5	131	5	79
1358	IC0479028	70	563	74	1005	70	535	71	666	6	723	8	71	8	457	8	137	1	1061	6	89	3.5	1043	3	808
1359	IC0479048	71	616	74	1008	88	1084	78	1138	6	1055	7	265	7	894	7	609	2	559	6	58	4.5	808	4	300
1360	IC0479072	71	626	74	1010	88	1103	78	1139	6	1056	7	331	11	34	8	45	1	1219	4	472	4.5	708	3	869
1361	IC0479098	70	505	74	998	111	1373	85	1343	6	1190	6	942	9	306	7	610	2	625	3	1300	7.5	199	4	327
1362	IC0479124	77	1190	81	1343	88	1107	82	1261	7	472	8	83	10	91	8	27	2	250	5	217	3.5	970	4	682
1363	IC0479146	70	507	81	1299	88	1101	80	1201	6	1080	7	309	6	1211	6	954	2	572	5	175	4.5	852	4	448
1364	IC0479148	71	669	81	1308	78	861	77	1084	6	1057	6	599	11	29	8	89	1	1220	5	152	8.5	99	5	89
1365	IC0479179	65	106	77	1124	87	1067	76	1066	6	809	8	156	13	6	9	7	2	438	5	357	5.5	435	4	357
1366	IC0588016	66	173	67	445	86	1033	73	828	7	433	8	135	7	884	7	292	1	937	4	455	3.5	1115	3	1093
1367	IC0588023	69	479	69	741	53	48	64	69	5	1358	7	561	9	116	7	455	1	1377	4	692	5	623	3	850
1368	IC0588025	76	1066	61	107	71	634	69	467	6	972	6	829	10	66	7	253	2	520	5	318	4.5	709	4	502
1369	IC0588027	76	1063	61	106	72	663	70	500	7	242	4	1367	6	1122	6	1298	2	125	4	753	5.5	575	4	484
1370	IC0588028	78	1262	67	522	72	656	72	770	7	39	5	1124	9	197	7	415	2	42	5	161	5.5	466	4	250
1371	IC0588030	71	679	74	1017	69	496	71	667	5	1344	8	200	9	178	7	254	1	1367	3	1033	5.5	463	3	873
1372	GE4449	71	604	64	313	58	207	64	96	6	823	6	757	7	973	6	955	2	714	4	441	3.1	1197	3	1042
1373	KMR204	70	602	64	314	80	893	71	668	6	821	6	589	8	326	7	456	2	715	4	654	4.4	874	3	848
1374	KMR301	72	765	77	1149	95	1205	81	1239	6	822	7	232	8	325	7	218	1	718	4	892	4.6	703	3	896
1375	UduruMallige	70	601	68	735	56	148	65	133	6	501	6	758	8	646	7	615	2	716	4	655	3.1	1198	3	1158
	Mean	71		70		75		72		6.3		6.35		7.4		6.7		1.53		4.14		5.2		3.6	
	CD 5%	0.24		0.35		0.79		0.31		0.02		0.07		0.08		0.04		0.03		0.05		0.11		0	
	CD 1%	0.31		0.46		1.03		0.41		0.03		0.09		0.11		0.05		0.04		0.07		0.15		0.1	
	CV %	6.33		9.43		19.74		8.15		7.8		20.2		21.4		10.6		34.9		25.08		40.6		21.7	

Annexure Table 16: Finger millet germplasm 1375 acc. (2500 acc.) characterization and screening and ranking for plant height, grain yield and fodder yield

S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
1	IC0007218	112	399	61	1385	66	1364	80	1372	484.4	1161	1000	1303	3401	782	1628	1218	759.1	244	9889	187	6360	446	5669	141
2	IC0007579	109	572	73	1338	98	924	93	1240	536.3	991	1056	1280	4043	373	1878	940	934.3	92	11389	104	6395	416	6239	70
3	IC0007951	103	1007	93	834	80	1303	92	1270	545	956	1444	1050	5370	17	2453	215	661.8	450	2833	1211	6847	224	3447	1001
4	IC0007952	99	1160	88	1026	84	1220	90	1301	661.8	461	3056	128	2751	1213	2156	544	525.5	916	3722	1050	4464	1218	2904	1246
5	IC0043274	98	1187	97	638	91	1090	95	1150	657.4	478	2111	553	3294	842	2021	736	608	623	6556	537	4540	1179	3901	761
6	IC0043275	113	346	84	1133	112	443	103	654	415.2	1270	1611	935	3496	724	1841	988	711.2	328	6444	561	4609	1147	3922	751
7	IC0043276	116	269	102	418	80	1289	99	912	484.4	1158	2000	625	2956	1063	1813	1024	545	855	6389	567	4377	1245	3770	834
8	IC0044035	104	916	98	580	112	450	105	544	553.6	913	1667	877	3590	661	1937	861	564.4	776	6222	607	5847	708	4211	597
9	IC0045839	101	1084	104	343	120	220	108	285	1051	30	2000	622	4254	265	2435	227	501.7	973	7778	370	5629	827	4636	411
10	IC0045842	107	711	95	718	110	536	104	587	632.2	562	2000	633	2853	1146	1828	1011	603.4	655	11556	92	5984	632	6048	90
11	IC0045843	123	87	90	957	110	558	108	324	681.2	390	1244	1181	3979	409	1968	814	536.3	874	6278	600	5804	731	4206	601
12	IC0045844	111	483	93	828	118	294	107	364	524.6	1064	1556	960	3591	659	1890	924	486.6	1026	9889	183	6286	482	5554	165
13	IC0045845	107	717	76	1317	68	1358	107	373	501.7	1116	1556	981	3905	456	2453	217	798	197	3111	1164	7291	65	3054	1191
14	IC0045847	100	1113	87	1054	94	1028	94	1231	603.4	733	1056	1270	2852	1148	1504	1283	432.5	1135	4111	980	4270	1287	2938	1234
15	IC0045849	104	932	98	611	121	173	102	705	651.4	492	2056	587	2950	1069	1907	906	545	837	5111	798	5083	990	2698	1298
16	IC0045850	107	724	92	854	91	1094	97	1092	501.7	1117	2389	386	3101	952	1997	767	661.8	456	8444	299	6029	607	5045	304
17	IC0045851	107	753	97	615	98	935	101	808	592.2	760	1611	925	5099	54	2434	228	650.5	488	5444	747	7296	62	4464	492
18	IC0045852	108	694	107	241	110	546	108	297	651.4	491	1222	1183	4230	275	2035	708	545	836	5667	711	6121	564	4111	643



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
19	IC0045854	106	838	98	591	121	188	108	281	536.3	994	1389	109	2823	1166	1583	1250	467.1	1072	4333	940	6889	208	3896	764
20	IC0045855	79	1384	96	672	90	1132	88	1327	613	659	2833	185	5239	37	2895	21	684	402	5833	672	7191	99	4569	444
21	IC0045858	108	626	95	744	111	494	104	557	632.2	559	3000	141	3522	713	2385	275	628.7	573	3833	1018	5866	697	3443	1002
22	IC0045858-X	109	566	102	412	97	950	103	664	501.7	1115	1056	1262	5530	3	2362	301	661.8	455	2278	1292	7030	151	3323	1066
23	IC0045859	112	413	107	236	100	875	106	424	536.3	988	1722	826	2743	1216	1667	1175	467.1	1070	4833	835	4934	1031	3411	1015
24	IC0045860	129	36	82	1197	86	1200	99	935	1148.4	9	1111	1251	4471	185	2243	429	608	624	4444	916	6010	617	3687	877
25	IC0045862	103	967	106	252	90	1122	100	881	449.8	1217	1833	735	3526	706	1936	864	525.5	933	3111	1160	6971	172	3536	962
26	IC0045863	109	577	108	202	107	668	108	301	681.2	393	1333	1126	4595	151	2203	481	684	400	4111	978	6305	472	3700	872
27	IC0045864	83	1380	94	779	83	1240	87	1347	578.2	794	3111	113	2169	1348	1953	836	689.6	376	8111	334	4290	1276	4364	535
28	IC0045865	89	1304	106	256	88	1166	94	1197	536.3	1007	2667	252	3709	594	2304	358	650.1	500	2889	1199	5986	630	3175	1136
29	IC0045866	113	360	101	461	93	1041	102	691	603.4	694	1222	1186	3102	950	1643	1202	628.7	575	2944	1195	5613	836	3062	1187
30	IC0045867	118	225	106	246	102	814	100	899	739.6	218	1056	1259	3076	968	2592	122	525.5	910	5333	765	4168	1323	2919	1241
31	IC0045868	113	364	118	42	103	782	111	148	934.3	70	3833	29	3621	641	2796	44	689.6	368	3833	1016	5511	890	3345	1057
32	IC0045869	125	59	115	65	78	1319	106	445	914.8	89	2056	572	2806	1182	1925	875	650.1	496	4556	883	4498	1199	3235	1106
33	IC0045874	126	56	70	1362	117	325	104	574	914.8	88	2278	471	3051	992	2081	638	558.8	805	6000	637	4425	1232	3661	899
34	IC0045878	121	146	105	295	87	1187	104	584	564.4	817	1944	657	3910	452	2140	558	564.4	767	11000	117	5198	966	5587	158
35	IC0045880	111	472	83	1160	88	1165	94	1211	328.7	1332	1944	683	5078	55	2450	218	540.3	866	1389	1373	6638	311	2856	1262
36	IC0049931	111	441	94	786	92	1088	99	961	1148.4	12	1722	847	3898	460	2256	412	525.5	906	9444	214	7366	41	5779	130
37	IC0049934	107	758	103	404	85	1209	98	989	914.8	93	3333	75	3321	828	2523	165	506.1	944	6278	585	5635	825	4140	629
38	IC0049935	119	190	103	388	109	590	110	196	759.1	185	2611	286	3141	932	2170	528	625.4	583	5667	701	5566	866	3953	736
39	IC0049936	120	165	108	201	105	739	111	165	506.1	1081	1444	1032	5216	41	2389	267	564.4	783	7389	421	6345	451	4766	374
40	IC0049937	119	194	107	222	112	449	113	119	447.7	1223	1389	1077	3070	974	1636	1210	540.3	864	7167	450	5253	952	4320	547
41	IC0049939	120	170	102	434	123	125	115	64	798	154	2111	549	3010	1017	1973	805	630.6	556	4056	985	5256	951	3314	1074
42	IC0049940	122	106	87	1063	117	321	108	274	642.3	534	2333	430	3360	801	2112	597	655.7	470	5722	693	4712	1115	3697	873
43	IC0049941	91	1272	94	789	112	445	99	959	501.7	1131	1611	929	3528	702	1880	938	630.6	558	4222	960	6144	552	3666	896
44	IC0049942	146	4	100	511	108	636	118	32	817.5	132	1444	1044	4325	228	2196	491	560.6	795	6111	625	5525	886	4066	665
45	IC0049944	140	11	96	684	81	1278	106	469	1012.1	35	2222	496	4096	341	2443	224	657.4	457	2056	1320	5467	898	2727	1290
46	IC0049947	101	1085	97	660	104	764	108	321	562.3	878	2472	351	3875	473	2013	744	608.1	620	2556	1245	5888	687	3032	1201
47	IC0049949	94	1236	95	740	89	1150	92	1253	467.1	1208	2556	310	2726	1223	1916	885	657.4	467	3500	1097	4803	1088	2987	1217
48	IC0049951	108	683	94	796	120	223	107	367	798	159	1389	1098	4169	299	2119	585	632.2	541	3222	1146	5669	806	3174	1138
49	IC0049953	109	555	97	634	115	366	107	385	1012.1	39	1444	1048	4073	353	2177	520	524.6	936	6556	541	7305	58	4795	361
50	IC0049955	113	387	94	755	87	1186	98	1014	759.1	189	889	1328	4696	126	2115	593	592.2	705	2833	1217	7439	21	3622	910
51	IC0049956	83	1379	108	208	106	698	99	964	882.4	109	2167	520	3688	607	2246	427	545	826	9333	220	5985	631	5288	228
52	IC0049958	113	335	92	884	100	883	101	760	934.3	68	1167	1209	4958	77	2353	320	651.4	476	3556	1091	6500	364	3569	942
53	IC0049960	110	540	95	721	107	673	104	605	467.1	1187	2056	596	2712	1231	1745	1090	1051	47	3944	1001	4136	1334	3044	1196
54	IC0049964	105	896	99	541	96	988	100	864	630.3	588	3667	41	3161	915	2486	187	415.2	1173	2611	1242	4840	1068	2622	1314
55	IC0049965	117	257	91	925	109	609	106	485	875.9	111	2556	312	4154	303	2528	159	501.7	975	833	1386	6272	485	2536	1330
56	IC0049966	129	40	96	673	81	1284	102	718	759.1	178	1889	709	3413	770	2020	738	536.3	868	3000	1184	5875	693	3137	1158
57	IC0049967	120	158	95	748	91	1102	102	742	798	153	1556	956	3713	590	2022	733	681.2	404	4889	827	5197	967	3589	930
58	IC0049969	121	127	94	774	106	699	107	380	545	920	1778	796	4113	330	2145	551	739.6	267	6944	483	6871	219	4852	348
59	IC0049973	110	500	107	217	88	1158	102	731	632.2	556	2333	398	4504	172	2490	180	484.4	1040	2111	1306	6991	163	3196	1121
60	IC0049974	110	528	109	169	128	78	116	50	559	893	3000	129	3147	923	2235	443	553.6	820	1611	1364	5332	926	2499	1332
61	IC0049976	110	539	92	863	128	67	110	205	617.1	647	1944	673	4778	115	2447	221	632.2	547	2667	1233	7492	5	3597	924
62	IC0049977	105	842	95	713	103	795	101	792	432.5	1241	1944	669	3351	810	1909	900	524.6	939	3444	1112	5018	1004	2996	1214
63	IC0049979	109	601	79	1269	111	504	100	900	408.7	1285	1611	942	3198	896	1739	1095	564.4	792	5667	709	5891	685	4041	681
64	IC0049979-X	104	903	84	1148	72	1346	87	1346	536.3	996	2167	536	4136	317	2280	384	642.3	529	2278	1289	6995	162	3305	1078
65	IC0049981	121	139	78	1286	88	1169	96	1140	428.2	1250	1722	861	3999	397	2050	688	1148.4	30	5111	799	5703	792	3987	717
66	IC0049982	108	656	105	304	129	61	114	91	559.5	888	2333	405	3109	946	2001	760	592.2	707	3944	999	6345	454	3627	906
67	IC0049983	102	1037	113	101	102	830	106	483	558.8	899	1889	689	5261	29	2570	137	651.4	479	3778	1035	7470	14	3966	726
68	IC0049986	108	640	76	1304	99	896	94	1188	759.1	197	2111	568	5026	66	2632	100	914.8	104	6111	623	7264	74	4763	375



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
69	IC0049988	115	299	113	85	83	1236	104	621	641.7	542	1556	945	3682	608	1960	825	501.7	987	5667	710	6000	622	4056	672
70	IC0049991	112	409	85	1093	94	1027	97	1077	428.2	1253	2111	563	3075	971	1871	947	759.1	253	7167	447	5252	954	4393	523
71	IC0049992	111	468	87	1045	110	539	103	665	545	930	2167	530	2821	1168	1844	983	506.1	959	4667	864	4340	1257	3171	1143
72	IC0049993	107	718	92	891	102	831	100	852	700.7	329	1389	1103	3006	1023	1699	1141	447.7	1117	9056	247	6863	222	5455	185
73	IC0049995	103	951	90	967	107	654	100	860	1051	27	2056	603	3276	858	2128	575	798	186	8278	321	5305	938	4794	362
74	IC0049995-X	83	1377	94	751	113	392	97	1088	934.3	81	1389	1095	3590	660	1971	808	689.6	370	3667	1072	5651	818	3336	1061
75	IC0049996	104	948	92	892	121	197	105	488	798	162	3611	47	4835	107	3081	8	642.3	521	10167	156	6125	563	5645	149
76	IC0049999	85	1344	102	429	113	418	100	874	914.8	95	1389	1084	3762	550	2022	735	650.1	498	4000	997	7216	93	3955	734
77	IC0049999-X	105	879	84	1142	126	89	105	532	501.7	1120	1722	857	4330	226	2185	510	613	618	2833	1208	6437	390	3294	1083
78	IC0050000	87	1331	91	914	84	1219	87	1339	564.4	875	3278	87	4500	173	2781	50	564.4	772	5278	766	7472	12	4438	503
79	IC0050011	110	514	82	1205	72	1349	88	1333	613	655	1611	937	4076	352	2100	612	817.5	166	1667	1361	6902	199	3129	1161
80	IC0050015	106	825	69	1370	97	959	91	1293	632.2	563	556	1383	3559	681	1582	1251	1012.1	60	2667	1241	6590	330	3423	1008
81	IC0050015-X	113	329	91	937	121	199	108	291	536.3	987	2278	462	5207	43	2674	89	632.2	550	2389	1276	6707	284	3243	1102
82	IC0053739	104	920	106	251	116	339	109	260	588.2	775	2222	480	3895	463	2235	444	603.4	666	9778	190	6325	464	5569	162
83	IC0065559	108	631	85	1129	87	1176	93	1239	720.2	265	1667	898	3744	572	2044	695	817.5	163	5611	719	6536	349	4322	545
84	IC0065595	116	292	103	378	103	792	107	356	759.1	186	2222	483	5250	33	2744	59	1012.1	53	8500	288	7492	4	5668	142
85	IC0065632	118	217	94	776	89	1155	100	848	506.1	1082	2278	452	3802	525	2195	492	1304.1	14	7333	428	6088	576	4908	330
86	IC0065674	107	725	94	780	87	1190	96	1128	525.5	1032	2333	426	4171	298	2343	327	1226.2	22	6444	553	5988	629	4553	449
87	IC0065694-X	103	979	109	176	91	1104	101	801	484.4	1172	1389	1074	4940	83	2271	391	449.8	1112	2111	1313	7026	154	3196	1120
88	IC0065698-X1	102	1052	106	249	81	1287	96	1114	467.1	1205	3000	131	4213	277	2560	144	578.2	730	4333	929	5713	788	3542	959
89	IC0065699	118	241	74	1328	73	1343	88	1328	617.1	646	1111	1256	3579	665	1769	1067	875.9	132	4611	876	6782	249	4090	656
90	IC0065699-X	106	811	102	414	112	427	107	391	328.7	1336	2667	259	4408	207	2468	199	536.3	895	6000	634	5908	678	4148	624
91	IC0065922	96	1196	82	1213	72	1347	83	1367	328.7	1339	1500	1020	3077	967	1635	1211	759.1	254	3167	1153	6379	429	3435	1004
92	IC0065946	106	819	82	1186	102	829	97	1093	661.8	456	1778	809	3103	949	1848	980	506.1	948	5722	695	6901	201	4376	532
93	IC0065956	85	1342	109	179	98	928	97	1068	596.9	750	2611	279	4420	201	2543	151	5979.2	11	4222	955	5578	856	5260	237
94	IC0065966	116	270	97	650	105	736	106	464	501.7	1110	1778	788	3443	756	1908	905	798	196	3222	1142	6766	255	3595	925
95	IC0065983	115	316	108	212	108	624	110	195	536.3	986	2333	397	4053	368	2308	356	642.3	528	5333	756	6893	205	4290	562
96	IC0065984	84	1361	110	145	104	761	99	927	540.5	968	2611	277	3231	881	2128	574	397.9	1198	5444	735	6258	490	4033	690
97	IC0065985	104	914	100	523	82	1274	95	1163	632.2	565	3500	58	3624	639	2585	128	484.4	1041	7278	435	5323	931	4362	538
98	IC0066048	98	1185	104	326	71	1352	91	1284	467.1	1207	3333	74	3572	669	2457	212	759.1	250	6000	632	6828	234	4529	464
99	IC0066088-X1	92	1264	304	1	60	1376	152	6	484.4	1176	2667	248	3700	601	2284	380	536.3	889	6000	633	6490	368	4342	541
100	IC0066128	122	105	105	291	73	1344	100	872	501.7	1107	2944	147	2536	1291	1994	770	617.1	612	4778	842	4036	1371	3144	1155
101	IC0066132	106	789	87	1060	114	389	102	708	1148.4	15	2500	346	3929	442	2526	161	525.5	907	6278	588	6160	543	4321	546
102	IC0066140-X1	99	1152	104	340	94	1032	99	953	536.3	1003	2111	547	3087	960	1911	897	328.7	1256	6611	532	6355	448	4432	505
103	IC0066172	119	187	108	203	133	29	120	24	432.5	1236	2500	318	2648	1256	1860	967	501.7	1008	6556	536	6148	1331	3735	849
104	IC0066178-X1	96	1204	104	320	138	20	113	117	578.2	792	3056	122	4122	324	2585	129	536.3	877	6833	499	6424	397	4598	433
105	IC0066255	100	1106	94	795	129	63	107	344	484.4	1175	2833	186	3193	898	2170	529	588.2	720	4389	921	5669	807	3549	951
106	IC0069583	100	1094	81	1241	103	789	94	1192	449.8	1219	2111	567	4069	357	2210	472	1304.1	17	1833	1343	6809	241	3315	1073
107	IC0069594	102	1045	85	1122	103	777	97	1096	588.2	778	2333	431	3775	544	2232	447	467.1	1093	10333	148	6166	538	5655	146
108	IC0069598	110	544	78	1295	104	746	97	1062	578.2	790	1278	1174	3643	633	1833	1004	1226.2	20	2222	1299	6370	436	3273	1090
109	IC0069598-X	129	38	89	1008	113	397	110	194	759.1	177	1944	676	3427	760	2044	696	467.1	1079	5167	784	5644	820	3759	840
110	IC0071331	117	249	104	318	121	194	114	84	914.8	90	2778	203	3469	738	2387	271	506.1	942	5056	804	5841	712	3801	817
111	IC0071331-X1	108	624	83	1161	88	1160	93	1243	415.2	1273	1444	1060	3841	498	1900	911	630.3	562	12944	57	7441	20	7005	32
112	IC0071333	91	1302	98	598	92	1084	94	1232	759.1	204	3722	38	3044	999	2508	169	625.4	584	5389	750	5496	894	3837	802
113	IC0071335	118	214	88	1033	87	1194	97	1051	608	670	1111	1241	3201	894	1640	1207	632.2	548	5778	690	5541	875		



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
119	IC0071365	103	1000	86	1084	109	593	99	932	467.1	1204	1778	805	3745	569	1997	768	617.1	613	11167	112	6904	197	6229	73
120	IC0071365-X	104	911	96	685	89	1151	96	1116	155.7	1385	1333	1131	4418	204	1969	809	415.2	1182	9389	217	5876	691	5227	249
121	IC0071373-X	111	482	95	734	103	772	103	651	397.9	1287	2389	384	4234	273	2340	331	553.6	825	7111	455	5481	897	4382	530
122	IC0071377	111	446	86	1086	119	228	105	503	311.4	1346	2000	639	3780	541	2030	717	798	200	3556	1087	6382	426	3579	933
123	IC0071379	108	613	104	372	108	619	107	403	467.1	1189	778	1348	4492	177	1912	895	759.1	248	4833	838	5817	723	3803	816
124	IC0071380	109	598	90	959	95	1007	98	1007	525.5	1028	1889	717	3737	576	2050	686	798	194	6389	568	6036	604	4408	511
125	IC0071381	105	854	93	827	129	66	109	253	689.6	368	2500	337	5145	51	2778	53	642.3	525	3278	1130	6345	452	3422	1010
126	IC0071382	107	760	98	603	103	806	102	688	650.1	517	2611	288	3543	694	2268	398	545	840	4333	931	6955	180	3944	739
127	IC0071383	125	71	90	952	107	656	107	337	564.4	811	1222	1192	4287	248	2025	726	759.1	236	5889	668	5782	749	4143	626
128	IC0071389	139	13	92	865	115	346	115	58	525.5	1012	1556	962	3767	546	1949	841	817.5	167	6333	579	5777	752	4309	551
129	IC0071393	107	748	89	1003	89	1147	95	1168	506.1	1094	2000	636	4055	367	2187	502	408.7	1186	4722	852	6027	608	3719	859
130	IC0071395	110	496	93	813	97	954	100	856	630.3	587	2944	152	4023	387	2533	156	817.5	165	4833	831	7471	13	4374	533
131	IC0071396	104	931	91	932	111	489	102	713	625.4	628	1833	754	4119	327	2193	494	428.2	1145	5444	743	5619	833	3831	807
132	IC0071397	110	525	98	575	77	1326	95	1166	564.4	834	2833	183	4038	378	2479	191	759.1	237	4444	911	6375	432	3860	785
133	IC0071398	106	831	101	463	103	775	103	637	540.3	975	2667	261	3671	617	2293	372	428.2	1148	6167	617	7321	52	4639	410
134	IC0071399	100	1119	101	458	118	276	106	426	630.6	584	2500	328	3764	548	2298	363	545	843	8833	257	6971	171	5450	188
135	IC0071401	100	1130	104	351	88	1172	97	1066	560.6	887	2722	231	3052	990	2112	599	1051	45	8778	260	6942	184	5590	156
136	IC0071402	109	585	96	679	101	866	102	721	657.4	472	1778	789	5322	22	2586	127	798	190	9500	209	6719	281	5672	140
137	IC0071403	104	947	103	380	93	1052	100	865	415.2	1275	2500	326	2921	1103	1945	846	720.2	303	10167	158	5509	892	5465	182
138	IC0071404	112	423	102	446	103	776	106	482	484.4	1163	2556	303	3260	867	2100	613	759.1	245	12167	76	5630	826	6185	78
139	IC0071405	109	578	96	677	112	472	106	479	553.6	910	3000	140	3515	716	2356	314	506.1	956	7778	367	5222	960	4502	477
140	IC0071406	118	234	98	579	97	967	104	575	632.2	553	2889	166	3872	478	2464	204	525.5	917	11000	116	7083	131	6203	76
141	IC0071407	96	1201	96	697	94	1019	95	1154	524.6	1068	4278	13	3330	820	2711	73	661.8	452	7444	411	4588	1160	4231	588
142	IC0071408	116	296	97	632	122	162	112	140	592.2	758	2333	420	4892	91	2606	113	311.4	1269	7444	413	7084	129	4947	320
143	IC0071409	113	328	97	620	91	1107	100	835	613	653	1000	1289	3199	895	1604	1237	432.5	1133	7278	439	4675	1130	4128	637
144	IC0071410	115	302	105	316	115	354	112	139	651.4	490	2778	202	3964	420	2464	203	720.2	297	10000	170	5117	980	5279	232
145	IC0071411	100	1125	104	366	103	793	99	966	501.7	1127	3111	106	4893	90	1838	991	875.9	133	12389	69	7250	80	5559	164
146	IC0071412	98	1168	94	770	118	267	103	638	536.3	1004	1889	713	3864	483	2096	620	720.2	302	9722	192	7371	39	5938	107
147	IC0071413	112	402	82	1214	112	473	102	739	559	892	1500	1021	3443	755	1834	999	428.2	1147	2778	1223	6483	373	3230	1109
148	IC0071418	83	1376	96	699	101	849	93	1236	617.1	652	1833	747	4027	383	2159	540	759.1	233	7611	391	7354	46	5241	243
149	IC0071419	110	520	96	665	111	519	106	474	681.2	391	2000	631	2866	1137	1849	978	739.6	264	6444	556	5261	948	4148	623
150	IC0071420	106	794	88	1039	131	40	108	299	328.7	1335	1167	1215	3425	761	1640	1206	632.2	552	7389	422	5201	965	4407	512
151	IC0073541	112	400	96	662	105	733	104	573	739.6	220	2444	359	3745	570	2310	355	525.5	911	4611	869	6390	421	3842	796
152	IC0087466	108	637	96	693	82	1262	95	1156	577.9	795	1667	883	3767	547	2004	754	559.5	799	5667	707	5407	912	3878	774
153	IC0087486	95	1233	105	282	77	1324	92	1256	501.7	1130	1889	696	3487	727	1959	826	558.8	810	3722	1059	6656	303	3646	903
154	IC0087492	115	317	97	637	87	1183	100	887	467.1	1200	2611	289	3476	734	2185	509	641.7	534	5444	736	5759	766	3948	737
155	IC0087497	119	181	97	617	111	488	109	233	449.8	1212	778	1349	3722	588	1650	1194	380.6	1212	4722	862	5176	970	3426	1007
156	IC0087500	87	1334	107	237	117	315	103	639	555.9	902	1167	1203	2689	1242	1471	1301	501.7	996	7278	438	4469	1215	4083	658
157	IC0087501	111	444	103	387	96	976	103	641	501.7	1113	556	1378	3955	426	1671	1169	536.3	886	7000	477	5322	933	4286	565
158	IC0087503	103	962	114	83	92	1086	103	671	1051	28	2056	573	4256	264	2454	214	484.4	1032	4222	959	5756	768	3488	987
159	IC0087510	99	1150	103	402	109	608	103	636	603.4	737	1278	1154	3291	845	1724	1110	467.1	1091	6500	548	4542	1178	3836	803
160	IC0087514-X	91	1280	101	457	118	289	103	646	953.7	64	1444	1042	3701	600	2033	710	328.7	1240	8667	269	6762	262	5252	239
161	IC0087522	107	740	98	592	121	192	109	259	467.1	1202	1278	1158	4768	116	2171	527	592.2	708	4556	891	6669	296	3939	746
162	IC0087523	106	824	97	644	123	131	108	271	501.7	1119	2056	590	4066	361	2208	473	651.4	480	6944	480	5566	865	4387	526
163	IC0087524	108	623	104	339	92	1080	101	779	759.1	196	1611	922	3892	465	2087	630	596.9	701	9944	175	6192	523	5578	160
164	IC0087525	124	82	112	121	99	897	112	138	447.7	1221	1500	986	4469	187	2139	560	577.9	733	3922	1007	5969	641	3490	985
165	IC0087530	122	102	85	1101	79	1314	95	1152	798	150	1278	1166	4667	131	2248	424	501.7	977	4611	875	5893	684	3669	892
166	IC0087533	108	650	93	823	80	1293	94	1225	432.5	1238	1389	1100	3909	453	1910	899	536.3	891	9889	185	5918	672	5448	189
167	IC0087539	83	1371	102	419	106	705	97	1084	553.6	917	1611	923	4533	167	2233	446	603.4	674	944	1385	6432	394	2660	1307
168	IC0087540	89	1308	89	989	96	978	91	1277	415.2	1279	1333	1135	2663	1251	1471	1300	739.6	275	5000	813	4686	1126	3475	992



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
169	IC0096774	106	788	76	1305	107	677	96	1109	545	947	667	1368	3499	723	1570	1258	798	192	4556	896	5770	756	3708	866
170	IC0096775	100	1134	92	858	110	540	101	803	622.8	638	1722	852	2954	1067	1766	1072	720.2	299	17333	5	4768	1099	7607	12
171	IC0096776	110	543	91	909	98	917	100	876	711.2	279	1444	1055	3123	939	1760	1078	759.1	227	6278	598	5822	719	4286	564
172	IC0096777	100	1104	93	806	128	68	107	360	590.1	769	556	1379	3956	425	1701	1137	506.1	955	9778	191	5778	750	5354	212
173	IC0096781	109	568	86	1076	95	997	97	1091	666.2	438	667	1367	2564	1283	1299	1352	525.5	913	12611	65	4160	1326	5766	132
174	IC0096782	104	924	73	1339	108	611	95	1174	732.8	241	444	1387	2906	1111	1361	1332	661.8	439	7556	403	4592	1158	4270	575
175	IC0096783	112	403	91	906	112	425	105	511	564.4	831	611	1374	2406	1308	1194	1364	311.4	1270	5944	655	4393	1240	3550	950
176	IC0096785	108	673	91	935	83	1243	94	1217	603.4	713	500	1385	2134	1358	1079	1372	720.2	301	6222	615	4605	1151	3849	792
177	IC0096793	94	1241	94	791	107	674	98	1001	689.6	372	833	1341	2169	1347	1231	1362	875.9	131	6889	493	4014	1379	3926	750
178	IC0096810	103	950	92	886	111	508	102	735	711.2	287	1556	964	2834	1158	1700	1138	720.2	296	7556	402	5022	1002	4433	504
179	IC0096815	105	867	108	196	81	1276	98	1011	506.1	1097	3722	36	3239	876	2489	182	739.6	272	14222	27	4803	1087	6588	48
180	IC0096817	101	1077	101	469	110	527	104	595	650.5	509	2333	411	3348	813	2111	601	467.1	1067	3222	1139	4674	1131	2788	1277
181	IC0096844	123	96	97	613	103	771	108	309	603.4	683	2111	552	3954	427	2223	461	525.5	926	4778	844	6302	477	3868	779
182	IC0096876	100	1101	105	305	117	322	107	362	672.7	419	3222	91	2911	1107	2269	395	689.6	372	3833	1017	4972	1020	3165	1146
183	IC0141286	91	1283	101	465	121	175	104	562	467.1	1195	2389	378	4605	148	2487	186	709.1	342	3056	1172	5698	795	3154	1151
184	IC0141287	108	660	97	626	88	1159	98	1025	684	384	1667	881	4438	194	2263	404	711.2	313	3056	1177	5938	658	3235	1105
185	IC0141289	103	1017	89	995	96	993	96	1126	525.5	1045	2056	604	4197	285	2259	409	694.3	365	3944	1002	6232	502	3624	908
186	IC0200123	87	1320	72	1347	123	116	94	1208	559.5	890	1056	1281	3393	788	1669	1171	545	847	15278	18	6023	610	7282	18
187	IC0354382	125	62	104	342	93	1047	107	349	380.6	1296	3444	63	2974	1044	2266	402	788.1	206	7389	420	5809	727	4662	399
188	IC0354385	139	15	103	397	119	251	120	21	484.4	1155	1889	701	3867	481	2080	640	812.8	180	10167	161	5972	639	5650	148
189	IC0473254	94	1242	92	868	102	836	96	1127	525.5	1052	1500	1006	3921	444	1982	782	540.5	861	6500	547	5503	893	4181	609
190	IC0473263	103	995	92	843	128	69	108	310	311.4	1347	1722	850	3289	846	1774	1061	632.2	553	10333	150	4560	1170	5175	266
191	IC0473276	105	846	91	929	118	263	105	541	759.1	201	2111	559	2948	1070	1939	855	484.4	1036	5833	676	6520	358	4279	569
192	IC0473422	121	129	86	1088	118	262	108	283	642.3	535	2167	533	2890	1123	1900	912	467.1	1085	5389	752	4607	1148	3488	986
193	IC0473423	116	276	76	1307	112	432	101	756	817.5	136	1211	1202	2137	1355	1389	1324	449.8	1102	2833	1213	4881	1052	2721	1291
194	IC0473424	108	651	89	1013	102	835	99	917	1012.1	41	2111	561	4454	190	2526	162	555.9	812	6722	516	5954	649	4411	510
195	IC0473425	107	765	79	1272	110	559	98	980	1304.1	4	1500	1027	2501	1299	1768	1070	501.7	971	7333	432	4854	1065	4230	589
196	IC0473426	108	705	107	240	80	1302	98	1010	1226.2	7	1722	828	3549	686	2166	534	1051	38	6333	578	6791	246	4725	382
197	IC0473427	109	593	99	532	82	1272	97	1095	506.1	1091	1722	836	3390	790	1873	946	603.4	681	3000	1185	4446	1223	2683	1301
198	IC0473429	112	397	92	856	90	1119	98	1004	798	156	1889	715	3793	531	2160	537	953.7	73	4333	934	5572	861	3620	911
199	IC0473431	113	341	94	768	108	632	105	517	759.1	187	1556	959	3754	560	2023	731	525.5	909	2556	1251	6132	557	3071	1184
200	IC0473432	118	211	109	174	117	314	115	74	934.3	67	2000	619	4192	287	2375	282	311.4	1264	2944	1192	6725	280	3327	1065
201	IC0473433	113	355	93	822	100	872	102	715	875.9	112	2778	217	3804	522	2486	188	759.1	221	12389	70	5759	765	6302	65
202	IC0473435	125	66	92	842	104	759	107	372	759.1	181	2278	455	2870	1134	1969	811	1051	40	5944	643	5272	946	4089	657
203	IC0473436	121	133	90	962	76	1333	96	1133	798	151	2278	464	3989	404	2355	318	681.2	403	6833	503	6021	613	4512	473
204	IC0473437	111	448	90	972	111	509	104	613	642.3	538	1889	719	4180	294	2237	439	603.4	653	2556	1250	5680	803	2946	1230
205	IC0473438	107	727	92	893	122	146	107	378	545	944	2278	459	3325	825	2049	689	739.6	269	2778	1221	5183	969	2900	1249
206	IC0473440	119	180	92	894	108	653	106	439	759.1	184	2889	168	2469	1304	2039	704	934.3	87	1889	1341	4123	1339	2315	1359
207	IC0473441	120	161	96	700	92	1075	102	687	817.5	134	2778	216	3009	1020	2201	484	914.8	100	3833	1019	4359	1250	3036	1200
208	IC0473442	119	176	101	482	102	824	107	354	408.7	1283	2778	206	3914	449	2367	295	564.4	791	4556	880	5624	830	3581	932
209	IC0473444	120	172	102	433	99	908	107	390	428.2	1251	3056	123	5048	60	2844	30	1148.4	31	5111	795	6548	345	4269	576
210	IC0473445	122	107	98	610	102	842	107	369	759.1	182	1889	708	4641	133	2430	233	914.8	103	8111	337	6908	194	5311	221
211	IC0473446	146	2	97	624	108	625	117	38	428.2	1245	3222	92	2373	1312	2008	749	759.1	252	7944	350	4492	1207	4399	520
212	IC0473447	140	8	94	753	97	965	110	189	545	919	1944	671	4480	182	2323	344	506.1	957	5889	663	5980	634	4125	639
213	IC0473450	121	131	93	819	108	614	107	348	700.7	327	3056	126	2806	1181	2187	501	447.7	1						



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
219	IC0473457	113	334	90	983	99	911	100	830	525.5	1021	2778	219	3456	747	2253	414	1226.2	21	4611	868	6231	504	4023	694
220	IC0473462	129	47	87	1051	61	1374	92	1260	311.4	1344	3778	34	3320	830	2470	197	798	198	6278	584	5453	901	4176	611
221	IC0473463	120	166	85	1103	60	1383	88	1329	720.2	260	3833	31	4092	345	2882	24	1012.1	56	4833	830	5592	851	3812	812
222	IC0473464	137	26	92	879	97	971	109	266	875.9	110	2500	338	3858	488	2411	244	759.1	220	4667	863	5559	870	3662	898
223	IC0473465	121	141	94	793	102	838	105	492	720.2	259	3222	95	4409	206	2784	49	934.3	88	4000	992	5909	677	3614	912
224	IC0473475	111	463	97	623	128	74	112	129	739.6	221	2556	307	2319	1327	1871	948	875.9	127	3556	1085	4766	1101	3066	1186
225	IC0473479	96	1202	102	417	104	766	101	812	447.7	1234	1444	1040	3750	564	1881	937	650.1	501	5278	772	6894	204	4274	573
226	IC0473482	103	971	113	104	108	645	108	318	545	953	889	1323	2546	1284	1327	1345	564.4	778	8667	271	4148	1332	4460	493
227	IC0473483	100	1115	95	724	98	931	98	1041	603.4	734	1389	1094	2774	1200	1589	1245	525.5	927	9000	250	4087	1353	4538	458
228	IC0473485	108	687	90	981	82	1275	93	1244	694.3	345	1167	1212	3250	871	1704	1135	645.1	504	12611	64	4522	1187	5926	110
229	IC0473487	116	284	105	310	80	1290	100	837	369.8	1304	1000	1286	3207	893	1526	1275	607.9	626	8667	270	6167	537	5147	273
230	IC0473489	118	236	100	493	110	548	109	229	564.4	819	2000	627	2306	1331	1623	1221	709.5	331	6556	539	4477	1212	3914	754
231	IC0473490	107	722	95	722	82	1261	95	1181	603.4	719	944	1311	2788	1191	1445	1309	737.7	279	5167	791	4441	1226	3448	999
232	IC0473491	106	828	92	852	109	602	102	699	661.8	458	611	1372	2799	1188	1357	1334	630.6	554	3944	1004	4696	1123	3090	1176
233	IC0473492	111	469	94	781	128	71	111	155	525.5	1024	1000	1290	3233	878	1586	1246	739.6	271	3222	1149	5127	977	3030	1203
234	IC0473493	111	436	90	979	118	290	106	443	709.1	314	1389	1106	3560	679	1886	930	467.1	1065	3778	1044	6044	599	3430	1006
235	IC0473494	109	563	92	899	105	709	102	723	629.5	593	1833	752	3191	900	1885	933	666.2	432	6722	517	6958	179	4782	367
236	IC0473496	109	597	95	731	120	218	108	305	467.1	1188	2667	269	3190	902	2108	603	759.1	247	5778	685	5004	1007	3847	794
237	IC0473497	109	587	94	801	111	518	104	566	934.3	74	1389	1099	4763	117	2362	305	798	187	6278	599	6263	487	4446	500
238	IC0473498	121	120	97	622	112	442	110	199	1148.4	10	2778	212	4578	154	2835	34	642.3	516	6889	486	6078	581	4536	459
239	IC0473500	112	404	96	710	104	769	104	618	836.9	125	2722	239	3510	718	2356	313	759.1	223	8056	343	5155	973	4657	402
240	IC0473501	111	465	98	597	63	1368	91	1294	739.6	223	1833	742	4137	316	2237	440	817.5	161	6389	570	5651	816	4286	566
241	IC0473502	107	743	84	1149	110	564	100	854	564.4	843	2944	154	4595	150	2701	80	408.7	1185	8722	262	6047	596	5059	299
242	IC0473503	103	952	90	955	98	948	97	1081	992.6	49	2833	187	2780	1195	2202	482	428.2	1140	8500	284	4253	1291	4394	521
243	IC0473504	104	942	94	762	102	820	100	851	1090	19	2000	634	3164	911	2085	635	759.1	217	5667	704	5971	640	4132	634
244	IC0473505	106	821	88	1032	92	1069	95	1151	759.1	200	2667	272	2964	1054	2130	571	798	188	7833	364	5540	876	4724	383
245	IC0473506	111	450	86	1073	59	1386	85	1355	603.4	701	2722	243	2921	1104	2082	637	720.2	300	5833	673	5109	982	3887	769
246	IC0473508	111	462	85	1099	97	964	98	1037	720.2	263	2222	504	3607	648	2183	511	759.1	226	14778	21	6665	299	7401	15
247	IC0473509	104	945	104	360	95	1001	101	793	642.3	541	1444	1037	3010	1018	1699	1140	506.1	949	6833	508	5323	932	4221	593
248	IC0473510	113	356	105	317	79	1315	99	965	622.8	635	2056	579	2932	1089	1870	950	525.5	923	4833	832	4984	1015	3448	1000
249	IC0473511	109	579	108	206	81	1282	99	925	622.8	636	1889	691	3526	707	2013	745	661.8	446	7444	414	5577	857	4561	446
250	IC0473512	108	681	114	79	121	195	114	79	661.8	452	2167	512	3704	598	2177	518	311.4	1265	9222	236	6053	592	5196	259
251	IC0473513	109	607	106	262	93	1064	103	684	953.7	61	1889	694	3313	833	2052	684	720.2	293	5944	647	6160	544	4275	572
252	IC0473514	105	887	108	214	108	650	107	394	739.6	226	1500	990	2887	1126	1709	1129	875.9	129	6889	491	4448	1222	4071	662
253	IC0473515	107	721	99	570	110	563	105	518	642.3	540	1333	1128	3062	983	1679	1160	720.2	298	7167	452	5060	992	4316	549
254	IC0473516	125	70	106	273	102	825	111	164	564.4	810	1611	918	3935	437	2037	706	739.6	265	5278	770	5786	744	3934	747
255	IC0473518	139	20	93	826	80	1306	104	615	564.4	807	1944	672	2700	1238	1736	1100	467.1	1069	8611	273	4440	1227	4506	476
256	IC0473522	107	745	88	1015	94	1037	96	1112	1012.1	42	1222	1193	4876	97	2370	286	934.3	82	8111	339	6529	351	5191	261
257	IC0473523	104	921	91	910	91	1110	95	1153	564.4	854	1889	716	4330	227	2261	406	1148.4	27	5944	648	6303	474	4465	491
258	IC0473524	110	495	98	612	106	704	104	565	1012.1	38	2778	211	4551	162	2780	52	992.6	63	7000	470	7366	40	5120	278
259	IC0473527	106	799	98	594	62	1369	89	1322	992.6	48	1889	707	2689	1243	1857	973	836.9	147	3778	1036	4189	1316	2935	1235
260	IC0473528	100	1135	97	649	90	1130	96	1136	992.6	51	2278	449	3931	441	2400	251	739.6	262	4000	993	5222	959	3321	1068
261	IC0473529	110	508	99	571	110	555	106	444	759.1	193	3111	111	2938	1080	2269	394	564.4	743	4500	898	4438	1228	3167	1145
262	IC0473531	100	1086	97	627	80	1301	92	1258	934.3	76	2778	213	4488	179	2733	65	992.6	64	5444	733	5988	628	4142	628
263	IC0473534	109	569	96	687	98	927	101	790	428.2	1254	2056	592	3600	653	2028	722	1090	35	5944					



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
269	IC0473544	105	852	109	160	101	865	105	521	737.7	233	1944	653	3501	721	2061	674	603.4	637	3500	1099	5996	623	3366	1037
270	IC0473553	115	318	260	4	109	572	161	4	739.6	219	1833	729	2641	1257	1738	1098	720.2	295	5833	679	4159	1327	3571	941
271	IC0473560	100	1098	97	621	98	920	98	975	934.3	77	2389	382	3749	566	2357	311	642.3	518	4611	870	5796	737	3683	881
272	IC0473561	98	1183	107	242	80	1305	95	1183	934.3	83	3556	50	4795	110	3095	7	622.8	585	7000	469	6295	480	4639	408
273	IC0473563	110	516	112	125	120	212	114	88	536.3	990	2333	394	3874	474	2248	423	622.8	598	4889	823	6973	169	4162	617
274	IC0473564	103	993	86	1082	109	598	99	930	847.8	122	1833	757	2609	1267	1763	1075	661.8	438	7556	401	4109	1342	4109	644
275	IC0473565	112	411	103	405	112	433	109	243	674.7	400	2278	445	4307	237	2420	237	953.7	76	7056	463	5807	728	4605	430
276	IC0473566	83	1370	112	119	105	725	100	877	467.1	1210	1722	820	3404	779	1864	959	739.6	274	5167	785	5313	935	3740	847
277	IC0473568	85	1340	102	440	108	647	98	1003	276.8	1366	2611	287	4516	168	2468	198	642.3	531	6889	487	6237	498	4589	438
278	IC0473570	97	1190	104	373	117	296	106	462	804.5	147	2083	570	3945	434	2277	386	564.4	741	6306	582	5445	904	4105	646
279	IC0473580	117	244	86	1083	60	1377	88	1334	657.4	468	2000	638	4862	103	2506	172	1012.1	59	6444	557	6362	443	4606	429
280	IC0473583	102	1036	91	943	128	76	107	389	830.4	130	1222	1191	6332	1	2795	45	992.6	65	5333	764	7493	3	4606	428
281	IC0473592	105	843	92	888	102	834	99	903	628.7	614	1722	855	2963	1056	1771	1066	732.8	281	9500	210	6766	257	5666	144
282	IC0473594	107	744	95	745	106	690	103	677	813.1	142	2611	290	4626	140	2683	86	992.6	66	8389	306	6129	559	5170	268
283	IC0473596	98	1173	92	848	103	804	98	1039	501.7	1128	1722	851	2827	1164	1684	1158	759.1	243	6444	560	4798	1091	4001	709
284	IC0473598	113	365	107	239	77	1323	99	951	1020.8	33	1944	655	2964	1055	1976	797	934.3	81	3722	1058	4784	1095	3147	1154
285	IC0473603	116	277	109	184	101	857	108	273	813.1	141	2833	176	4628	137	2758	56	428.2	1141	5444	732	6128	560	4000	710
286	IC0473604	104	928	97	656	105	707	102	724	674.7	404	2222	494	4424	199	2440	225	1012.1	58	6333	575	7256	77	4867	343
287	IC0473614	107	749	103	392	109	582	106	419	449.8	1215	1778	777	2112	1364	1447	1308	1109.4	34	6833	506	4679	1128	4207	600
288	IC0473617	111	474	121	29	96	980	109	231	397.9	1286	1333	1124	2327	1325	1353	1336	681.2	408	7167	451	4853	1066	4234	585
289	IC0473619	106	790	97	648	119	242	107	353	709.3	308	1778	787	4535	166	2341	330	661.8	441	7944	355	6466	382	5024	306
290	IC0473634	104	936	102	437	72	1348	92	1255	570.9	801	3000	134	4010	393	2527	160	953.7	78	8667	266	5925	665	5182	264
291	IC0473642	107	713	99	543	90	1140	99	971	726.6	244	2222	491	3162	914	2037	705	486.6	1015	9833	188	5656	815	5325	218
292	IC0473651	107	737	92	847	82	1269	94	1224	721.9	252	889	1330	3354	806	1655	1190	564.4	748	11722	89	4524	1185	5604	155
293	IC0473652	83	1364	91	933	117	318	97	1086	709.3	311	1500	1009	2936	1083	1715	1122	847.8	137	5944	653	5598	848	4130	636
294	IC0473654	89	1309	92	844	104	763	95	1167	899.7	100	2167	527	3460	743	2175	521	674.7	411	6278	593	4761	1102	3905	759
295	IC0473656	125	60	104	371	109	592	112	123	428.2	1247	1778	776	3619	644	1942	851	603.4	684	11444	98	6155	546	6068	89
296	IC0473657	139	16	89	1010	119	259	115	57	564.4	805	1000	1292	2714	1230	1426	1314	689.6	377	13722	39	4806	1084	6406	59
297	IC0473659	107	776	100	494	105	726	104	599	603.4	721	833	1339	2680	1247	1372	1326	711.2	320	13389	47	4150	1330	6083	88
298	IC0473666	104	901	92	881	120	222	105	510	545	951	611	1373	2932	1087	1363	1330	506.1	961	20667	2	4767	1100	8647	5
299	IC0473668	110	546	94	758	110	525	105	534	525.5	1026	1667	885	3743	573	1978	790	650.5	492	11167	113	5599	847	5805	124
300	IC0473669	95	1230	98	578	108	613	100	821	674.7	410	2278	447	4784	113	2579	132	467.1	1082	5889	659	6469	378	4275	571
301	IC0473671	91	1270	91	936	90	1127	91	1290	830.4	131	2500	341	4264	258	2531	157	276.8	1301	7056	461	5754	772	4362	537
302	IC0473672	107	746	96	666	111	524	105	545	778.5	168	2222	495	3293	844	2098	617	674.7	413	4222	957	4633	1138	3177	1134
303	IC0473673	103	1024	104	335	107	671	105	550	674.7	405	2278	443	2902	1115	1952	839	934.3	95	2111	1307	5258	949	2768	1283
304	IC0473674	103	1014	101	468	116	330	107	393	709.3	309	1833	739	3093	958	1879	939	605.5	628	5944	649	4593	1157	3714	864
305	IC0473676	111	473	100	498	105	723	105	497	570.9	799	2889	164	2766	1205	2075	648	536.3	878	4222	954	4492	1206	3084	1180
306	IC0473680	108	635	91	949	80	1291	93	1247	525.5	1031	1167	1211	3798	526	1830	1008	536.3	885	2389	1279	7081	134	3335	1062
307	IC0473682	106	791	72	1349	129	65	102	703	369.8	1313	556	1382	3106	948	1344	1339	603.4	690	14556	23	5044	996	6734	42
308	IC0473683	100	1110	80	1250	96	975	92	1263	671.5	428	1056	1279	3544	691	1757	1079	6726.6	6	15333	17	6400	412	9487	1
309	IC0473688	91	1290	102	421	92	1082	95	1172	484.4	1177	2222	486	3527	705	2078	644	657.4	465	7111	456	5139	975	4303	553
310	IC0473693	103	1011	110	151	122	172	112	142	564.4	859	2000	618	3722	586	2095	621	651.4	478	3833	1020	6161	542	3549	952
311	IC0473694	102	1065	97	633	114	383	104	583	674.7	406	2056	588	3368	798	2033	711	830.4	153	4056	986	4627	1140	3171	1142
312	IC0473695	105	857	113	100	121	208	113	111	603.4	722	2278	437	4629	136	2503	175	501.7	992	6833	502	7124	116	4820	355
313	IC0473696	99	1153	100	518	109	589	102	686	726.6	245	1833	740	2608	1268	1723	1111	813.1	170	4333	935	4108	1343	3085	1179
314	IC0473697	101	1083	106	248	124	112	110	190	545	958	1444	1034	3400	783	1796	1041	536.3	882	2667	1237	6808	242	3337	1060
315	IC0473699	123	92	114	77	129	55	122	11	525.5	1016	1667	869	2974	1042	1722	1113	613	616	3500	1101	4212	1308	2775	1281
316	IC0473700	100	1095	102	415	130	45	111	171	369.8	1320	1944	660	4108	336	2141	556	632.2	551	3944	1003	5608	839	3395	1027
317	IC0473701	110	512	108	209	121	201	113	115	608	665	1444	1033	3144	926	1732	1102	447.7	1120	7111	457	6222	512	4594	436
318	IC0473702	96	1205	125	9	139	16	120	23	671.5	430	1333	1123	3802	524	1936	868	449.8	1104	4611	874	5752	773	3604	918



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
319	IC0473703	103	980	116	53	138	23	119	26	608	667	4333	10	2256	1336	2399	253	578.2	728	3722	1049	5770	757	3357	1040
320	IC0473706	108	676	105	297	117	326	110	215	545	942	944	1305	4401	208	1963	820	5979.2	13	3333	1129	5901	680	5071	293
321	IC0473708	116	275	104	345	108	628	109	227	564.4	822	2556	300	4182	293	2434	229	397.9	1197	3944	998	7094	126	3812	813
322	IC0473709	118	230	105	296	96	983	106	420	603.4	690	2500	322	2056	1373	1720	1117	484.4	1046	5667	702	5667	808	3939	744
323	IC0473710	107	747	100	502	141	11	116	45	486.6	1143	1778	783	3207	891	1824	1016	536.3	888	6278	596	7041	148	4618	424
324	IC0473711	106	833	104	355	123	136	111	169	650.5	505	1056	1261	3281	851	1662	1182	617.1	607	3778	1047	6637	312	3677	886
325	IC0473713	111	434	107	224	124	100	114	81	545	929	2056	575	2898	1117	1833	1005	328.7	1253	4167	969	6903	198	3799	819
326	IC0473714	111	467	96	681	94	1026	100	833	661.8	448	1611	928	4447	192	2240	433	501.7	985	2667	1235	6356	447	3175	1137
327	IC0473715	104	927	109	164	119	240	111	170	467.1	1191	2944	145	3625	637	2346	324	536.3	890	3500	1096	6758	265	3598	923
328	IC0473717	113	377	103	375	124	103	113	100	684	380	2056	582	3272	860	2004	755	588.2	714	4500	901	7199	96	4096	652
329	IC0473718	109	556	98	574	118	295	108	279	628.7	613	1111	1229	3969	416	1903	908	467.1	1088	7611	394	6092	575	4723	384
330	IC0473720	109	565	108	192	129	54	115	55	689.6	363	3278	83	3805	521	2591	123	632.2	545	4889	820	5981	633	3834	804
331	IC0473723	105	875	112	116	106	694	108	328	650.1	518	2389	368	3033	1005	2024	728	559	802	4278	948	6766	256	3868	781
332	IC0473728	107	734	101	448	67	1362	92	1268	564.4	841	2500	327	3682	609	2249	421	617.1	610	5611	715	7362	43	4530	463
333	IC0473729	125	69	98	587	121	204	115	71	525.5	1014	2056	586	3843	497	2141	555	432.5	1137	5722	694	6243	495	4133	633
334	IC0473730	139	14	100	508	189	3	143	8	506.1	1076	2778	208	4465	188	2583	130	559.5	800	8056	342	5690	799	4768	372
335	IC0473733	107	774	104	369	180	4	130	9	625.4	626	2389	375	4147	306	2387	272	558.8	807	8500	286	5826	718	4962	318
336	IC0473734	104	905	105	289	69	1355	93	1249	564.4	851	1389	1081	4312	234	2088	628	641.7	533	7111	458	5812	726	4522	470
337	IC0473735	110	523	100	521	87	1178	99	950	540.3	972	2722	235	3847	494	2370	288	380.6	1210	5000	809	6851	223	4077	659
338	IC0473739	110	493	95	716	63	1366	89	1310	674.7	402	2556	309	3056	988	2095	622	813.1	171	2944	1189	4387	1242	2715	1294
339	IC0473740	106	809	105	292	102	815	104	568	630.6	580	1000	1284	4493	176	2041	700	501.7	988	3556	1094	7136	114	3731	852
340	IC0473742	100	1121	104	331	106	703	103	645	655.7	485	2500	323	4062	365	2406	248	536.3	876	6833	501	6753	269	4708	390
341	IC0473748	100	1122	78	1283	104	748	94	1203	711.2	293	1389	1120	3509	720	1870	951	545	830	12556	67	5775	754	6292	67
342	IC0473750	110	542	83	1181	103	779	99	972	380.6	1297	2833	190	3873	475	2362	303	674.7	426	5056	803	6000	621	3910	756
343	IC0473754	110	491	114	80	114	387	112	122	560.6	880	2500	316	3974	412	2345	325	484.4	1051	7667	376	7408	29	5186	263
344	IC0473756	100	1129	119	35	113	391	111	172	657.4	477	3111	104	3825	505	2531	158	467.1	1084	5444	729	5658	813	3857	787
345	IC0473761	104	946	113	96	82	1266	100	896	484.4	1171	2111	541	4249	268	2282	382	596.9	703	7500	408	7151	110	5083	289
346	IC0473763	110	529	82	1217	89	1154	93	1233	484.4	1164	1889	726	4033	379	2135	564	449.8	1111	4611	871	7055	140	4039	687
347	IC0473764	105	870	85	1118	104	755	98	1022	622.8	642	1500	1014	3386	792	1836	996	397.9	1192	2889	1203	5837	713	3041	1198
348	IC0473765	108	702	75	1322	122	139	102	740	934.3	82	889	1335	4052	369	1958	828	709.3	333	2278	1293	5602	843	2863	1260
349	IC0473766	109	584	101	454	121	183	110	183	632.2	558	2167	524	4483	180	2427	234	632.2	546	5333	758	6920	192	4295	557
350	IC0473767	102	1042	89	1002	82	1268	91	1288	709.3	310	667	1365	2358	1314	1245	1361	570.9	737	3389	1123	4795	1092	2918	1242
351	IC0473768	109	557	75	1326	129	64	104	593	545	935	1944	687	2107	1365	1532	1274	603.4	676	4778	847	4241	1294	3207	1115
352	IC0473769	118	218	106	264	108	635	110	182	524.6	1062	2611	283	4030	381	2389	268	484.4	1055	4056	982	5530	881	3357	1041
353	IC0473770	104	938	72	1340	108	630	95	1179	564.4	856	2389	390	2579	1280	1844	984	694.3	360	8111	335	4079	1357	4295	560
354	IC0473771	98	1189	122	22	98	946	106	466	613	657	3222	90	2170	1346	2002	759	484.4	1042	14056	31	4563	1166	6368	62
355	IC0473774	110	517	124	12	79	1312	104	591	632.2	557	2889	157	3416	768	2312	352	588.2	716	5722	691	5804	732	4038	688
356	IC0473776	115	300	94	790	89	1157	99	933	640.1	545	1778	797	2583	1279	1667	1176	726.6	286	3444	1113	4083	1356	2751	1286
357	IC0473778	132	31	92	901	120	214	115	72	674.7	396	2333	428	3162	913	2057	679	899.7	110	3667	1068	5677	805	3414	1012
358	IC0473779	105	845	89	1004	140	12	111	151	449.8	1216	2056	606	2987	1037	1831	1006	1159.2	25	3167	1151	5240	955	3189	1127
359	IC0473780	112	407	102	411	100	877	105	537	578.2	788	2333	408	4887	93	2600	119	608	625	6056	627	6768	254	4477	485
360	IC0473781	113	392	92	853	113	395	106	440	467.1	1201	1667	891	3889	466	2008	751	1090	37	2389	1277	5933	662	3137	1157
361	IC0473783	83	1383	108	205	106	686	99	944	536.3	1010	3000	130	4270	256	2602	117	558.8	808	5000	808	6560	343	4040	684
362	IC0473784	103	981	92	867	93	1045	96	1120	588.2	776	2667	270	5357	18	2871	27	449.8	1107	3000	1181	6616	321	3355	1044
363	IC0473786	102	1054	88	1041	121	184	104	629	276.8	1364	3167	103	4093	344	2512	168	709.3	336	3222	1135	5684	801	3205	1117
364	IC0473787	106	802	63	1380	118	270	96	1130	640.1	549	1722	864	4097	340	2153	545	899.7	111	3667	1071	6535	350	3700	871
365	IC0473788	85	1352	95	741	112	441	97	1059	778.5	169	2389	385	2751	1212	1973	806	674.7	414	6778	511	4369	1249	3941	742
366	IC0473789	84	1356	102	427	91	1113	92	1261	640.1	550	4111	16	3278	857	2676	88	830.4	155	4222	953	6001	620	3685	879
367	IC0473790	104	906	83	1171	115	362	101	818	657.4	473	1056	1276	3184	904	1632	1214	778.5	208	4667	867	4844	1067	3430	1005
368	IC0473791	92	1258	94	761	103	773	96	1102	415.2	1278	1778	794	4477	184	2223	459	674.7	425	4778	848	5729	780	3727	855



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
369	IC0473792	122	117	98	595	93	1050	104	571	830.4	126	2222	493	4562	160	2538	153	709.3	334	3722	1054	6340	455	3591	928
370	IC0473793	99	1146	92	870	92	1087	94	1200	1020.8	34	1389	1102	2617	1265	1676	1167	570.9	734	3500	1107	4974	1019	3015	1208
371	IC0473795	119	178	87	1066	99	910	101	763	882.4	104	1444	1059	2663	1250	1663	1180	484.4	1034	3500	1105	4163	1324	2716	1293
372	IC0473797	96	1209	105	294	121	209	107	358	743.9	209	3000	132	3443	754	2396	256	674.7	415	3333	1124	6495	366	3501	976
373	IC0473798	87	1327	112	123	120	216	106	431	397.9	1292	556	1377	4079	350	1677	1163	613	619	7389	423	6304	473	4769	371
374	IC0473802	112	394	72	1350	118	293	100	827	603.4	696	2222	509	3094	956	1973	803	369.8	1223	5944	644	6928	189	4414	509
375	IC0473804	117	261	102	431	120	221	113	114	536.3	983	3000	133	4324	229	2620	106	501.7	999	2556	1244	6033	605	3030	1202
376	IC0473805	100	1099	88	1031	88	1164	92	1267	657.4	475	833	1344	4668	129	2053	681	726.6	285	4500	907	5772	755	3666	895
377	IC0473806	91	1273	96	668	106	696	98	1027	617.1	651	1278	1159	2891	1121	1595	1240	467.1	1090	7667	385	4391	1241	4175	612
378	IC0473807	117	263	115	61	112	424	115	68	328.7	1330	1667	867	4850	106	2282	381	449.8	1113	7889	362	7495	2	5278	233
379	IC0473808	102	1038	120	32	92	1073	105	547	501.7	1122	1833	731	3073	973	1803	1034	555.9	815	8611	274	4212	1307	4460	494
380	IC0473809	107	752	106	265	79	1313	97	1069	536.3	993	1500	992	3053	989	1696	1144	501.7	1000	9000	249	6643	306	5382	205
381	IC0473810	98	1186	101	459	122	164	107	381	588.2	782	1722	832	4790	111	2367	296	1051	43	8500	290	6309	469	5287	229
382	IC0473811	102	1055	87	1067	98	940	95	1149	501.7	1123	1389	1108	2951	1068	1614	1229	363.3	1230	3444	1114	6643	307	3484	990
383	IC0473813	108	644	82	1219	122	165	104	617	882.4	106	1611	938	3922	443	2138	562	380.6	1202	2500	1259	7167	106	3349	1052
384	IC0473814	109	604	87	1046	121	189	106	472	486.6	1140	2611	291	4089	347	2396	257	564.4	785	9444	213	5589	854	5199	258
385	IC0473815	113	343	109	162	118	284	113	102	759.1	188	1389	1073	3899	459	2016	742	603.4	635	7000	473	6029	606	4544	454
386	IC0473816	116	289	105	284	122	141	114	77	506.1	1085	2833	178	2090	1367	1810	1028	953.7	80	6278	587	4014	1380	3748	844
387	IC0473817	104	917	102	430	76	1336	94	1218	447.7	1231	1944	661	3012	1015	1801	1037	759.1	251	7667	379	4486	1208	4304	552
388	IC0473818	118	235	78	1287	140	13	112	133	968.9	57	2944	156	4568	158	2827	37	674.7	410	3222	1136	6068	586	3322	1067
389	IC0473819	105	851	77	1297	82	1260	88	1330	830.4	127	1833	764	4419	203	2361	307	380.6	1203	2333	1283	5919	670	2878	1254
390	IC0473823	111	455	107	221	87	1188	102	751	642.3	539	3556	49	2623	1263	2274	388	311.4	1266	6167	616	4911	1039	3796	820
391	IC0473825	103	1015	103	398	99	900	101	759	536.3	1000	1833	737	2570	1281	1647	1198	484.4	1053	3389	1121	4070	1362	2648	1310
392	IC0473826	106	832	111	137	111	497	109	236	817.5	139	3500	55	2874	1130	2397	255	759.1	224	6833	496	4276	1284	3956	733
393	IC0473827	113	331	106	250	112	469	110	191	570.9	798	2889	162	4231	274	2564	142	622.8	605	4167	966	5731	777	3507	973
394	IC0473829	108	612	106	260	97	973	104	633	484.4	1166	1889	693	3752	562	2042	699	934.3	97	4111	975	5441	905	3495	981
395	IC0473832	104	904	115	59	105	717	108	293	1012.1	43	2056	571	2968	1049	2012	746	1051	39	5889	661	4039	1368	3660	900
396	IC0473833	95	1218	117	48	106	701	106	457	674.7	408	2556	297	4977	73	2736	64	709.3	335	7056	460	6108	569	4624	420
397	IC0473835	115	306	105	285	103	807	108	334	536.3	985	2111	545	4248	269	2298	362	640.1	538	3667	1069	7282	67	3863	783
398	IC0473837	79	1387	105	277	108	612	97	1049	506.1	1104	2778	201	2387	1311	1890	925	739.6	273	6111	621	4354	1253	3735	850
399	IC0473838	108	670	113	95	111	517	111	176	798	158	2167	513	3144	927	2036	707	934.3	84	6833	504	4863	1062	4210	599
400	IC0473841	103	1003	114	81	122	152	113	110	1012.1	45	2389	367	3631	635	2344	326	914.8	98	9278	229	5942	655	5378	206
401	IC0473842	119	200	105	279	120	213	115	67	640.1	544	1944	656	2736	1218	1774	1062	674.7	420	8778	261	4804	1086	4752	376
402	IC0473844	83	1382	108	197	113	411	101	766	759.1	205	3472	61	4811	108	3014	11	564.4	744	7389	419	6519	359	4824	354
403	IC0473845	89	1312	111	131	101	867	100	840	934.3	79	3056	119	3082	963	2357	312	1148.4	26	4167	965	4174	1321	3163	1147
404	IC0473846	111	460	99	533	122	157	111	174	553.6	908	1611	924	3051	991	1739	1096	467.1	1095	1556	1367	5449	903	2491	1333
405	IC0473847	95	1224	107	233	113	394	105	524	875.9	116	1722	825	3279	856	1959	827	914.8	99	5500	725	4821	1075	3745	846
406	IC0473850	103	1029	85	1098	99	906	96	1135	553.6	914	1722	856	4283	251	2186	505	588.2	718	4111	977	5783	747	3494	982
407	IC0473851	99	1158	83	1169	110	530	97	1053	588.2	779	1833	759	5272	28	2565	141	276.8	1305	3056	1176	6883	212	3405	1021
408	IC0473853	91	1293	82	1196	110	545	94	1196	847.8	123	1444	1062	5275	27	2522	166	640.1	536	2722	1229	7142	112	3501	975
409	IC0473854	101	1081	101	470	116	340	106	458	899.7	98	1500	995	2487	1302	1629	1216	830.4	151	6389	572	4656	1135	3958	730
410	IC0473855	123	94	88	1036	102	809	104	576	501.7	1106	2500	345	3065	980	2022	732	1020.8	50	4889	821	4717	1111	3542	956
411	IC0473856	100	1105	82	1206	88	1163	90	1305	899.7	99	1667	900	4879	95	2482	189	882.4	118	6722	518	6364	442	4656	403
412	IC0473857	103	1010	112	112	79	1307	98	1008	545	957	1944	652	4869	101	2453	216	798	193	6833	505	6333	459	4655	404
413	IC0473859	102	1069	100	514	106	682	103	673	882.4	107	1222	1187	3816	514	1974	801	743.9	259	9278	234	5846	709	5289	227
414	IC0473863	108	638	86	1085	60	1375	85	1361	882.4	105	1500	1013	4741	119	2374	284	657.4	460	9333	225	5942	654	5311	222
415	IC0473864	99	1154	110	148	119	231	109	225	428.2	1258	1278	1148	2314	1328	1340	1342	1304.1	18	6944	485	4325	1266	4191	607
416	IC0473865	94	1235	97	642	111	516	100	825	759.1	203	1833	743	4539	164	2377	278	1226.2	19	5667	706	6465	383	4453	497
417	IC0473866	118	228	108	213	123	117	116	44	674.7	397	1389	1076	5100	53	2388	270	501.7	984	6444	562	6520	356	4489	480
418	IC0473867	105	888	65	1376	93	1056	88	1335	830.4	128	1889	728	3174	906	1964	819	882.4	119	6944	482	5390	915	4406	514



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
419	IC0473868	105	891	102	410	106	689	104	556	428.2	1257	2111	548	3647	632	2062	673	506.1	968	4889	824	5756	769	3717	860
420	IC0473872	110	513	132	6	80	1304	107	351	1051	24	1778	768	3575	666	2135	565	759.1	218	7444	415	5684	802	4629	415
421	IC0473873	103	958	81	1232	104	768	96	1129	380.6	1298	1667	902	2780	1197	1609	1232	968.9	72	9333	223	4280	1282	4861	347
422	IC0473875	113	383	95	720	108	629	105	487	899.7	96	1944	670	5147	50	2664	91	830.4	150	6278	594	7042	147	4717	388
423	IC0473876	108	616	94	765	101	868	101	796	986.2	55	1889	712	6134	2	3003	14	536.3	867	9278	232	7234	86	5683	138
424	IC0473877	105	869	113	99	100	887	106	453	798	161	3500	54	4320	230	2873	26	934.3	85	8056	340	5820	721	4937	322
425	IC0473878	108	655	122	21	109	584	113	106	720.2	267	2556	294	4699	124	2658	93	875.9	130	8389	307	5877	690	5047	303
426	IC0473883	105	880	97	630	119	241	107	371	155.7	1384	4444	5	2125	1362	2242	431	545	860	6278	583	7124	117	4649	405
427	IC0473884	113	361	106	245	118	292	112	126	190.3	1379	2722	228	2565	1282	1826	1013	759.1	255	6667	525	6601	327	4676	395
428	IC0473885	103	1018	99	545	112	462	105	552	259.5	1369	2167	525	3783	539	2070	659	817.5	169	9333	221	7192	98	5781	129
429	IC0473887	104	934	111	133	86	1198	100	839	224.9	1374	2167	516	2544	1287	1645	1199	545	859	9278	231	4074	1359	4632	413
430	IC0473888	92	1268	103	407	94	1022	96	1115	207.6	1378	3444	64	3723	584	2458	210	700.7	346	10722	125	6372	434	5932	108
431	IC0473889	122	111	110	143	75	1340	102	696	311.4	1349	2167	518	2696	1241	1725	1109	1051	48	6278	592	4196	1313	3842	797
432	IC0473890	99	1159	115	60	85	1217	100	897	155.7	1386	3667	40	3276	859	2366	297	798	201	7778	366	6076	584	4884	338
433	IC0473892	119	205	102	424	96	984	106	470	328.7	1328	1778	779	2715	1229	1607	1233	720.2	304	5444	744	4493	1204	3553	948
434	IC0473916	102	1044	96	661	111	483	103	649	311.4	1353	944	1309	2919	1105	1392	1323	525.5	934	4611	878	4419	1235	3185	1130
435	IC0473919	105	841	95	747	115	344	105	528	121.1	1388	944	1312	2873	1132	1313	1348	720.2	306	6833	509	4466	1217	4006	704
436	IC0473920	103	970	98	573	90	1133	97	1078	190.3	1380	944	1307	2179	1345	1105	1371	875.9	134	9278	235	4677	1129	4944	321
437	IC0473921-X	113	367	106	243	98	916	106	459	224.9	1371	1389	1079	2815	1176	1476	1297	720.2	305	7222	443	4354	1252	4099	648
438	IC0473922	108	639	99	536	105	712	104	590	363.3	1327	1444	1047	2961	1059	1590	1244	739.6	276	3333	1126	4604	1152	2892	1251
439	IC0473923	95	1214	105	307	111	496	103	635	328.7	1340	1000	1285	3288	847	1539	1268	467.1	1077	4333	942	6830	232	3877	776
440	IC0473924	115	307	100	528	130	43	115	65	311.4	1351	2111	551	3950	430	2124	581	934.3	94	4722	851	6385	423	4014	700
441	IC0473925	119	201	107	231	121	178	116	48	294.1	1358	2389	371	4311	235	2331	337	1148.4	32	4278	949	5919	671	3782	826
442	IC0473927	111	430	113	89	95	1011	106	406	294.1	1359	1556	946	3680	611	1843	985	836.9	149	5611	720	6987	165	4478	483
443	IC0473928	103	959	116	55	96	987	105	530	259.5	1368	1611	916	2733	1219	1535	1272	739.6	277	6278	597	4321	1267	3779	827
444	IC0473929	99	1163	104	321	109	574	104	586	242.2	1370	1444	1035	2927	1098	1538	1270	564.4	794	3222	1145	5835	714	3207	1116
445	IC0473930	91	1279	104	353	102	841	99	960	190.3	1381	1278	1153	2831	1160	1433	1311	992.6	69	2111	1314	4034	1372	2379	1351
446	IC0473931	108	625	117	46	107	662	111	173	397.9	1290	2667	249	3326	824	2130	570	1090	36	8389	305	6739	275	5406	196
447	IC0473932	94	1243	104	328	109	577	102	689	415.2	1276	1667	873	2328	1324	1470	1302	934.3	93	4056	987	4233	1299	3074	1183
448	IC0473933	103	988	101	484	100	876	101	777	536.3	999	1556	951	2683	1244	1592	1243	603.4	680	3611	1081	4183	1317	2799	1275
449	IC0473936	123	89	94	777	139	18	119	27	467.1	1198	1667	887	3351	809	1828	1012	759.1	249	1944	1337	6558	344	3087	1177
450	IC0473937	100	1093	104	354	120	210	108	302	501.7	1125	1722	829	3533	700	1919	881	603.4	682	4333	937	4690	1125	3209	1114
451	IC0473942	95	1232	81	1231	112	429	96	1121	605.5	679	2000	641	3050	993	1885	932	570.9	739	3722	1057	5884	688	3392	1028
452	IC0473943	103	954	109	175	87	1192	99	905	432.5	1242	2278	440	4200	283	2303	359	642.3	530	6278	591	5965	644	4295	559
453	IC0473944	100	1088	104	363	83	1228	96	1141	276.8	1365	1167	1204	5241	35	2228	452	622.8	604	5889	669	6741	274	4418	507
454	IC0473945	110	492	124	11	94	1038	109	232	553.6	909	2111	538	5188	46	2618	108	155.7	1373	5444	739	6688	290	4096	651
455	IC0473946	129	41	122	19	113	419	121	13	415.2	1267	1611	913	4863	102	2296	364	190.3	1364	8333	317	7251	79	5258	238
456	IC0473952	126	51	113	97	91	1101	110	212	645.1	522	1944	650	4095	342	2228	451	259.5	1313	6667	528	5551	872	4159	620
457	IC0473954	129	39	118	41	117	306	121	14	607.9	672	1667	866	4128	321	2134	566	224.9	1331	7611	392	5628	828	4488	481
458	IC0473955	115	320	82	1216	94	1023	97	1082	588.2	773	1833	761	4023	388	2148	548	484.4	1050	5500	724	6189	524	4058	671
459	IC0473956	119	177	97	618	108	618	108	290	847.8	121	1778	786	3069	975	1898	913	674.7	412	3778	1037	6567	339	3673	887
460	IC0473958	87	1319	89	994	91	1099	89	1317	432.5	1243	2778	220	3349	812	2186	504	536.3	892	3000	1180	5860	701	3132	1159
461	IC0473962	111	486	89	993	112	467	104	609	657.4	470	2222	503	4459	189	2446	222	640.1	537	5611	716	5959	646	4070	663
462	IC0473963	103	1004	97	651	121	174	107	376	830.4	129	2111	554	2960	1060	1967	817	570.9	736	8333	315	6953	182	5286	230
463	IC0473965	99	1156	91	950	105	710	98	993	533.9	1011	1778	802	2758	1208	1690	1151	553.6	821	5778	688	4092	1349	3474	993
464	IC0473966	91	1276	98	602	83	1232	91	1292	645.1	532	2556	306	3968	418	2390	265	553.6	818	2111	1304	6273	484	2979	1218
465	IC0473967	124	76	123	15	106	697	117	36	709.5	302	2167	511	3936	436	2271	392	86.5	1386	8389	309	7215	94	5230	248
466	IC0473968	108	706	88	1043	103	796	99	919	607.9	674	4444	6	3977	410	3010	12	588.2	717	9944	173	7084	130	5872	114
467	IC0473969	94	1250	84	1134	85	1216	88	1336	709.5	304	889	1331	2165	1349	1254	1360	847.8	136	6667	530	4478	1211	3997	712
468	IC0473972	103	956	79	1268	91	1097	91	1282	737.7	234	1389	1116	2963	1058	1697	1143	657.4	462	5278	773	6411	404	4115	642



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
469	IC0473975	105	860	77	1302	86	1195	89	1314	630.6	574	4444	7	3423	763	2833	36	570.9	738	8667	265	6830	231	5356	210
470	IC0473976	101	1075	86	1091	83	1249	90	1309	739.6	228	1111	1243	2343	1320	1398	1321	501.7	981	9556	205	4007	1385	4688	392
471	IC0473980	123	86	91	951	123	118	112	128	467.1	1181	1500	1010	2830	1161	1599	1239	501.7	1005	7667	384	6017	616	4728	381
472	IC0473981	100	1126	84	1138	133	30	106	478	545	959	889	1332	2603	1272	1346	1338	899.7	115	2000	1333	5694	797	2865	1259
473	IC0473982	115	305	81	1236	121	187	106	475	622.8	633	1611	940	2312	1330	1515	1280	501.7	990	2167	1301	5325	929	2664	1306
474	IC0473984	119	173	66	1374	58	1387	81	1370	711.2	273	944	1321	2313	1329	1323	1347	899.7	108	4500	906	4183	1318	3194	1122
475	IC0473985	124	77	114	75	117	309	118	30	737.7	231	2500	315	3736	577	2325	342	501.7	982	9056	241	6505	361	5354	211
476	IC0473992	87	1324	84	1140	105	742	92	1265	590.1	772	889	1333	2089	1369	1189	1365	882.4	122	9389	218	5378	919	5216	252
477	IC0473998	111	437	90	965	90	1121	97	1072	666.2	437	2222	501	2545	1286	1811	1026	882.4	120	3944	1000	5288	942	3372	1034
478	IC0474000	103	984	93	808	95	1014	97	1079	732.8	242	1278	1162	2770	1203	1594	1241	674.7	416	3444	1115	6409	405	3509	972
479	IC0474001	99	1151	80	1248	117	308	99	957	564.4	866	1500	1024	3003	1025	1689	1152	830.4	156	5222	781	7225	89	4426	506
480	IC0474002	118	221	80	1244	132	33	110	207	650.5	495	2500	350	4362	218	2504	174	603.4	644	11167	111	6202	520	5991	95
481	IC0474003	91	1278	73	1336	113	415	92	1262	603.4	739	2889	172	2863	1138	2118	586	380.6	1208	3611	1076	6058	591	3350	1049
482	IC0474004	108	619	92	874	101	859	100	845	689.6	364	2056	601	3566	674	2104	609	899.7	109	9889	182	6128	561	5639	150
483	IC0474006	94	1252	82	1218	108	638	94	1193	711.2	295	2667	275	2895	1120	2091	626	986.2	70	6778	510	6065	587	4610	426
484	IC0474007	103	986	107	216	116	341	109	258	506.1	1099	2722	227	3437	758	2222	462	605.5	630	5278	767	6294	481	4059	669
485	IC0474009	101	1082	98	590	127	83	109	257	603.4	732	2667	267	2921	1102	2064	671	847.8	140	5722	692	6226	509	4265	578
486	IC0474011	123	85	90	988	119	229	111	178	672.7	412	2722	241	2982	1039	2126	577	432.5	1131	6500	543	6470	377	4468	490
487	IC0474012	100	1128	88	1021	123	126	104	625	447.7	1233	2167	529	3603	651	2072	654	657.4	468	4222	958	6154	547	3678	885
488	IC0474013	96	1212	95	742	109	595	100	878	545	962	889	1327	3984	408	1806	1030	830.4	157	3000	1188	6525	352	3452	997
489	IC0474017	122	101	110	149	92	1071	108	300	630.6	572	3889	27	3672	616	2731	66	328.7	1250	10111	163	7331	50	5924	111
490	IC0474018	83	1367	93	812	105	721	94	1227	603.4	742	1611	930	3796	529	2003	757	533.9	902	5944	652	6414	403	4297	556
491	IC0474019	85	1345	82	1187	122	160	96	1108	694.3	353	1611	936	3692	605	1999	765	645.1	505	7222	442	6130	558	4666	398
492	IC0474020	87	1322	93	835	131	36	104	626	369.8	1324	1389	1101	3462	740	1740	1094	607.9	627	2500	1263	7390	31	3499	978
493	IC0474021	106	796	76	1306	83	1227	88	1323	564.4	847	2333	434	3772	545	2223	460	709.5	332	3222	1140	7452	18	3795	821
494	IC0474022	96	1198	93	833	130	44	106	429	545	960	2278	454	3523	712	2115	589	661.8	451	9889	181	5204	964	5252	240
495	IC0474023	121	128	114	71	111	520	115	59	739.6	215	3389	66	3759	553	2629	101	224.9	1327	9278	226	5915	675	5139	277
496	IC0474024	117	251	79	1275	86	1202	94	1220	603.4	691	1389	1118	3913	451	1968	813	737.7	278	4556	889	6219	513	3837	800
497	IC0474026	91	1277	75	1321	108	610	91	1276	661.8	466	1556	982	3806	520	2008	750	630.6	555	6167	619	6170	533	4322	544
498	IC0474027	116	278	118	43	90	1143	108	319	467.1	1183	3889	25	5053	59	3136	5	207.6	1352	7944	349	6608	323	4920	327
499	IC0474028	117	245	76	1313	129	60	107	355	525.5	1020	889	1334	4094	343	1836	997	739.6	270	4556	895	6022	611	3772	833
500	IC0474029	102	1048	90	963	98	937	97	1098	709.1	324	667	1364	3553	684	1643	1201	467.1	1066	2556	1256	7000	161	3341	1059
501	IC0474030	107	716	104	350	129	51	113	101	711.2	285	2000	623	3997	399	2236	442	545	829	3278	1131	7462	15	3762	838
502	IC0474031	98	1169	83	1177	128	72	103	659	628.9	607	1500	1019	3500	722	1876	943	622.8	591	2722	1228	6888	209	3411	1017
503	IC0474032	111	459	97	625	439	1	216	1	721.9	251	944	1308	2338	1321	1335	1343	564.4	747	3278	1133	5270	947	3037	1199
504	IC0474033	106	810	88	1037	80	1296	91	1280	428.2	1255	667	1366	2472	1303	1189	1366	603.4	686	2722	1231	4013	1381	2446	1341
505	IC0474034	104	940	93	832	99	899	98	986	564.4	857	722	1354	2650	1255	1312	1349	689.6	381	2056	1325	4624	1141	2456	1338
506	IC0474035	108	646	117	45	93	1057	106	456	545	939	2778	193	2973	1045	2099	616	311.4	1283	8444	298	5600	845	4785	366
507	IC0474038	107	728	100	489	117	307	108	289	622.8	637	2722	234	3414	769	2253	415	155.7	1369	10056	165	5790	741	5334	215
508	IC0474043	107	720	97	641	108	646	104	612	603.4	718	1111	1233	2705	1237	1473	1299	711.2	319	5389	755	5923	668	4008	702
509	IC0474046	79	1385	60	1386	123	135	87	1341	525.5	1060	4444	8	2132	1360	2367	293	650.5	494	2222	1296	4294	1275	2389	1349
510	IC0474048	116	295	83	1179	121	177	107	402	661.8	446	1111	1248	3833	504	1869	955	525.5	915	11278	106	6245	493	6016	92
511	IC0474055	108	657	96	688	110	565	104	559	711.2	283	2056	593	2101	1366	1623	1222	328.7	1244	4833	834	4620	1142	3261	1095
512	IC0474056	109	567	103	406	93	1049	102	752	590.1	767	2889	163	2869	1135	2116	588	397.9	1196	4056	981	4552	1175	3002	1213
513	IC0474058	112	420	99	562	113	405	108	307	666.2	436	1056	1265	3674	613	1799	1040	328.7	1247	4722	859	6079	580	3710	865
514	IC0474061	109	599	113	86	109	581	110	181	732.8	237	1500	985	2502	1298	1578	1253	311.4	1275	5722	697	4002	1388	3345	1055
515	IC0474062	113	375	114	74	96	974	108	314	564.4	827	1000	1283	3494	725	1686	1156	328.7	1252	6389	573	5778	751	4165	615
516	IC0474063	118	227	130	7	86	1196	111	143	603.4	689	4778	2	4537	165	3306	1	311.4	1281	5611	714	6044	598	3989	716
517	IC0474067	113	368	125	10	112	428	117	41	689.6	358	3944	21	4906	86	3180	3	121.1	1379	4889	819	7316	55	4109	645
518	IC0474068	119	207	98	585	82	1255	100	880	672.7	413	3556	51	4545	163	2924	19	311.4	1276	12000	80	6236	499	6182	80



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
519	IC0474072	119	196	127	8	75	1338	107	383	545	923	2556	293	2977	1041	2026	725	224.9	1339	10444	142	4664	1133	5111	280
520	IC0474073	120	159	103	374	111	522	111	146	603.4	686	1944	658	2738	1217	1762	1077	294.1	1294	8111	336	4273	1286	4226	591
521	IC0474074	122	112	121	26	88	1171	110	192	694.3	335	2000	614	3138	933	1944	847	259.5	1311	7500	409	4535	1181	4098	650
522	IC0474075	146	3	105	278	112	431	121	17	369.8	1300	1111	1227	2957	1061	1479	1293	242.2	1324	4722	858	4543	1177	3169	1144
523	IC0474076	115	321	77	1303	117	312	103	670	467.1	1184	1778	814	3246	874	1830	1007	709.1	340	9667	194	5561	869	5312	220
524	IC0474077	140	10	100	499	99	909	113	108	564.4	804	1889	704	3048	995	1834	1001	190.3	1359	13778	38	4750	1105	6239	71
525	IC0474079	121	119	110	157	91	1108	107	366	603.4	684	1278	1149	3017	1013	1633	1213	397.9	1194	4444	914	5143	974	3328	1064
526	IC0474080	121	147	112	114	111	500	115	73	661.8	443	2167	514	4200	281	2343	328	415.2	1170	3778	1033	6629	316	3607	916
527	IC0474081	120	160	105	298	117	299	114	83	525.5	1019	2000	621	3569	670	2032	715	536.3	884	4944	814	6350	450	3944	740
528	IC0474082	108	675	109	171	109	599	109	265	709.1	318	3278	82	2730	1220	2239	435	380.6	1205	9889	177	4700	1121	4990	313
529	IC0474083	109	595	110	154	102	816	107	377	711.2	280	4333	11	2763	1207	2603	116	363.3	1228	12833	58	4809	1081	6002	94
530	IC0474084	113	358	109	173	82	1263	101	764	628.9	602	3333	71	2514	1294	2159	541	467.1	1087	6833	497	4071	1361	3790	822
531	IC0474086	113	340	98	609	90	1145	100	859	694.3	338	1667	880	2539	1289	1633	1212	501.7	983	6056	629	4728	1108	3762	837
532	IC0474089	117	243	104	364	77	1327	99	936	486.6	1136	2000	624	3086	961	1858	971	484.4	1058	5778	687	4192	1315	3485	989
533	IC0474090	129	46	95	727	93	1054	106	477	629.5	590	1278	1161	3870	480	1926	874	432.5	1132	3500	1109	5590	852	3174	1140
534	IC0474091	120	162	95	715	112	465	109	238	628.7	611	1333	1133	3341	814	1768	1071	276.8	1304	9889	186	6099	571	5422	193
535	IC0474092	137	24	107	220	120	224	121	15	721.9	248	2778	198	3405	778	2302	360	553.6	817	8389	304	6307	471	5083	288
536	IC0474093	121	121	118	39	118	261	119	25	428.2	1249	3111	105	2612	1266	2050	687	415.2	1177	6278	586	4112	1341	3602	920
537	IC0474094	111	476	108	204	101	844	107	399	564.4	832	1722	822	3226	884	1838	992	564.4	770	8222	328	5722	784	4836	350
538	IC0474095	109	574	107	225	119	247	112	137	603.4	708	3500	56	3132	936	2412	243	533.9	901	3778	1031	6691	288	3668	893
539	IC0474096	109	591	99	560	109	578	106	481	545	937	1389	1089	4077	351	2004	756	622.8	597	7444	416	6161	541	4743	379
540	IC0474097	121	123	110	146	129	53	120	22	525.5	1017	1667	870	3535	699	1909	901	711.8	309	8389	311	5816	724	4972	316
541	IC0474098	108	686	110	158	124	107	114	93	369.8	1311	2778	195	3919	446	2356	316	812.8	183	12222	74	6208	518	6414	57
542	IC0474099	112	396	100	492	95	1010	102	685	671.5	424	3333	78	2849	1151	2285	378	674.4	427	11944	85	4779	1097	5799	125
543	IC0474100	111	479	99	548	91	1100	100	834	608	664	3111	110	3330	821	2350	321	761.4	216	13889	36	6930	188	7193	23
544	IC0474101	107	715	121	28	88	1170	105	514	711.2	284	3667	39	2507	1296	2295	368	837.5	144	6667	521	4007	1384	3837	801
545	IC0474102	103	987	102	443	97	949	101	814	545	954	1778	781	3778	542	2034	709	645.1	513	13611	41	6761	263	7006	31
546	IC0474103	104	915	123	14	118	285	115	66	564.4	853	2222	473	3001	1028	1929	872	689.6	395	8500	287	6137	554	5109	281
547	IC0474104	108	641	121	24	112	453	114	97	603.4	712	2778	191	3153	918	2178	517	788.1	205	11278	105	4506	1193	5524	170
548	IC0474105	116	271	108	186	95	1012	106	421	486.6	1137	2500	317	3692	606	2226	455	812.8	179	10444	143	6159	545	5805	123
549	IC0474107	107	756	123	16	109	576	113	109	545	946	2278	435	3258	869	2027	723	689.6	397	10722	128	6608	324	6007	93
550	IC0474108	106	813	113	94	79	1310	99	916	661.8	455	1889	688	3762	552	2104	608	793.5	203	7611	390	6754	268	5053	301
551	IC0474109	111	466	118	37	90	1117	106	414	467.1	1186	2222	475	2944	1074	1878	942	422.6	1164	12000	81	5540	877	5988	98
552	IC0474110	111	461	110	155	112	455	111	168	684	381	3722	35	3970	415	2792	46	645.1	507	8278	318	5725	783	4883	339
553	IC0474111	104	922	116	54	126	88	115	61	628.7	615	2000	616	3320	829	1983	781	689.6	391	9111	239	6831	230	5544	167
554	IC0474113	113	376	115	69	113	399	114	98	525.5	1022	1944	647	3340	816	1937	863	422.6	1162	11222	110	4913	1038	5519	172
555	IC0474114	109	560	107	223	105	715	107	365	689.6	362	2500	319	3152	919	2114	594	767.4	210	7778	368	4999	1008	4515	471
556	IC0474115	108	654	112	117	99	903	106	434	650.1	516	2222	477	3836	501	2236	441	694.9	348	9056	244	5973	637	5241	244
557	IC0474116	109	586	108	187	138	19	118	29	564.4	836	1278	1150	3617	646	1820	1018	812.8	178	2333	1285	7354	47	3500	977
558	IC0474117	105	865	104	319	105	713	105	535	525.5	1038	2278	442	5384	16	2729	67	622.8	599	3611	1077	7429	23	3888	768
559	IC0474119	125	72	123	17	79	1309	109	247	625.4	623	2000	613	4573	157	2399	252	603.4	656	5333	759	6625	318	4187	608
560	IC0474120	139	17	107	226	91	1095	112	124	564.4	806	2167	521	4643	132	2458	211	689.6	378	9611	198	6883	213	5728	134
561	IC0474121	107	782	113	84	113	420	111	157	540.3	973	2556	298	4750	118	2615	109	711.2	324	9889	180	6960	177	5853	117
562	IC0474122	104	907	121	27	122	149	116	47	630.6	582	1611	914	3846	496	2029	721	506.1	950	8889	254	7285	66	5560	163
563	IC0474123	110	497	105	301	112	438	109	241	655.7	482	1889	697	4620	141	2388	269	650.5	484	8389					



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
569	IC0474129	96	1194	105	288	130	42	110	186	501.7	1129	2056	578	3509	719	2022	734	501.7	1004	10056	166	5868	696	5475	181
570	IC0474130	116	282	105	312	122	148	114	78	536.3	984	2278	441	3548	687	2121	583	328.7	1254	6167	618	6837	228	4444	502
571	IC0474132	100	1114	120	31	79	1308	100	879	632.2	569	2222	474	4112	333	2322	346	207.6	1350	13500	45	7037	149	6915	35
572	IC0474133	98	1175	116	50	85	1208	100	875	449.8	1220	1111	1223	4166	301	1909	902	311.4	1285	13222	48	6264	486	6599	47
573	IC0474134	110	536	100	487	102	812	104	585	578.2	789	1889	703	4068	360	2178	516	155.7	1371	4556	885	6302	476	3671	888
574	IC0474135	103	960	106	270	90	1120	100	898	536.3	997	2778	200	4957	79	2757	57	328.7	1255	10722	127	7423	25	6158	82
575	IC0474136	112	419	102	442	101	862	105	540	597.9	744	2556	302	3222	886	2125	580	397.9	1195	8833	256	6639	310	5290	226
576	IC0474137	83	1365	100	507	110	544	98	1045	397.9	1293	2333	413	3789	533	2173	524	328.7	1260	9333	219	6523	354	5395	199
577	IC0474139	87	1323	112	106	107	658	102	704	536.3	1008	2222	476	3220	887	1993	771	328.7	1257	10889	121	5233	956	5484	179
578	IC0474140	106	793	102	413	119	250	109	245	617.1	649	3278	84	4246	270	2714	72	311.4	1278	10889	119	7248	82	6149	83
579	IC0474141	117	256	109	165	100	882	109	261	328.7	1329	3778	33	3038	1002	2381	276	121.1	1383	7611	386	4700	1120	4144	625
580	IC0474142	91	1287	111	135	102	808	101	774	501.7	1132	1778	773	3075	970	1785	1052	190.3	1361	10667	131	4575	1165	5144	274
581	IC0474143	117	250	111	127	98	919	109	251	536.3	982	2278	439	3338	818	2051	685	224.9	1341	6000	636	5103	984	3776	831
582	IC0474144	102	1040	109	166	111	485	107	340	588.2	777	2611	278	3357	802	2185	507	363.3	1229	8556	278	5821	720	4913	328
583	IC0474145	107	775	117	47	111	482	112	135	467.1	1203	2944	144	3146	924	2186	506	328.7	1259	8278	319	6162	540	4923	326
584	IC0474146	98	1182	103	377	121	182	107	343	630.3	589	3944	23	3527	704	2701	81	311.4	1277	13500	44	5528	884	6446	54
585	IC0474148	116	293	99	559	110	552	108	296	559	891	2333	416	3728	581	2207	475	224.9	1337	7500	406	6965	176	4897	336
586	IC0474149	104	902	111	128	98	941	104	572	617.1	650	2167	515	2863	1140	1882	935	294.1	1293	9278	230	4003	1386	4525	468
587	IC0474150	107	769	115	58	101	853	108	315	432.5	1240	2500	314	2963	1057	1965	818	259.5	1316	9500	208	5889	686	5216	253
588	IC0474153	106	820	101	475	91	1098	99	923	558.8	897	3333	76	2047	1374	1980	787	190.3	1360	10000	169	4403	1238	4864	345
589	IC0474154	104	941	104	336	91	1093	100	885	641.7	543	2111	546	3000	1029	1918	882	397.9	1191	7944	354	4295	1274	4212	596
590	IC0474156	106	812	99	529	77	1325	94	1202	501.7	1118	2333	414	3340	817	2058	677	536.3	887	9111	238	5583	855	5077	290
591	IC0474158	108	695	103	400	123	134	111	152	484.4	1169	1944	659	3382	795	1937	860	363.3	1231	5611	718	6146	548	4040	682
592	IC0474160	83	1372	98	584	121	203	101	811	328.7	1343	1111	1231	3485	729	1642	1204	501.7	1013	3722	1066	5055	994	3093	1175
593	IC0474161	89	1311	108	191	99	913	99	970	596.9	749	1778	774	2818	1171	1731	1103	484.4	1048	6778	513	4857	1064	4040	683
594	IC0474162	95	1222	100	506	121	198	105	508	540.5	967	1556	952	5059	57	2385	274	432.5	1136	7944	358	7054	141	5144	275
595	IC0474163	91	1301	99	554	126	90	105	513	632.2	571	1667	876	4580	152	2293	371	276.8	1303	7667	382	6080	578	4674	396
596	IC0474164	107	777	106	258	97	955	103	642	484.4	1170	2500	320	3677	612	2220	465	553.6	824	12278	73	5098	985	5976	99
597	IC0474166	103	972	98	588	102	833	101	794	536.3	998	1778	784	2772	1202	1695	1146	155.7	1374	4500	904	4808	1082	3155	1150
598	IC0474167	111	485	104	362	108	622	108	335	432.5	1237	1222	1184	4436	196	2030	718	190.3	1363	3833	1025	7375	36	3800	818
599	IC0474168	91	1296	111	126	115	348	106	460	578.2	793	1278	1146	3595	656	1817	1020	259.5	1314	3889	1014	5483	896	3210	1113
600	IC0474169	102	1043	114	76	102	823	106	441	484.4	1173	1444	1030	3883	468	1937	859	224.9	1342	4722	856	4983	1016	3310	1076
601	IC0474171	99	1165	113	102	82	1273	98	1030	588.2	780	1333	1125	3963	421	1962	822	86.5	1388	4556	890	5850	706	3497	980
602	IC0474173	94	1248	97	629	80	1300	90	1298	415.2	1277	1722	840	4177	295	2105	606	501.7	1011	4167	971	5677	804	3448	998
603	IC0474175	110	504	103	382	81	1285	98	1017	558.8	896	1222	1185	3539	698	1773	1063	224.9	1338	5333	763	5926	664	3828	808
604	IC0474183	110	509	104	337	83	1247	99	952	613	654	1611	921	3712	592	1979	789	311.4	1279	6389	571	6927	190	4542	456
605	IC0474185	105	884	110	144	88	1161	101	786	577.9	796	2778	194	3818	511	2391	262	155.7	1372	12278	72	5532	880	5988	96
606	IC0474187	113	344	112	111	92	1072	106	467	1051	23	3889	26	4295	246	3078	9	501.7	972	11667	90	5795	738	5988	97
607	IC0474188	103	991	115	66	96	989	104	558	603.4	726	3611	45	4287	249	2834	35	484.4	1047	13944	34	7479	10	7303	17
608	IC0474190	106	816	105	315	90	1128	100	844	759.1	199	2722	230	3601	652	2361	308	276.8	1302	14722	22	7490	6	7496	14
609	IC0474191	85	1343	99	561	112	457	98	987	525.5	1057	2722	236	5460	7	2903	20	553.6	822	15444	15	6886	211	7628	11
610	IC0474192	84	1362	100	488	105	745	96	1110	311.4	1348	3333	77	3875	472	2507	171	415.2	1180	11222	108	5637	824	5758	133
611	IC0474194	92	1259	109	167	77	1328	93	1252	1051	31	3833	30	3759	555	2881	25	190.3	1354	10278	151	5252	953	5240	245
612	IC0474198	99	1149	115	56	93	1053	102	694	603.4	736	1778	769	3813	515	2065	664	224.9	1334	10333	149	5793	740	5450	187
613	IC0474199	119	198	110	142	83	1244	104	603	739.6	216	2167	517	4264	259	2390	264	86.5	1385	6500	544	5764	761	4117	641
614	IC0474201	96	1192	97	657	87	1182	93	1241	934.3	78	2722	238	3811	518	2489	181	501.7	974	11500	94	6640	308	6214	74
615	IC0474202	100	1138	102	445	80	1295	94	1214	914.8	94	2222	487	3464	739	2200	486	328.7	1242	8500	289	4885	1049	4571	443
616	IC0474204	108	674	99	551	85	1214	97	1055	1148.4	14	2278	446	5105	52	2844	31	207.6	1347	8667	267	6464	384	5113	279
617	IC0474205	108	684	92	859	97	968	99	949	369.8	1310	1500	1005	3546	690	1805	1031	603.4	689	3500	1102	6612	322	3572	938
618	IC0474214	83	1368	80	1251	119	237	94	1207	608	669	1111	1252	3863	485	1861	966	447.7	1122	4778	850	6457	387	3894	765



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
619	IC0474215	87	1338	83	1163	87	1193	86	1353	570.9	803	2000	640	4244	271	2272	389	449.8	1108	3056	1174	6362	444	3289	1085
620	IC0474216	113	382	95	750	91	1112	99	920	447.7	1225	1500	1001	4131	319	2026	724	397.9	1199	5278	771	5912	676	3863	784
621	IC0474219	115	309	101	464	80	1299	99	963	650.5	498	1944	662	3989	403	2195	493	328.7	1249	5667	705	5897	682	3964	728
622	IC0474222	119	202	100	513	108	639	109	249	603.4	688	2444	356	3668	622	2239	438	311.4	1280	6000	635	5415	911	3909	758
623	IC0474223	87	1316	101	452	117	301	102	729	672.7	422	1278	1155	4141	311	2030	716	121.1	1380	7000	474	6037	603	4386	527
624	IC0474224	111	480	101	478	86	1197	99	924	447.7	1228	1389	1086	2628	1262	1488	1287	190.3	1362	3722	1064	4128	1336	2680	1302
625	IC0474225	89	1314	86	1090	108	649	94	1206	711.2	297	1611	933	4112	332	2145	552	545	831	8556	279	7075	135	5392	200
626	IC0474228	95	1228	72	1345	100	879	89	1319	545	963	1111	1257	2335	1322	1330	1344	603.4	678	3444	1117	5020	1003	3023	1204
627	IC0474229	103	968	98	606	105	737	102	737	545	952	1667	879	3304	837	1839	990	224.9	1340	6222	608	5453	902	3967	725
628	IC0474230	91	1274	94	757	107	657	97	1048	564.4	871	1111	1234	3796	528	1824	1015	694.3	362	2833	1215	7046	144	3525	968
629	IC0474233	107	732	94	760	111	514	104	601	603.4	720	1667	886	2343	1319	1538	1271	369.8	1225	2444	1270	5038	997	2617	1315
630	IC0474234	91	1285	104	368	121	181	105	504	694.3	352	3111	107	3659	625	2488	184	328.7	1246	4778	841	7052	143	4053	675
631	IC0474236	108	659	97	619	125	94	110	198	369.8	1309	1722	839	4788	112	2293	369	311.4	1286	4444	912	5833	715	3530	966
632	IC0474237	94	1255	99	539	119	256	104	607	564.4	870	2389	381	3011	1016	1988	777	294.1	1295	4222	956	5055	995	3190	1125
633	IC0474238	103	996	97	652	113	413	104	592	603.4	727	1389	1091	3562	678	1851	976	224.9	1333	5444	749	6423	398	4031	692
634	IC0474239	105	873	97	653	114	376	105	506	661.8	459	2111	555	4607	146	2460	209	294.1	1292	3000	1182	5873	694	3056	1189
635	IC0474241	123	99	113	93	107	667	114	76	709.1	312	1944	649	3705	597	2120	584	645.1	503	5611	717	6408	406	4221	592
636	IC0474243	103	1001	102	436	79	1311	94	1190	486.6	1149	1444	1041	2905	1112	1612	1230	564.4	787	9500	211	5006	1006	5023	307
637	IC0474244	103	992	119	36	113	417	112	141	650.5	507	833	1336	2298	1332	1261	1358	603.4	647	6722	519	6025	609	4450	498
638	IC0474245	111	477	100	512	129	58	113	104	545	931	1556	953	2537	1290	1546	1265	661.8	449	3778	1039	5799	736	3413	1014
639	IC0474250	102	1062	85	1097	105	735	97	1057	467.1	1192	1000	1294	2604	1271	1357	1335	709.1	341	4722	861	5403	913	3611	915
640	IC0474251	99	1166	91	918	91	1109	94	1229	684	388	1500	1008	2995	1032	1726	1107	711.2	315	4000	996	7240	84	3984	719
641	IC0474254	94	1246	85	1126	108	640	95	1148	628.7	621	1056	1272	2085	1370	1256	1359	628.9	569	5667	712	4202	1311	3499	979
642	IC0474255	105	847	84	1132	88	1167	92	1257	525.5	1037	1167	1219	2134	1357	1275	1357	694.3	364	4056	989	4701	1119	3150	1152
643	IC0474256	110	518	88	1025	100	874	99	921	689.6	361	1278	1164	2117	1363	1361	1331	486.6	1017	5611	721	4230	1301	3443	1003
644	IC0474257	110	537	93	811	110	529	104	563	650.1	513	1889	714	2788	1190	1776	1058	629.5	565	4889	825	4040	1367	3186	1128
645	IC0474258	110	531	82	1202	102	811	98	1005	564.4	835	1056	1278	2662	1252	1427	1313	628.7	577	3333	1128	6681	292	3548	955
646	IC0474259	102	1047	108	194	109	601	106	427	628.9	606	2167	519	3524	709	2107	604	788.1	204	5111	797	6300	478	4066	664
647	IC0474260	108	662	108	195	119	243	112	134	694.3	344	1833	734	5403	12	2644	98	812.8	174	6556	540	7315	56	4894	337
648	IC0474261	118	226	104	334	126	93	116	46	486.6	1135	2611	285	2840	1154	1979	788	622.8	601	6667	527	4040	1366	3777	830
649	IC0474262	105	892	95	736	109	600	103	661	525.5	1039	1889	711	2035	1375	1483	1289	721.9	289	3389	1120	4090	1350	2734	1288
650	IC0474263	105	893	101	466	118	268	108	294	629.5	596	2222	489	4281	252	2378	277	689.6	388	6222	605	6263	488	4392	524
651	IC0474273	108	666	82	1185	60	1378	83	1366	506.1	1092	556	1381	2850	1150	1304	1351	428.2	1149	1278	1377	5313	936	2340	1358
652	IC0474274	102	1050	100	510	119	232	107	370	625.4	630	611	1371	2942	1076	1393	1322	564.4	760	3444	1118	4317	1270	2775	1280
653	IC0474275	113	351	96	695	90	1136	99	907	721.9	250	1944	667	4948	81	2538	154	422.6	1157	7000	472	6467	380	4630	414
654	IC0474277	115	301	99	557	105	740	106	437	564.4	823	1389	1088	2157	1351	1370	1327	603.4	669	1444	1372	4714	1113	2254	1365
655	IC0474280	95	1225	110	159	118	281	107	345	564.4	868	2389	370	4380	212	2444	223	689.6	396	7500	405	6841	227	5010	309
656	IC0474284	132	27	96	674	111	481	113	105	540.3	969	1667	882	2928	1096	1712	1127	545	849	3556	1089	5128	976	3076	1182
657	IC0474285	119	188	98	572	105	743	107	352	545	922	2667	265	4437	195	2550	148	767.4	213	11222	109	5937	659	5976	100
658	IC0474288	87	1315	99	569	86	1205	90	1297	525.5	1056	2333	418	4950	80	2603	115	694.9	350	10278	153	6125	562	5699	136
659	IC0474289	105	861	97	645	94	1036	98	978	630.6	581	1611	926	2357	1315	1533	1273	525.5	920	5056	805	5948	651	3843	795
660	IC0474290	113	373	79	1266	59	1385	84	1364	655.7	481	944	1318	2756	1210	1452	1305	369.8	1217	3111	1169	4351	1254	2611	1320
661	IC0474291	111	454	108	200	83	1242	101	817	369.8	1306	2111	543	5004	68	2495	179	812.8	182	5833	675	6504	362	4383	529
662	IC0474292	103	957	259	5	84	1221	149	7	560.6	884	1722	819	2804	1183	1696	1145	671.5	430	6333	577	6407	407	4471	488
663	IC0474293	103	1025	104	332	111	510	106	450	671.5	426	2500	324	4700	123	2624	103	622.8	590	6389	565	7295	63	4769	370
664	IC0474294	99	1161	99	553	103	801	100	850	608	668	2333	415	5156	48	2699	82	645.1	509	8333	314	6339	458	5106	282
665	IC0474295	102	1068	94	759	109	570	102	730	657.4	474	1556	958	2967	1050	1727	1106	608	622	1944	1339	6333	460	2962	1223
666	IC0474296	105	883	99	566	99	907	101	805	486.6	1148	1278	1157	3160	916	1641	1205	650.5	495	5333	762	4425	1231	3470	994
667	IC0474298	123	88	97	635	91	1103	104	631	650.5	494	2000	630	2956	1062	1869	953	6726.6	8	7667	378	6170	534	6854	36
668	IC0474301	119	183	101	450	134	27	118	31	447.7	1222	1389	1085	3192	899	1676	1165	603.4	683	7278	437	5551	873	4477	484



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
669	IC0474303	106	787	91	920	114	374	104	616	415.2	1274	4039	18	2658	1254	2371	285	711.2	329	4389	919	6383	425	3828	809
670	IC0474304	85	1351	87	1055	128	77	100	871	484.4	1178	1556	968	2162	1350	1401	1320	545	856	2944	1193	4563	1167	2684	1300
671	IC0474306	84	1359	86	1075	118	264	96	1118	553.6	915	1556	971	2781	1194	1630	1215	564.4	777	5444	748	6486	372	4165	616
672	IC0474307	104	923	92	873	83	1230	93	1246	632.2	566	944	1313	2856	1143	1478	1295	603.4	695	6889	492	4495	1201	3996	713
673	IC0474308	92	1260	85	1096	60	1379	79	1374	524.6	1069	1556	972	2766	1206	1615	1227	486.6	1028	2833	1209	7306	57	3542	957
674	IC0474309	122	118	91	948	118	288	110	203	592.2	756	2889	170	2822	1167	2101	611	650.5	487	3111	1158	6062	588	3275	1089
675	IC0474310	99	1145	94	775	128	79	107	386	651.4	493	2500	336	3111	944	2087	629	545	838	6333	574	6332	462	4403	516
676	IC0474311	119	182	98	604	132	31	116	43	501.7	1108	1944	665	3057	986	1834	998	661.8	453	3611	1079	6311	468	3528	967
677	IC0474313	96	1210	90	953	111	523	99	943	536.3	1006	1056	1267	3258	868	1617	1226	467.1	1073	4222	962	7351	48	4013	701
678	IC0474314	111	447	109	161	117	319	112	125	603.4	700	2778	196	2584	1278	1988	775	369.8	1224	11389	103	4084	1355	5281	231
679	IC0474316	103	1002	105	276	125	96	111	156	694.3	348	1389	1080	3749	565	1944	848	564.4	755	8389	312	7218	92	5390	201
680	IC0474318	102	1072	96	708	102	819	100	868	632.2	568	2333	422	2130	1361	1699	1142	628.7	574	2333	1282	5576	858	2846	1266
681	IC0474319	108	699	86	1080	109	586	101	789	449.8	1214	2167	532	4141	312	2252	416	525.5	932	2556	1246	6404	410	3162	1148
682	IC0474320	99	1141	113	98	121	207	111	162	369.8	1322	1778	770	2819	1170	1656	1187	603.4	693	10000	171	4931	1032	5178	265
683	IC0474321	91	1300	116	51	124	98	110	180	564.4	874	2889	158	5328	20	2927	18	661.8	447	8056	341	7180	103	5299	223
684	IC0474322	108	627	103	376	97	951	103	669	603.4	710	2667	257	3840	499	2370	287	711.2	318	6667	526	7248	83	4875	340
685	IC0474323	94	1244	113	88	121	185	109	224	661.8	465	1944	648	5424	11	2677	87	590.1	709	6111	624	7238	85	4646	406
686	IC0474324	103	1012	112	107	110	543	108	270	525.5	1044	1944	651	5190	45	2553	147	666.2	436	6944	481	6690	289	4767	373
687	IC0474325	105	882	105	302	110	538	107	400	709.1	323	1611	920	4250	267	2190	496	732.8	280	5000	812	5994	624	3909	757
688	IC0474326	101	1074	96	689	102	828	100	894	711.2	291	1278	1160	3214	889	1734	1101	564.4	751	6111	626	5594	850	4090	655
689	IC0474327	100	1092	100	486	130	49	110	208	694.3	351	2389	380	3669	618	2251	420	689.6	371	7667	377	6581	331	4979	314
690	IC0474329-X	83	1374	106	267	139	17	109	235	629.5	600	1611	917	4493	175	2245	428	506.1	951	5833	680	5735	776	4025	693
691	IC0474330	118	232	83	1170	113	401	105	542	578.2	787	1389	1112	4189	289	2052	683	689.6	375	2889	1204	6636	313	3405	1022
692	IC0474331	105	877	92	864	122	151	106	418	536.3	995	1667	892	2293	1333	1499	1284	650.1	499	4056	988	4619	1143	3108	1168
693	IC0474337	87	1337	103	409	144	10	111	153	721.9	258	1778	778	4263	260	2254	413	603.4	640	6222	606	5763	762	4196	606
694	IC0474338	103	1031	84	1155	117	302	101	775	597.9	746	1944	681	2861	1141	1801	1039	564.4	763	2111	1309	6046	597	2907	1245
695	IC0474340	117	246	103	408	127	82	116	49	564.4	820	2778	204	2932	1086	2091	625	447.7	1123	2889	1198	5093	987	2810	1274
696	IC0474343	108	671	85	1116	123	122	105	495	484.4	1168	1778	806	3407	777	1890	927	506.1	964	3222	1143	7374	37	3701	870
697	IC0474346	117	254	282	2	122	159	174	3	545	925	1611	912	3034	1004	1730	1104	603.4	675	3778	1038	4534	1182	2972	1219
698	IC0474350	99	1142	89	997	114	369	101	806	564.4	865	1667	895	3952	429	2061	675	657.4	464	3222	1144	7026	155	3635	905
699	IC0474351	91	1298	92	871	101	855	95	1184	525.5	1055	1722	853	4191	288	2146	550	415.2	1176	1667	1360	6575	334	2886	1252
700	IC0474352	108	642	70	1369	112	460	96	1105	645.1	526	1056	1282	3903	457	1868	957	484.4	1039	3056	1179	6321	466	3287	1086
701	IC0474354	94	1238	75	1324	116	338	95	1171	607.9	677	1222	1199	3916	448	1915	887	553.6	819	3333	1127	7219	91	3702	869
702	IC0474355	103	1021	71	1359	101	861	92	1273	709.5	303	444	1388	3233	879	1462	1303	632.2	543	2500	1268	6435	392	3189	1126
703	IC0474357	105	850	80	1245	117	316	101	807	737.7	232	1889	727	3673	614	2100	614	524.6	937	2889	1200	6144	551	3186	1129
704	IC0474358	101	1079	80	1261	59	1384	80	1371	630.6	575	1444	1066	3413	771	1829	1009	592.2	706	3778	1043	7378	34	3916	753
705	IC0474359	123	91	82	1184	137	24	114	80	739.6	214	1778	808	3483	730	2000	761	651.4	477	3111	1161	6172	531	3311	1075
706	IC0474360	100	1124	75	1319	61	1371	79	1375	467.1	1193	1778	816	4187	292	2144	553	501.7	1006	4778	849	7185	101	4155	622
707	IC0474362	96	1206	80	1249	83	1239	86	1348	545	961	1444	1065	3268	862	1752	1083	536.3	883	3778	1042	7489	8	3934	748
708	IC0474365	98	1178	94	767	117	327	103	658	671.5	429	1778	795	4637	134	2362	304	564.4	756	3889	1011	5754	771	3402	1024
709	IC0474366	113	374	95	730	115	365	108	333	608	663	1889	710	4390	211	2296	365	603.4	658	7500	410	5665	809	4589	437
710	IC0474367	116	283	100	500	98	938	105	548	711.2	275	2000	628	4858	104	2523	164	661.8	440	2500	1257	6749	272	3304	1080
711	IC0474368	110	548	79	1276	112	451	100	858	590.1	766	1556	977	3988	405	2045	694	449.8	1106	3722	1061	7489	7	3887	770
712	IC0474369	129	43	82	1215	119	238	110	211	666.2	433	1778	811	3551	685	1998	766	578.2	727	2667	1234	6793	244	3346	1054
713	IC0474370	126	52	81	1230	113	421	107	405	732.8	235	1500	1022	3710	593	1981	784	536.3	871	3500	1103	6077	582	3371	1035
714	IC0474371	129	37	86	1070	103	770	106	433	564.4	808	2278	467	4140	313	2327	339	5979.2	12	7833	365	6571	335	6795	39
715	IC0474373	107	730	97	631	95	1005	100	886	564.4	840	1722	841	4351	223	2213	468	709.1	339	4333	938	7069	137	4037	689
716	IC0474376	124	81	78	1284	121	193	108	322	603.4	682	1667	905	3172	907	1814	1022	397.9	1193	3889	1012	6428	396	3572	939
717	IC0474379	106	806	94	764	81	1279	94	1219	486.6	1146	1167	1206	4070	356	1908	904	628.9	570	6222	613	6487	369	4446	501
718	IC0474380	124	79	93	807	126	87	114	75	689.6	355	2000	635	3541	696	2077	646	484.4	1038	3611	1078	6972	170	3689	875



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
719	IC0474381	122	103	78	1289	105	711	102	747	711.2	272	1333	1143	3920	445	1988	776	536.3	872	5167	789	6944	183	4216	594
720	IC0474382	121	125	79	1273	103	799	101	802	506.1	1078	1389	1117	3249	872	1715	1123	617.1	611	4444	913	6564	342	3875	777
721	IC0474383	104	908	100	509	110	556	105	554	650.5	506	1722	834	5058	58	2477	192	694.3	357	5222	779	6298	479	4071	661
722	IC0474384	116	272	83	1180	110	567	103	672	650.5	496	2389	389	4156	302	2398	254	328.7	1248	4889	822	6619	320	3946	738
723	IC0474385	107	750	102	432	118	269	109	242	545	945	1556	950	4065	362	2055	680	486.6	1023	5333	760	6657	302	4159	621
724	IC0474386	108	620	78	1293	124	99	103	647	603.4	709	1611	943	3986	406	2067	661	501.7	991	2889	1201	7330	51	3574	935
725	IC0474387	106	826	107	228	95	1002	103	674	661.8	457	1389	1078	3354	805	1802	1036	629.5	563	4889	828	4996	1009	3505	974
726	IC0474388	107	770	76	1315	123	133	102	738	672.7	416	2111	569	3471	737	2085	634	536.3	875	4556	882	6077	583	3723	857
727	IC0474389	108	614	85	1113	111	491	101	762	447.7	1229	2056	609	3812	516	2105	605	588.2	721	2556	1247	6905	196	3350	1050
728	IC0474390	109	549	76	1308	109	591	98	1013	545	934	1278	1175	3752	561	1858	970	467.1	1096	2111	1315	6110	568	2896	1250
729	IC0474391	112	398	83	1164	108	643	101	795	603.4	697	1389	1111	3520	714	1837	993	630.3	560	4889	829	6503	363	4007	703
730	IC0474392	79	1386	76	1310	110	542	88	1325	467.1	1197	1778	815	4373	214	2206	476	628.7	581	5000	810	5873	695	3834	805
731	IC0474393	109	551	86	1087	129	57	108	308	694.3	342	2056	608	3471	736	2074	649	632.2	544	5222	778	6630	315	4161	618
732	IC0474394	108	692	95	712	114	388	106	473	684	385	1500	1000	3946	433	2043	698	721.9	288	5833	681	7319	54	4625	418
733	IC0474395	113	385	85	1125	123	114	107	375	369.8	1305	1333	1137	3629	636	1777	1056	559	804	4833	837	6311	467	3901	762
734	IC0474397	118	212	83	1175	94	1030	98	1002	564.4	818	1056	1277	3411	772	1677	1164	617.1	609	3611	1084	6750	271	3659	901
735	IC0474398	103	1005	85	1092	111	513	100	889	628.7	616	2167	534	4984	72	2593	121	428.2	1144	6000	638	7002	160	4477	486
736	IC0474400	83	1375	98	577	111	479	97	1050	525.5	1059	1833	741	3449	751	1936	865	564.4	780	6389	569	6622	319	4525	467
737	IC0474401	113	332	88	1029	92	1085	98	1047	603.4	693	944	1315	3566	675	1705	1133	432.5	1134	2944	1197	6378	430	3252	1100
738	IC0474404	125	63	82	1204	60	1381	89	1321	661.8	442	1556	973	3461	742	1893	920	559.5	798	4000	995	6700	286	3753	842
739	IC0474405	100	1107	75	1323	132	35	102	700	684	387	1556	983	4004	394	2081	639	711.2	314	2833	1210	7253	78	3599	922
740	IC0474407	121	132	88	1044	83	1231	97	1064	525.5	1018	1167	1216	3818	512	1837	995	558.8	809	3667	1074	6487	370	3571	940
741	IC0474410	111	484	78	1291	108	620	99	946	709.1	315	1111	1253	4042	374	1954	835	641.7	532	3111	1168	6872	217	3542	958
742	IC0474411	107	738	86	1068	122	171	105	523	711.2	286	1389	1109	3748	568	1949	840	380.6	1204	3833	1024	7132	115	3782	825
743	IC0474412	119	206	79	1280	112	436	103	648	628.9	601	2056	612	4188	290	2291	374	501.7	989	3056	1173	6828	233	3462	996
744	IC0474413	120	157	74	1329	129	56	108	316	694.3	336	1444	1068	3669	619	1936	866	536.3	873	3000	1187	7189	100	3575	934
745	IC0474415	119	208	82	1191	119	252	107	398	486.6	1134	1389	1113	3486	728	1787	1050	484.4	1057	3889	1013	6679	294	3684	880
746	IC0474416	120	167	92	882	115	364	109	250	629.5	592	1111	1236	3530	701	1757	1080	467.1	1086	5167	790	7320	53	4318	548
747	IC0474418	122	104	86	1072	98	932	102	714	628.7	610	944	1316	3307	836	1627	1220	328.7	1251	6333	580	7083	132	4582	440
748	IC0474419	146	5	85	1127	60	1380	97	1089	721.9	247	1889	725	3389	791	2000	763	596.9	702	3222	1141	7359	44	3726	856
749	IC0474420	140	7	91	913	102	843	111	158	428.2	1246	1389	1104	3787	535	1868	956	540.5	862	2667	1238	6142	553	3116	1164
750	IC0474423	121	130	92	896	117	317	110	217	564.4	816	2389	387	3264	865	2072	653	632.2	549	1944	1335	6227	508	2935	1236
751	IC0474424	98	1172	74	1327	138	21	103	643	628.7	620	2000	643	3621	640	2083	636	628.9	568	11556	93	6184	527	6123	86
752	IC0474425	95	1215	105	281	103	786	101	784	650.1	520	1278	1152	2931	1090	1620	1225	689.6	387	6667	529	6371	435	4576	442
753	IC0474426	110	545	84	1137	112	459	102	720	525.5	1025	2389	388	4576	156	2497	178	694.3	363	8444	300	6977	168	5372	208
754	IC0474427	121	126	88	1014	123	120	111	166	603.4	685	1167	1214	4137	315	1969	810	484.4	1045	3222	1147	6366	440	3358	1039
755	IC0474429	120	152	88	1020	111	493	106	425	545	921	1056	1268	4091	346	1897	914	501.7	997	2222	1300	7101	125	3275	1088
756	IC0474434	109	581	84	1141	92	1076	95	1170	369.8	1308	1056	1273	3524	711	1650	1195	432.5	1139	3556	1093	7046	145	3678	884
757	IC0474435	113	342	82	1193	99	888	98	997	671.5	423	1167	1220	4114	329	1984	779	578.2	726	4333	941	7102	124	4005	705
758	IC0474436	113	333	82	1189	97	960	97	1056	608	661	1833	760	4121	325	2187	500	484.4	1043	4667	866	6901	200	4017	697
759	IC0474437	121	144	76	1314	85	1215	94	1209	486.6	1133	1444	1067	3994	401	1975	799	467.1	1097	3500	1106	6096	572	3354	1045
760	IC0474438	103	1026	83	1158	98	918	95	1177	689.6	371	1944	682	2842	1152	1825	1014	486.6	1019	4778	846	4798	1090	3354	1046
761	IC0474440	107	741	104	324	112	466	108	323	525.5	1033	1000	1287	3293	843	1606	1235	422.6	1163	4556	893	5070	991	3349	1051
762	IC0474441	112	418	87	1050	130	47	110	222	650.1	511	1278	1165	5338	19	2422	236	629.5	564	5389	754	7181	102	4400	519
763	IC0474443	111	442	86	1089	78	1318	92	1272	650.5	501	1222	1194	3478	733	1784	1053	613	615	2944	1196	6395	418	3317	1071
764	IC0474444	109	592	82	1188	93	1048	95	1180	545	938	1000	1297	3785	538	1777	1057	577.9	732	1722	1356	7227	88	3176	1135
765	IC0474448	103	964	105	306	129	62	112	130	625.4	629	1111	1228	4197	284	1978	793	689.6	392	5611	722	6079	579	4127	638
766	IC0474450	91	1295	111	129	113	412	105	520	540.3	978	1111	1225	2680	1246	1444	1310	767.4	214	3611	1083	4227	1303	2869	1256
767	IC0474453	83	1373	94	784	115	349	97	1054	564.4	876	1000	1291	5398	14	2321	348	628.7	579	6222	614	6792	245	4548	453
768	IC0474454	109	575	83	1182	78	1320	90	1304	661.8	449	1278	1168	4115	328	2018	739	501.7	986	2278	1291	6038	602	2939	1233



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
769	IC0474455	121	142	63	1383	75	1339	86	1349	467.1	1182	944	1322	3669	621	1694	1148	467.1	1099	4333	944	7478	11	4093	654
770	IC0474456	108	628	71	1360	85	1213	88	1332	684	382	944	1320	3409	775	1679	1161	449.8	1103	2833	1216	6353	449	3212	1112
771	IC0474457	110	507	96	686	89	1156	98	996	603.4	705	2278	451	3719	589	2200	487	689.6	373	4167	968	6816	237	3891	766
772	IC0474460	110	530	91	922	82	1259	94	1195	672.7	414	2556	311	3280	854	2169	530	711.2	316	8500	285	5726	782	4979	315
773	IC0474462	108	658	98	583	107	659	104	561	545	940	1556	954	2622	1264	1574	1257	650.5	491	2889	1202	4122	1340	2554	1327
774	IC0474463	102	1064	95	714	112	468	103	656	603.4	730	1389	1093	4299	245	2097	618	603.4	665	8722	264	5457	900	4928	323
775	IC0474464	115	313	102	416	76	1335	98	1042	694.3	337	2778	205	3695	602	2389	266	6726.6	2	3722	1051	6094	574	5514	174
776	IC0474465	132	28	100	501	83	1248	105	526	369.8	1301	3000	138	3723	585	2364	299	447.7	1125	4500	899	5601	844	3516	971
777	IC0474466	105	886	101	455	98	947	101	773	564.4	850	3111	109	3558	682	2411	245	545	845	10500	140	6395	417	5813	122
778	IC0474467	113	330	107	238	110	553	110	218	603.4	692	1722	827	4010	392	2112	598	603.4	661	5944	651	5510	891	4019	696
779	IC0474468	103	974	81	1225	104	756	96	1125	661.8	460	1444	1064	3823	506	1976	796	694.3	356	2500	1261	5662	812	2952	1229
780	IC0474470	106	798	111	134	106	692	108	329	709.1	320	1278	1147	3756	559	1914	892	564.4	753	6222	612	5720	785	4169	613
781	IC0474472	112	422	98	599	94	1025	101	765	628.7	612	2333	419	3727	582	2230	450	555.9	813	3389	1119	7271	71	3739	848
782	IC0474473	111	438	85	1120	90	1135	95	1160	525.5	1023	1167	1218	3474	735	1722	1114	501.7	1001	2778	1224	6781	250	3354	1047
783	IC0474474	107	714	79	1274	69	1356	85	1360	689.6	366	1778	812	4031	380	2166	533	1051	41	2833	1207	6366	441	3417	1011
784	IC0474476	103	1013	80	1262	91	1114	91	1283	650.1	519	1278	1172	4145	309	2024	727	603.4	650	1722	1355	7420	26	3249	1101
785	IC0474477	84	1360	117	49	111	480	104	610	628.9	609	1389	1072	4101	339	2040	702	661.8	445	5944	654	6599	328	4402	517
786	IC0474478	104	899	115	68	122	147	114	96	694.3	346	1944	646	4429	197	2356	315	711.2	310	6444	558	6880	214	4679	394
787	IC0474479	92	1263	105	275	105	718	101	799	486.6	1152	2333	401	4307	238	2376	281	590.1	712	5333	757	5807	729	3910	755
788	IC0474480	104	935	82	1210	68	1359	85	1362	564.4	855	944	1317	4196	286	1902	909	953.7	79	2111	1318	6536	348	3200	1119
789	IC0474481	108	622	84	1143	102	826	98	1012	525.5	1030	1222	1195	3352	807	1700	1139	759.1	240	2556	1254	6565	340	3293	1084
790	IC0474484	119	192	101	474	118	273	113	116	721.9	249	2333	412	3960	423	2338	332	564.4	746	6389	566	6405	409	4453	496
791	IC0474485	96	1203	96	667	120	211	104	588	428.2	1259	2278	450	2922	1101	1876	944	603.4	687	5111	796	4198	1312	3304	1079
792	IC0474487	102	1053	101	462	105	734	103	680	603.4	729	2500	329	5026	65	2710	75	711.2	321	3333	1125	6760	264	3602	921
793	IC0474488	108	661	102	422	105	732	105	527	545	941	2556	301	3619	645	2240	434	506.1	960	5389	751	5651	817	3849	793
794	IC0474490	116	279	83	1172	63	1367	87	1343	506.1	1084	1111	1247	3408	776	1675	1168	525.5	931	3833	1027	7165	107	3841	798
795	IC0474491	118	231	81	1242	82	1264	94	1230	625.4	624	1500	1023	3873	476	1999	764	311.4	1267	6222	610	6209	516	4248	581
796	IC0474492	107	780	91	912	70	1353	89	1311	564.4	845	1056	1266	3896	462	1839	989	759.1	239	4722	860	7457	16	4313	550
797	IC0474493	106	822	90	974	60	1382	85	1357	540.3	974	1111	1238	4065	363	1905	907	1051	46	3667	1075	6227	507	3648	902
798	IC0474494	105	881	103	390	89	1153	99	954	369.8	1317	2333	407	3098	954	1934	869	603.4	691	7944	353	6340	456	4963	317
799	IC0474495	111	433	84	1153	73	1345	89	1316	630.6	579	1833	758	4103	337	2189	498	681.2	407	2611	1243	7425	24	3572	936
800	IC0474497	103	961	106	255	107	681	105	501	671.5	425	2333	400	3847	493	2284	379	6726.6	4	9611	197	5640	821	7326	16
801	IC0474499	108	617	94	800	118	280	106	412	711.2	281	2222	497	3741	575	2225	456	545	828	6889	488	5590	853	4341	543
802	IC0474500	95	1231	106	257	122	156	108	332	545	964	1500	991	4142	310	2062	672	603.4	679	4944	817	6639	309	4062	666
803	IC0474501	115	308	106	274	112	440	111	163	564.4	825	1611	919	3512	717	1896	917	694.3	359	7889	363	5333	925	4639	409
804	IC0474503	104	939	85	1107	81	1288	90	1303	560.6	883	2111	564	3853	491	2175	522	739.6	266	4500	900	6878	216	4039	686
805	IC0474504	119	193	90	956	122	155	110	188	603.4	687	1389	1105	3111	945	1701	1136	369.8	1221	6611	534	4948	1027	3976	723
806	IC0474505	87	1332	93	836	115	352	98	994	486.6	1153	1556	961	3296	839	1779	1055	564.4	788	4333	939	5702	793	3533	963
807	IC0474506	113	370	80	1247	81	1280	91	1278	657.4	469	1333	1139	4016	390	2002	758	934.3	91	2500	1265	6361	445	3265	1093
808	IC0474507	105	876	80	1259	109	587	98	1016	689.6	369	2000	642	2372	1313	1687	1154	486.6	1018	3056	1175	4078	1358	2540	1329
809	IC0474508	109	583	78	1282	117	298	101	755	415.2	1272	1222	1198	3409	774	1682	1159	914.8	106	6500	549	6605	325	4673	397
810	IC0474509	108	636	82	1201	61	1373	84	1363	484.4	1167	1333	1138	3064	981	1627	1219	564.4	789	5722	699	7455	17	4581	441
811	IC0474510	85	1348	87	1065	104	751	92	1266	525.5	1058	2778	221	3803	523	2369	290	721.9	292	6667	524	6132	556	4507	475
812	IC0474511	109	589	92	883	66	1365	89	1320	553.6	911	1944	674	3847	495	2115	590	1148.4	28	4556	884	7108	122	4271	574
813	IC0474512	105	889	79	1279	88	1162	90	1296	632.2	564	1556</													



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
819	IC0474776	123	100	115	70	123	124	120	19	578.2	786	2111	540	2063	1372	1584	1249	380.6	1209	8278	320	4038	1370	4232	587
820	IC0474778	87	1321	104	344	128	73	106	417	934.3	80	1056	1260	1980	1377	1323	1346	328.7	1241	2500	1266	6565	341	3131	1160
821	IC0474782	103	1023	113	91	114	380	110	206	992.6	50	1111	1224	1780	1380	1295	1353	294.1	1289	4444	915	6970	173	3903	760
822	IC0474786	91	1294	109	181	127	81	109	244	739.6	229	1500	989	3953	428	2064	668	294.1	1290	5167	787	5599	846	3687	878
823	IC0474789	100	1103	105	286	90	1126	98	984	484.4	1174	2333	402	3487	726	2102	610	899.7	117	8167	331	5712	790	4926	324
824	IC0474791	94	1249	112	122	110	537	105	505	992.6	52	3333	70	3791	532	2706	79	242.2	1321	4167	964	6658	301	3689	876
825	IC0474801	103	963	96	670	110	541	103	650	1090	20	778	1350	2154	1352	1341	1341	812.8	172	7944	359	4100	1347	4286	567
826	IC0474802	105	894	100	490	81	1277	95	1146	934.3	75	1444	1043	2948	1071	1776	1059	397.9	1188	5111	800	4559	1171	3356	1042
827	IC0474821	87	1325	96	692	77	1322	87	1345	558.8	900	1778	790	3046	998	1794	1043	847.8	141	8167	332	5356	921	4790	363
828	IC0474844	107	762	101	460	132	34	113	103	875.9	115	2944	150	3385	793	2402	250	836.9	148	5444	731	4865	1060	3715	862
829	IC0474867	99	1157	97	659	90	1142	95	1164	628.7	618	1611	927	4359	219	2200	489	674.7	421	4833	836	5784	746	3764	836
830	IC0474872	107	731	100	495	108	641	105	522	953.7	62	1722	833	3196	897	1957	831	525.5	908	5000	811	4696	1122	3407	1020
831	IC0474874	94	1253	95	725	110	535	100	882	525.5	1053	1833	748	4939	84	2433	230	830.4	158	4556	886	7032	150	4139	631
832	IC0474882	105	849	96	702	98	942	99	918	689.6	367	1944	668	3604	650	2079	643	778.5	207	3500	1100	6437	391	3572	937
833	IC0474899	110	524	96	683	103	802	103	663	650.1	512	2056	591	3712	591	2139	559	674.7	419	4833	833	5844	711	3784	824
834	IC0474906	108	690	85	1110	121	191	105	549	486.6	1142	611	1375	3968	417	1689	1153	578.2	729	1833	1347	6893	206	3102	1172
835	IC0474912	126	50	96	690	97	970	106	436	655.7	479	1500	999	4125	322	2094	624	350.3	1235	10389	144	5865	698	5535	169
836	IC0474927	108	648	118	38	130	48	119	28	1012.1	40	1667	865	3956	424	2212	469	812.8	173	7667	381	5324	930	4601	431
837	IC0474929	107	773	110	140	124	101	114	89	564.4	844	1722	821	3459	746	1915	888	674.4	428	2500	1258	5832	716	3002	1212
838	IC0474950	113	362	94	788	117	304	108	303	689.6	357	1389	1097	2925	1099	1668	1174	934.3	90	4722	857	4474	1214	3377	1033
839	IC0474953	105	848	103	381	110	561	106	451	506.1	1095	2222	484	4025	385	2251	418	484.4	1056	5667	703	6969	174	4373	534
840	IC0474956	108	696	105	280	82	1257	98	982	625.4	625	2667	253	3021	1010	2104	607	674.7	422	3889	1008	6059	590	3541	961
841	IC0474970	113	352	99	567	107	664	106	430	934.3	69	2333	417	3734	579	2334	334	190.3	1355	6278	589	7373	38	4614	425
842	IC0475002	105	874	104	352	113	423	107	359	645.1	527	2500	325	2673	1249	1939	856	759.1	231	5833	674	4522	1188	3705	867
843	IC0475007	107	761	109	183	102	810	106	454	369.8	1312	2667	250	4069	358	2368	291	628.9	571	16889	6	5861	699	7793	9
844	IC0475012	107	710	100	525	106	693	104	581	607.9	675	2444	357	4895	88	2649	96	603.4	659	6944	478	6234	500	4594	435
845	IC0475022	103	1006	108	210	120	227	110	204	628.7	617	1722	824	4025	384	2125	579	467.1	1089	4167	970	5990	626	3541	960
846	IC0475038	110	494	105	283	111	486	109	255	603.4	704	3333	72	3062	982	2333	336	486.6	1022	20167	3	5783	748	8812	2
847	IC0475055	91	1286	96	663	114	390	100	836	689.6	373	1167	1205	4667	130	2174	523	577.9	731	2833	1214	6167	536	3193	1124
848	IC0475057	100	1131	112	115	121	176	111	154	525.5	1049	2278	438	2858	1142	1887	929	628.7	580	12167	77	4987	1012	5927	109
849	IC0475059	108	688	101	473	114	382	108	336	650.5	504	1778	782	3974	411	2134	567	415.2	1171	9656	195	6659	300	5577	161
850	IC0475064	110	506	113	90	115	345	113	113	709.1	316	2722	225	5009	67	2813	39	721.9	287	13533	43	7275	69	7177	24
851	IC0475072	110	522	91	905	111	512	104	600	711.2	278	722	1356	5446	10	2293	370	642.3	523	3222	1150	6897	202	3587	931
852	IC0475073	100	1132	104	358	95	1015	99	902	590.1	770	1889	700	3393	789	1957	830	564.4	765	4667	865	6815	238	4015	698
853	IC0475074	119	203	97	654	106	700	107	368	934.3	66	1389	1092	4058	366	2127	576	155.7	1367	2500	1262	7028	153	3228	1110
854	IC0475085	103	1027	108	199	86	1201	99	941	525.5	1046	2611	281	3399	786	2179	515	449.8	1109	7667	375	6303	475	4806	360
855	IC0475094	105	878	104	367	111	506	106	411	506.1	1098	2944	149	3931	439	2460	207	555.9	814	7350	425	6459	385	4788	364
856	IC0475095	91	1299	110	150	104	752	102	748	1148.4	17	1444	1031	1856	1379	1483	1290	739.6	261	4389	923	6433	393	3854	789
857	IC0475112	123	90	95	719	105	744	108	325	564.4	812	1778	792	2902	1116	1748	1089	1051	44	5944	650	4826	1073	3940	743
858	IC0475120	112	401	90	978	83	1229	95	1175	564.4	830	1556	967	2941	1078	1687	1155	564.4	769	4722	855	4503	1195	3263	1094
859	IC0475124	96	1199	103	393	115	363	105	555	630.6	586	1389	1083	3126	937	1715	1121	953.7	77	8500	293	6003	618	5152	271
860	IC0475127	118	239	106	266	95	1000	106	423	689.6	356	1556	949	2929	1094	1725	1108	992.6	67	5389	753	6324	465	4235	583
861	IC0475143	112	406	112	120	101	848	108	282	486.6	1138	2722	226	2778	1198	1996	769	545	853	21611	1	4278	1283	8811	3
862	IC0475145	100	1097	85	1115	112	439	99	940	560.6	886	1056	1271	3885	467	1834	1002	525.5	929	2500	1267	6398	414	3141	1156
863	IC0475150	102	1051	88	1035	116	334	102	717	666.2	439	2000	637	2984	1038	1883	934	830.4	154	4483	908	4032	1373	3115	1165
864	IC0475154	124	83	92	902	105	708	107	382	415.2	1269	1222	1190	2589	1276	1409	1318	175.2	1366	5500	726	4089	1351	3255	1098
865	IC0475156	109	596	120	33	109	575	113	118	629.5	595	2333	391	3517	715	2160	538	525.5	922	15561	14	5017	1005	7035	30
866	IC0475162	100	1116	123	18	90	1116	104	579	632.2	570	1833	730	3582	664	2016	740	778.5	209	6889	489	5704	791	4457	495
867	IC0475164	102	1046	114	78	104	754	107	404	449.8	1218	3333	69	4780	114	2854	28	640.1	539	5889	657	6258	489	4262	579
868	IC0475167	122	108	102	425	122	170	115	60	484.4	1157	1778	780	2730	1221	1664	1178	350.3	1237	10156	162	4230	1300	4912	329



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
869	IC0475170	108	667	103	389	153	5	121	16	578.2	791	2278	444	4869	99	2575	133	657.4	463	6056	628	6814	239	4509	474
870	IC0475184	108	677	96	707	99	892	101	797	432.5	1239	1333	1132	2888	1125	1551	1264	545	857	3811	1029	4794	1093	3050	1194
871	IC0475187	103	973	97	616	132	32	111	167	276.8	1363	1111	1232	1256	1386	881	1375	622.8	603	7222	444	4016	1376	3954	735
872	IC0475202	121	148	85	1121	99	891	102	750	553.6	905	1944	679	4049	372	2182	514	564.4	775	7678	373	7273	70	5172	267
873	IC0475225	83	1363	96	678	83	1251	87	1342	553.6	916	1500	998	2910	1110	1655	1191	711.2	323	9389	216	4674	1132	4925	325
874	IC0475226	89	1313	95	737	71	1351	85	1358	415.2	1280	1778	793	4000	396	2064	667	590.1	713	5194	783	7435	22	4407	513
875	IC0475231	107	723	93	837	90	1134	96	1104	732.8	239	1722	848	3411	773	1955	834	533.9	896	4722	854	4950	1026	3402	1025
876	IC0475250	116	285	91	941	92	1083	99	910	632.2	554	1556	965	3216	888	1801	1038	545	841	8444	301	4591	1159	4527	466
877	IC0475264	117	242	104	357	100	870	107	374	709.1	313	2056	581	3835	502	2200	488	847.8	138	5833	677	5231	958	3971	724
878	IC0475265	108	700	115	64	93	1058	105	509	603.4	717	2833	174	3124	938	2187	503	759.1	235	6667	522	4404	1237	3943	741
879	IC0475267	109	558	107	234	118	277	111	150	739.6	224	2056	576	1890	1378	1562	1261	506.1	945	5444	741	5098	986	3683	882
880	IC0475294	112	412	103	394	124	111	113	112	934.3	73	2389	376	1982	1376	1768	1069	447.7	1114	6222	604	4908	1041	3859	786
881	IC0475298	108	704	93	830	107	669	103	683	524.6	1066	1667	889	2249	1339	1480	1292	369.8	1226	10111	164	4599	1154	5027	305
882	IC0475300	115	319	122	20	105	731	114	86	328.7	1331	1056	1258	3041	1001	1475	1298	501.7	1012	4056	990	5216	962	3258	1096
883	IC0475302	111	429	109	163	109	597	110	220	603.4	698	2333	395	3756	558	2231	448	244.7	1319	12811	59	5658	814	6238	72
884	IC0475307	119	191	110	139	98	945	109	239	501.7	1109	2889	161	3707	595	2366	298	882.4	124	8500	282	6651	304	5344	214
885	IC0475310	112	408	96	701	82	1258	97	1100	645.1	525	2556	308	5035	62	2745	58	650.5	485	13894	35	6379	428	6975	33
886	IC0475316	87	1328	100	516	112	454	99	906	536.3	1009	1278	1156	3143	929	1652	1193	968.9	71	3500	1108	5233	957	3234	1107
887	IC0475325	91	1292	109	168	118	266	106	442	328.7	1342	1889	690	3331	819	1850	977	506.1	970	4033	991	4826	1072	3122	1162
888	IC0475332	83	1381	98	607	92	1070	91	1286	689.6	379	2667	268	3612	647	2323	345	545	832	11961	83	6430	395	6312	64
889	IC0475348	116	286	88	1040	96	977	100	867	484.4	1159	2833	189	4028	382	2449	219	467.1	1076	5889	658	5528	883	3961	729
890	IC0475351	112	425	71	1357	85	1218	89	1315	536.3	989	1389	1121	3058	985	1661	1184	292	1298	2833	1212	4712	1116	2612	1319
891	IC0475352	111	443	105	308	105	720	107	379	447.7	1227	1889	698	3047	996	1795	1042	506.1	965	6278	595	4330	1264	3705	868
892	IC0475354	91	1281	100	515	120	215	104	624	564.4	872	2500	330	3680	610	2248	422	311.4	1271	7044	466	7269	72	4875	341
893	IC0475355	94	1256	99	542	101	845	98	1006	311.4	1357	1500	996	3823	507	1878	941	6726.6	10	4561	879	6627	317	5972	101
894	IC0475357	105	862	83	1173	83	1246	90	1302	155.7	1382	1444	1061	1568	1384	1056	1373	447.7	1127	7611	393	5918	673	4659	400
895	IC0475361	132	33	118	44	116	331	122	12	759.1	175	1611	915	5453	8	2608	112	642.3	522	8500	292	7301	59	5481	180
896	IC0475364	118	215	95	735	112	464	108	287	536.3	981	3222	93	3350	811	2370	289	486.6	1024	7989	348	5389	916	4621	422
897	IC0475369	107	751	106	269	86	1206	99	911	617.1	648	2833	177	5477	6	2976	16	506.1	952	9544	206	6774	253	5608	154
898	IC0475385	113	366	101	449	98	943	104	602	506.1	1090	2667	260	2964	1053	2046	693	506.1	963	11156	114	5935	660	5866	115
899	IC0475390	91	1297	94	766	115	353	100	857	873.5	117	2333	425	2940	1079	2049	690	661.8	437	4383	925	5947	652	3664	897
900	IC0475391	106	834	104	365	122	153	111	179	817.5	140	2667	256	4375	213	2620	107	190.3	1356	6833	500	5607	840	4210	598
901	IC0475398	118	224	105	313	96	982	106	428	739.6	217	1500	993	4888	92	2376	280	564.4	745	9889	184	6084	577	5512	177
902	IC0475403	137	21	98	600	81	1286	105	515	1020.8	32	1667	878	4084	348	2257	410	294.1	1288	7944	357	7075	136	5105	283
903	IC0475407	94	1234	103	399	102	839	99	908	661.8	464	3111	108	4355	222	2709	76	556.1	811	10656	132	6880	215	6031	91
904	IC0475410	120	169	93	825	105	719	106	447	1304.1	3	1500	1004	2974	1043	1926	873	875.9	126	7333	431	4838	1069	4349	539
905	IC0475416	105	855	94	756	72	1350	90	1299	224.9	1372	889	1329	1685	1383	933	1374	709.1	344	6522	542	7259	76	4830	353
906	IC0475417	103	1030	98	589	91	1106	97	1060	525.5	1047	2278	448	2935	1084	1913	894	311.4	1272	6567	535	4128	1335	3669	891
907	IC0475420	113	363	101	472	121	179	112	136	363.3	1325	722	1353	2515	1293	1200	1363	711.2	330	3833	1028	4015	1377	2853	1264
908	IC0475423	103	976	83	1159	107	679	98	1038	328.7	1337	1056	1275	5218	40	2201	485	628.9	572	2433	1273	6698	287	3253	1099
909	IC0475425	102	1056	102	423	91	1096	98	985	311.4	1354	833	1337	3430	759	1525	1277	694.3	367	7056	465	4892	1045	4214	595
910	IC0475435	106	817	112	109	123	123	114	90	545	948	2556	299	3744	571	2282	383	655.7	472	12978	54	7499	1	7044	29
911	IC0475444	106	797	101	480	110	554	105	490	369.8	1314	2389	379	5000	69	2586	126	415.2	1179	13667	40	7233	87	7105	26
912	IC0475469	83	1378	100	519	129	52	104	604	711.2	299	2667	262	3459	745	2279	385	524.6	938	12944	56	6232	503	6567	49
913	IC0475474	105	859	99	535	137	25	114	95	709.1	321	3000	139	3632	634	2447	220	266.9	1309	9600	201	7106	123	5658	145
914	IC0475479	92	1265	99	555	91	1091	94	1212	645.1	530	944	1306	3165	910	1585	1247	428.2	1143	5489	728	6040	601	3986	718
915	IC0475500	106	836	101	451	107	661	105	536	525.5	1036	2222	488	2841	1153	1863	962	1020.8	49	8056	344	6234	501	5103	284
916	IC0475506	92	1262	112	110	108	648	104	606	428.2	1261	1556	948	3919	447	1968	815	501.7	1009	6833	507	6601	326	4645	407
917	IC0475507	107	763	93	820	100	884	100	873	721.9	253	1500	1003	4880	94	2367	294	953.7	74	5167	788	6478	375	4199	604
918	IC0475526	111	487	89	1006	96	990	98	979	1148.4	13	1667	896	4397	209	2404	249	350.3	1234	7383	424	5860	700	4531	461



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
919	IC0475529	104	909	90	980	114	373	103	681	588.2	774	3111	115	4242	272	2647	97	622.8	595	8383	313	6453	388	5153	270
920	IC0475534	108	663	116	52	122	144	115	52	559	894	2000	615	3775	543	2111	600	674.7	424	5444	742	5548	874	3889	767
921	IC0475547	120	163	85	1114	96	985	100	832	506.1	1080	1889	723	3281	852	1892	921	447.7	1124	4000	994	7007	159	3818	811
922	IC0475550	119	195	88	1019	86	1199	98	1026	447.7	1224	2056	607	3239	875	1914	893	369.8	1227	2833	1206	4646	1136	2616	1316
923	IC0475555	108	672	92	866	109	603	103	660	632.2	561	3667	43	4063	364	2787	48	564.4	758	12611	62	5563	868	6246	69
924	IC0475565	111	475	103	403	105	727	106	435	759.1	192	2667	258	3547	689	2324	343	759.1	225	3889	1009	5162	971	3270	1091
925	IC0475566	83	1369	108	189	110	531	100	820	629.5	599	2333	396	4356	221	2440	226	511.6	941	11267	107	5856	703	5878	113
926	IC0475570	105	856	105	290	95	1003	102	745	559.5	889	2333	404	3599	654	2164	536	570.9	740	7556	399	4713	1114	4280	568
927	IC0475581	96	1211	80	1243	111	490	96	1131	622.8	639	1389	1114	4187	291	2066	662	525.5	924	2472	1269	5730	778	2909	1244
928	IC0475601	107	709	87	1047	104	747	99	914	506.1	1093	2722	242	2772	1201	2000	762	622.8	600	5194	782	4866	1059	3561	945
929	IC0475602	111	470	82	1209	89	1152	94	1216	650.5	502	2056	611	5032	63	2579	131	533.9	900	5083	802	6520	357	4046	679
930	IC0475610	87	1333	106	268	107	663	100	863	721.9	257	2444	354	4699	125	2622	105	266.9	1308	15811	11	6737	276	7605	13
931	IC0475613	106	823	89	1000	75	1341	90	1306	428.2	1256	2056	605	4286	250	2257	411	244.7	1320	5833	678	7488	9	4522	469
932	IC0475614	103	966	84	1136	99	905	95	1157	378.2	1299	2111	565	3213	890	1901	910	486.6	1029	3556	1086	4871	1057	2971	1221
933	IC0475618	104	943	91	945	90	1141	95	1182	672.7	417	2278	463	4138	314	2363	300	533.9	899	6444	555	5638	823	4205	602
934	IC0475619	113	390	96	682	92	1078	100	847	759.1	190	1833	746	3673	615	2088	627	330.9	1238	10006	168	6415	402	5584	159
935	IC0475627	103	965	82	1212	101	852	95	1155	921.8	86	1000	1299	3152	920	1691	1150	739.6	263	2756	1225	4347	1255	2614	1317
936	IC0475632	113	393	91	942	104	753	103	678	934.3	71	667	1363	4894	89	2165	535	253	1317	2889	1205	6567	338	3236	1104
937	IC0475643	129	49	96	696	97	962	107	363	759.1	179	2333	421	3004	1024	2032	712	292	1296	11989	82	5624	831	5968	102
938	IC0475653	117	260	111	136	79	1316	102	712	545	926	2056	574	2706	1236	1769	1068	400.4	1187	11722	88	4206	1310	5443	191
939	IC0475657	113	326	91	934	54	1388	86	1351	767.4	171	1167	1210	3863	487	1932	871	603.4	633	4556	892	7019	157	4059	668
940	IC0475660	110	527	102	439	119	248	110	201	603.4	706	1056	1263	2965	1052	1541	1267	617.1	608	8544	280	5717	786	4960	319
941	IC0475664	109	576	103	385	97	957	103	652	545	936	2222	485	3043	1000	1937	862	525.5	930	5444	738	4194	1314	3388	1032
942	IC0475666	99	1164	114	72	121	202	111	145	700.7	330	1833	733	3356	803	1963	821	224.9	1329	8333	316	5603	842	4720	386
943	IC0475668	108	691	93	803	93	1046	98	999	694.9	333	1778	798	3294	841	1922	878	486.6	1016	6500	546	4887	1047	3958	731
944	IC0475670	137	23	96	664	98	929	110	187	642.3	533	944	1310	3559	680	1715	1120	214.1	1344	2406	1274	6387	422	3002	1211
945	IC0475674	108	701	86	1081	119	235	104	570	564.4	838	2556	313	2852	1147	1991	773	536.3	880	3722	1052	4599	1153	2953	1228
946	IC0475680	111	456	96	671	97	953	101	761	759.1	191	1833	744	4023	386	2205	477	467.1	1063	6711	520	5523	887	4234	584
947	IC0475689	109	550	104	370	89	1148	101	816	596.9	748	1722	830	3122	940	1814	1023	622.8	594	4889	826	6907	195	4140	630
948	IC0475694	108	610	106	254	112	434	109	256	694.3	343	2000	620	5394	15	2696	83	489.4	1014	4500	902	7023	156	4004	706
949	IC0475695	99	1147	90	966	118	291	102	702	411.8	1281	1556	966	2072	1371	1346	1337	847.8	142	3933	1006	4003	1387	2928	1240
950	IC0475697	109	606	96	676	92	1066	99	934	817.5	138	1833	745	3525	708	2059	676	603.4	632	9478	212	7223	90	5768	131
951	IC0475698	114	324	101	476	97	966	104	614	408.7	1284	1889	702	4312	233	2203	480	428.2	1154	9556	203	5812	725	5265	236
952	IC0475699	132	30	94	778	99	890	108	275	525.5	1013	1222	1188	3592	657	1780	1054	630.3	561	3111	1166	7419	27	3720	858
953	IC0475703	103	1028	90	961	98	933	97	1083	1051	29	2167	528	1525	1385	1581	1252	311.4	1263	6867	494	4691	1124	3956	732
954	IC0475708	108	643	102	420	98	923	103	668	720.2	266	1500	994	5072	56	2431	232	467.1	1064	7078	459	6144	550	4563	445
955	IC0475716	103	1019	91	940	99	912	97	1052	369.8	1318	2500	342	4017	389	2296	366	600.6	700	4250	952	6482	374	3778	829
956	IC0475718	109	554	94	782	93	1043	99	967	484.4	1165	3167	100	2898	1118	2183	512	467.1	1098	8867	255	4337	1261	4557	447
957	IC0475754	102	1035	95	711	92	1067	96	1103	694.3	349	2056	595	3856	490	2202	483	432.5	1130	3667	1070	6736	278	3612	914
958	IC0475755	106	827	105	314	106	702	105	494	486.6	1147	3444	62	2874	1131	2268	396	559.5	801	6222	603	4025	1375	3602	919
959	IC0475757	107	779	91	947	122	168	106	413	525.5	1034	2500	343	2916	1106	1981	785	242.2	1323	10256	154	4924	1033	5141	276
960	IC0475761	98	1181	93	817	118	286	103	662	588.2	781	2222	498	3279	855	2030	719	415.2	1174	4333	932	4962	1023	3237	1103
961	IC0475763	110	501	93	829	96	986	100	893	415.2	1271	2333	427	3865	482	2205	479	415.2	1178	9056	243	5025	1000	4832	352
962	IC0475766	110	510	81	1238	134	26	108	298	713.5	271	1667	903	5319	23	2566	138	674.7	417	5722	696	6406	408	4268	577
963	IC0475773	103	985	107	219	108	637	106	446	608	671	1667	871	2955	1064	1743	1092	484.4	1044	8500	291	4152	1329	4379	531
964	IC0475775	106	800	91	931	116	337	104	582	661.8	453	2278	461	3093	959	2011	747	259.5	1312	8422	303	4146	1333	4276	570
965	IC0475780	111	451	85	1130	98	921	98	1019	720.2	262	2333	432	4470	186	2508	170	224.9	1328	4056	984	6493	367	3591	926
966	IC0475784	112	395	104	330	113	422	110	221	558.8	895	2611	284	4071	354	2414	242	484.4	1052	10033	167	5571	862	5363	209
967	IC0475787	110	534	83	1168	98	926	97	1076	640.1	547	1500	1017	3452	748	1864	960	934.3	96	4156	973	6568	337	3886	771
968	IC0475788	103	969	94	771	94	1020	97	1071	841.2	124	1389	1096	4941	82	2390	263	484.4	1035	6056	630	7340	49	4627	416



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
969	IC0475789	89	1305	91	919	108	617	96	1119	603.4	740	3167	101	5199	44	2990	15	467.1	1068	6028	631	7378	33	4624	419
970	IC0475791	85	1349	61	1384	112	448	86	1350	629.5	597	1000	1302	3996	400	1875	945	558.8	806	1833	1346	5923	667	2772	1282
971	IC0475793	108	645	72	1348	68	1360	83	1369	467.1	1190	1667	908	4262	262	2132	568	432.5	1138	1833	1345	5762	763	2676	1303
972	IC0475795	105	840	70	1365	108	623	94	1194	591.2	762	1444	1071	4483	181	2173	526	605.5	629	3556	1090	5727	781	3296	1082
973	IC0475797	83	1366	97	646	98	936	92	1254	467.1	1209	2500	333	5401	13	2789	47	501.7	1007	7611	389	7113	120	5075	291
974	IC0475798	85	1346	99	552	110	550	98	1023	613	658	2778	210	4372	215	2588	125	380.6	1207	7250	440	7067	138	4899	334
975	IC0475802	87	1317	91	915	87	1180	88	1324	577.9	797	2889	169	2603	1274	2023	730	467.1	1094	7556	398	4340	1258	4121	640
976	IC0475813	109	609	92	880	87	1173	96	1122	525.5	1029	2278	458	3327	823	2043	697	242.2	1322	5683	700	6074	585	4000	711
977	IC0475816	125	64	80	1256	76	1332	94	1226	564.4	809	1611	941	1689	1382	1288	1355	121.1	1382	5222	780	6474	376	3939	745
978	IC0475817	89	1306	108	211	103	798	100	884	689.6	374	2611	282	2938	1081	2080	641	645.1	506	10378	146	4438	1229	5154	269
979	IC0475828	117	258	104	356	107	676	109	234	467.1	1199	2722	232	2882	1128	2024	729	363.3	1232	11422	101	4011	1382	5266	235
980	IC0475832	95	1223	98	593	97	972	97	1099	650.1	521	1778	785	2943	1075	1790	1048	422.6	1159	6767	514	4014	1378	3734	851
981	IC0475834	95	1221	94	799	117	324	102	743	661.8	463	3667	42	4111	334	2813	40	689.6	386	5878	671	5611	837	4059	667
982	IC0475837	91	1269	92	900	120	219	101	804	525.5	1054	1667	893	2250	1338	1481	1291	533.9	903	7167	448	6896	203	4866	344
983	IC0475839	107	755	90	982	114	372	104	627	709.1	319	2722	240	5222	39	2884	22	756.3	256	4389	922	6546	347	3897	763
984	IC0475841	91	1291	92	875	96	981	93	1245	564.4	873	1611	931	3653	630	1943	850	289.2	1299	5667	708	6578	333	4178	610
985	IC0475844	107	783	79	1277	101	850	96	1142	525.5	1035	1389	1119	4133	318	2016	741	266.9	1310	3783	1030	6383	424	3478	991
986	IC0475845	103	1033	112	113	101	869	105	502	628.9	605	2889	160	3863	486	2460	208	689.6	389	9278	227	6198	521	5388	202
987	IC0475846	102	1057	101	481	146	8	116	42	993.5	47	1667	874	5207	42	2622	104	657.4	459	9961	172	6339	457	5653	147
988	IC0475851	107	729	97	639	80	1297	95	1185	1051	26	2056	589	3462	741	2190	497	432.5	1128	8039	346	4618	1144	4363	536
989	IC0475856	111	452	88	1018	105	728	101	771	694.3	340	3389	67	2855	1145	2313	351	711.8	307	9183	237	4355	1251	4750	378
990	IC0475860	115	303	92	890	114	386	107	387	852.9	119	2500	339	3002	1027	2118	587	830.4	152	6311	581	4225	1304	3789	823
991	IC0475864	100	1096	100	517	93	1040	98	1040	369.8	1321	1444	1045	1689	1381	1168	1367	732.8	284	8167	333	7065	139	5321	219
992	IC0475866	99	1167	81	1223	109	607	96	1113	628.7	619	2722	245	3322	827	2224	457	711.8	308	3100	1170	4892	1046	2901	1248
993	IC0475868	94	1240	99	568	105	741	99	937	721.9	256	2222	492	3248	873	2064	669	689.6	383	5222	777	5391	914	3768	835
994	IC0475872	96	1208	91	923	118	271	102	746	564.4	867	2111	558	2539	1288	1738	1097	564.4	771	7000	471	4039	1369	3868	780
995	IC0475873	102	1066	93	814	92	1068	96	1132	630.6	583	1833	751	4959	76	2474	195	422.6	1161	8628	272	6765	258	5272	234
996	IC0475880	113	325	101	485	69	1357	94	1205	953.7	60	3000	137	4512	170	2822	38	553.6	816	8567	276	6762	261	5294	225
997	IC0475882	103	989	75	1325	82	1256	87	1344	603.4	725	1944	686	3186	903	1911	898	603.4	664	7722	372	4877	1055	4401	518
998	IC0475884	110	499	90	964	106	688	102	711	564.4	833	1833	755	3444	752	1947	844	756.3	257	9711	193	5899	681	5455	184
999	IC0475888	104	949	105	299	95	1016	101	780	988.2	54	2389	372	3101	951	2159	539	651.4	474	2667	1232	4505	1194	2608	1322
1000	IC0475892	105	858	95	746	116	335	105	507	517.6	1073	2944	151	2800	1187	2087	631	501.7	1002	8778	259	5419	908	4900	333
1001	IC0475896	110	541	87	1056	114	385	104	634	603.4	707	1611	932	2928	1095	1714	1124	600.6	698	5489	727	4123	1338	3404	1023
1002	IC0475898	113	339	99	563	111	521	107	346	426.5	1263	2056	585	4273	255	2252	417	1020.8	51	4194	963	6416	399	3877	775
1003	IC0475914	110	511	95	726	103	797	103	679	545	932	1833	749	2596	1275	1658	1186	756.3	258	3933	1005	4096	1348	2929	1239
1004	IC0475934	104	944	96	703	92	1081	97	1075	681.2	395	1556	955	2608	1269	1615	1228	588.2	715	5144	792	4108	1344	3280	1087
1005	IC0475950	116	287	97	647	105	722	106	463	590.1	764	1500	997	4200	282	2097	619	506.1	954	5889	666	7365	42	4587	439
1006	IC0475959	99	1143	104	323	93	1051	99	956	708.8	326	2667	254	3749	567	2375	283	613	614	5444	734	6685	291	4247	582
1007	IC0475962	112	416	87	1061	90	1139	96	1117	484.4	1162	1444	1058	3729	580	1886	931	328.7	1258	4472	910	6468	379	3756	841
1008	IC0475964	132	32	95	733	111	503	113	120	369.8	1302	2333	423	4039	377	2247	425	289.2	1300	8594	275	5730	779	4871	342
1009	IC0475965	109	590	88	1034	93	1042	97	1097	553.6	912	3167	102	3061	984	2260	407	311.4	1282	5111	794	4807	1083	3410	1018
1010	IC0475966	105	871	97	614	103	781	102	733	564.4	849	2444	358	3793	530	2267	399	378.2	1214	11889	86	5293	940	5853	118
1011	IC0475968	118	222	89	991	83	1241	97	1094	666.2	435	778	1351	3564	677	1669	1172	650.5	483	7444	417	4810	1080	4302	554
1012	IC0475970	95	1217	102	444	150	7	115	56	759.1	202	3000	135	4124	323	2628	102	484.4	1037	9611	196	5624	829	5240	246
1013	IC0475974	107	767	94	752	119	249	10																	



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
1019	IC0475997	84	1353	110	152	99	904	98	1046	628.9	608	2111	542	3837	500	2192	495	689.6	390	8222	326	6373	433	5095	286
1020	IC0476003	113	378	94	769	117	305	108	295	564.4	828	1833	750	2629	1261	1676	1166	378.2	1213	5544	723	4920	1034	3614	913
1021	IC0476011	122	109	85	1124	97	952	101	769	797.1	164	1111	1245	3856	489	1921	879	899.7	107	2111	1317	5786	745	2932	1238
1022	IC0476013	103	999	93	816	99	893	98	988	603.4	728	2111	557	4996	70	2570	136	622.8	593	4478	909	6798	243	3966	727
1023	IC0476015	99	1139	85	1109	97	969	94	1228	991.2	53	1000	1295	4808	109	2266	401	1159.2	24	3722	1067	6308	470	3730	853
1024	IC0476018	102	1063	102	426	100	886	101	781	486.6	1150	1722	831	5187	47	2465	202	533.9	904	8222	329	6865	221	5207	256
1025	IC0476020	103	1022	97	643	107	665	102	695	798	163	1722	842	3542	695	2021	737	415.2	1168	8433	302	5854	705	4901	332
1026	IC0476021	92	1257	85	1111	124	109	100	841	486.6	1151	2222	506	3973	413	2227	453	467.1	1075	9922	176	6170	532	5520	171
1027	IC0476022	122	115	114	82	115	356	117	39	629.5	591	2889	159	4429	198	2649	95	600.6	697	18222	4	5875	692	8233	6
1028	IC0476024	104	929	113	105	89	1149	102	726	525.5	1042	944	1304	3000	1030	1490	1286	467.1	1074	6278	601	4263	1288	3669	889
1029	IC0476025	106	795	104	329	83	1252	98	1043	564.4	846	2667	255	3947	432	2393	260	6726.6	9	13033	53	6415	401	8725	4
1030	IC0476031	84	1355	93	809	112	461	96	1111	607.9	678	1500	1002	1225	1387	1111	1370	311.4	1268	9278	233	6020	615	5203	257
1031	IC0476043	118	238	106	253	94	1031	106	449	674.7	398	2222	481	4169	300	2355	317	397.9	1190	7022	468	6737	277	4719	387
1032	IC0476044	98	1171	81	1237	94	1024	91	1287	536.3	1005	1278	1171	5151	49	2322	347	484.4	1054	7167	453	6783	248	4811	358
1033	IC0476046	102	1070	79	1264	82	1271	88	1337	711.2	290	1833	763	2401	1309	1649	1197	622.8	587	10544	138	4047	1364	5071	292
1034	IC0476055	108	611	94	792	99	902	100	853	590.1	768	1444	1049	3077	966	1704	1134	600.6	699	5333	761	4288	1277	3407	1019
1035	IC0476063	102	1034	99	549	93	1059	98	1020	585.3	783	2000	629	3572	668	2052	682	899.7	113	9611	199	6979	167	5830	120
1036	IC0476066	113	353	99	544	95	1004	102	692	506.1	1088	2833	182	4210	279	2516	167	694.3	366	12167	75	6486	371	6449	53
1037	IC0476068	103	982	92	846	116	343	104	623	564.4	858	1222	1189	4606	147	2131	569	578.3	724	3833	1026	6402	411	3605	917
1038	IC0476074	103	953	82	1220	90	1123	92	1271	603.4	724	1444	1063	3544	693	1864	961	190.3	1358	4361	926	6523	355	3691	874
1039	IC0476077	95	1220	94	798	104	750	98	1044	556.4	901	2056	598	2955	1065	1856	974	501.7	995	7428	418	4827	1071	4252	580
1040	IC0476084	108	678	97	658	100	871	102	753	689.6	365	1333	1129	4912	85	2312	353	600.6	696	3722	1065	6679	293	3667	894
1041	IC0476093	111	431	101	479	93	1055	101	758	691.2	354	1056	1264	4552	161	2100	615	630.3	559	5822	682	6052	593	4168	614
1042	IC0476095	102	1073	91	908	87	1191	93	1234	672.7	418	2222	499	3450	750	2115	591	380.6	1206	7889	361	4596	1156	4289	563
1043	IC0476098	94	1247	89	998	115	350	99	922	762.3	174	2444	362	3170	908	2126	578	559.5	797	3222	1138	4752	1104	2845	1267
1044	IC0476104	113	347	85	1123	106	687	101	768	608	662	1111	1244	2811	1179	1510	1282	292	1297	5800	683	4475	1213	3522	969
1045	IC0476125	101	1078	96	705	94	1021	97	1085	539.2	979	2500	334	3524	710	2188	499	380.6	1211	7333	426	5712	789	4475	487
1046	IC0476126	123	97	104	349	103	790	110	214	754.9	207	2944	148	3460	744	2386	273	501.7	979	7500	404	5973	638	4658	401
1047	IC0476135	106	803	114	73	83	1234	101	791	1148.4	16	2833	175	5043	61	3008	13	86.5	1384	12944	55	6399	413	6477	52
1048	IC0476142	115	312	103	396	103	794	107	388	564.4	826	2389	377	4957	78	2637	99	214.1	1345	12683	60	6395	415	6431	56
1049	IC0476147	94	1251	102	441	77	1329	91	1289	369.8	1323	2056	583	3444	753	1956	832	689.6	399	10544	137	4980	1018	5405	197
1050	IC0476153	100	1108	111	138	113	396	108	306	975.5	56	3056	120	4515	169	2849	29	328.7	1239	6411	563	5742	774	4161	619
1051	IC0476161	110	538	93	815	78	1317	94	1221	369.8	1307	2444	361	4480	183	2431	231	467.1	1100	10167	159	6867	220	5834	119
1052	IC0476166	103	1016	85	1108	81	1281	90	1308	564.4	860	2500	348	3352	808	2139	561	536.3	881	6111	622	6051	594	4233	586
1053	IC0476168	123	84	89	992	90	1144	101	809	525.5	1015	722	1357	3112	943	1453	1304	645.1	514	5889	670	4880	1053	3805	815
1054	IC0476170	91	1303	99	540	102	840	97	1061	276.5	1367	1889	705	3877	471	2014	743	484.4	1060	6333	576	7053	142	4624	421
1055	IC0476176	108	632	92	869	101	864	100	846	544.1	966	1556	963	3066	977	1722	1115	622.8	606	6222	609	4716	1112	3854	791
1056	IC0476180	100	1111	82	1198	95	1017	92	1259	709.1	325	1278	1169	3046	997	1678	1162	622.8	589	2056	1323	6369	439	3016	1207
1057	IC0476181	108	680	104	322	99	901	104	622	661.8	451	3167	97	4578	155	2802	43	467.1	1083	13978	33	7297	61	7247	21
1058	IC0476183	87	1335	104	333	114	371	102	741	486.6	1154	1444	1036	3893	464	1941	852	253	1318	11444	100	5329	927	5675	139
1059	IC0476193	116	288	104	347	67	1363	96	1143	590.7	763	1833	736	3693	604	2039	703	484.4	1049	9556	204	7356	45	5799	126
1060	IC0476204	123	95	108	198	116	342	116	51	502.4	1105	2700	247	4626	139	2609	111	449.8	1110	9100	240	6194	522	5248	242
1061	IC0476211	124	74	92	897	108	644	108	317	428.2	1248	1944	675	3848	492	2074	650	506.1	967	4306	946	5221	961	3344	1058
1062	IC0476213	111	439	112	124	99	894	107	357	650.5	500	1778	771	4288	247	2239	437	486.6	1021	13589	42	5788	742	6621	44
1063	IC0476225	113	389	102																					



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
1069	IC0476245	108	629	100	504	75	1337	94	1191	684	383	1667	875	1086	1388	1146	1369	136.2	1378	7283	434	4215	1306	3878	773
1070	IC0476249	126	54	101	467	115	357	114	87	620.6	644	2444	366	3078	965	2048	691	845.3	143	7333	427	5037	998	4405	515
1071	IC0476261	84	1357	104	346	67	1361	85	1359	428.2	1262	2222	482	5494	4	2715	71	501.7	1010	10794	123	7294	64	6197	77
1072	IC0476267	113	337	99	565	115	351	109	246	650.5	499	1722	837	3557	683	1977	795	603.4	645	13833	37	4857	1063	6431	55
1073	IC0476272	96	1213	98	601	112	437	102	716	523.5	1071	2556	305	3620	643	2233	445	588.2	719	7944	351	5120	979	4551	451
1074	IC0476278	123	98	92	889	109	596	108	313	564.4	814	1444	1053	5242	34	2417	240	233.6	1326	8989	251	6447	389	5223	250
1075	IC0476286	118	229	81	1222	124	104	108	312	595.6	751	1833	762	4120	326	2183	513	501.7	994	4556	887	5620	832	3559	946
1076	IC0476294	116	280	93	804	116	332	108	268	993.5	46	3333	79	4015	391	2781	51	640.1	535	5944	640	5515	888	4033	691
1077	IC0476301	118	240	92	895	113	416	107	339	852.9	118	3222	96	4070	355	2715	70	657.4	461	6444	552	6244	494	4449	499
1078	IC0476302	107	735	93	824	152	6	117	37	638.9	551	1667	888	4201	280	2169	531	415.2	1172	4528	897	5701	794	3548	953
1079	IC0476303	92	1266	109	172	82	1270	94	1199	603.4	738	1500	988	3872	479	1992	772	449.8	1105	13111	51	5883	689	6481	51
1080	IC0476307	106	814	95	728	112	463	104	577	517.6	1072	833	1340	4317	231	1889	928	830.4	159	5056	807	6248	492	4045	680
1081	IC0476310	111	449	99	531	106	691	105	486	426.5	1264	2778	209	5448	9	2884	23	1020.8	52	7611	388	6953	181	5195	260
1082	IC0476313	107	772	105	293	115	361	109	248	684	386	2722	229	4869	100	2758	55	603.4	643	10378	145	6369	437	5783	128
1083	IC0476316	111	445	95	749	109	583	105	531	523.5	1070	4333	12	3566	672	2808	42	882.4	123	11394	102	5594	849	5957	105
1084	IC0476318	107	726	86	1071	113	408	102	706	666.7	432	2667	273	4961	75	2765	54	1051	42	5994	639	7384	32	4810	359
1085	IC0476323	119	174	101	471	99	889	106	415	617.6	645	2833	180	3023	1009	2158	542	603.4	657	10622	133	6225	510	5817	121
1086	IC0476324	113	391	104	361	100	880	105	489	473.5	1179	3944	22	3812	517	2743	60	657.4	466	14056	30	6744	273	7152	25
1087	IC0476326	120	153	111	130	108	651	113	107	710.8	300	2222	478	3163	912	2032	714	953.7	75	12656	61	4783	1096	6131	85
1088	IC0476332	119	197	107	218	118	278	115	69	661.8	441	2778	197	3283	850	2241	432	759.1	229	10889	120	6230	505	5959	104
1089	IC0476333	120	164	85	1095	100	885	102	749	593.1	753	2500	347	3098	953	2064	670	525.5	928	8389	308	6709	283	5208	255
1090	IC0476337	99	1155	96	669	92	1077	96	1138	525.5	1050	2000	632	4304	241	2277	387	415.2	1175	8533	281	7111	121	5353	213
1091	IC0476340	109	564	78	1292	117	313	101	788	743.4	210	2333	433	3150	921	2076	647	578.3	722	10556	135	6755	267	5963	103
1092	IC0476341	113	371	120	30	111	505	115	70	743	212	2556	295	4370	216	2556	146	743.4	260	12583	66	5847	707	6391	60
1093	IC0476342	119	184	104	341	96	992	106	432	369.8	1303	2333	406	5281	26	2661	92	536.3	894	8456	295	6762	260	5251	241
1094	IC0476345	146	1	93	818	114	370	118	34	622.5	643	1778	799	3816	513	2072	655	759.1	232	6478	550	7198	97	4812	357
1095	IC0476350	107	781	106	272	113	402	109	264	741.2	213	2500	321	4175	296	2472	196	536.3	870	12611	63	6547	346	6565	50
1096	IC0476360	139	12	107	230	115	358	120	20	467.1	1180	1944	654	4305	239	2239	436	484.4	1059	10778	124	5805	730	5689	137
1097	IC0476362	118	219	95	717	112	446	108	277	897.1	101	1333	1134	3703	599	1978	794	689.6	382	6222	611	6118	567	4343	540
1098	IC0476363	114	323	100	526	100	873	105	553	501.7	1112	1722	835	3355	804	1860	968	207.6	1351	10222	155	6224	511	5551	166
1099	IC0476364	113	381	105	300	111	477	110	219	810.3	146	1389	1082	3286	848	1828	1010	7687.6	1	7056	464	5086	989	6610	46
1100	IC0476376	125	73	106	271	83	1238	104	564	756.3	206	2056	577	3122	941	1978	792	511.6	940	10167	160	5321	934	5333	216
1101	IC0476385	113	359	100	527	110	562	107	347	583.3	784	2667	263	2969	1048	2073	652	564.4	766	13183	49	4615	1146	6121	87
1102	IC0476387	113	350	105	309	102	827	107	401	544.1	965	2167	522	4069	359	2260	408	1148.4	29	11833	87	5569	863	6184	79
1103	IC0476392	129	34	88	1016	108	631	108	269	612.7	660	1444	1056	3706	596	1921	880	759.1	234	6461	551	5206	963	4142	627
1104	IC0476397	106	804	110	147	115	367	110	193	899.7	97	2222	479	4145	308	2422	235	570.9	735	14222	29	5645	819	6813	38
1105	IC0476398	120	154	92	887	102	817	105	546	540.3	970	2889	167	3425	762	2285	377	642.3	527	6233	602	5350	922	4075	660
1106	IC0476399	137	25	85	1102	112	471	111	147	666.7	431	1278	1167	4735	120	2226	454	447.7	1118	2056	1322	6939	185	3147	1153
1107	IC0476401	100	1117	94	754	111	492	102	734	564.4	863	1722	844	4897	87	2395	258	350.3	1236	9411	215	6216	514	5326	217
1108	IC0476408	113	348	85	1106	70	1354	89	1313	560.6	879	1611	934	3233	880	1802	1035	603.4	672	6889	490	4804	1085	4099	649
1109	IC0476450	102	1059	90	977	96	995	96	1134	711.2	289	2833	188	2787	1192	2111	602	467.1	1080	10456	141	4104	1346	5009	310
1110	IC0476478	108	682	104	359	113	407	108	280	545	943	3722	37	3750	563	2672	90	501.7	998	14367	25	6330	463	7066	28
1111	IC0476501	117	253	113	103	87	1177	106	480	732.8	236	2000	617	2802	1186	1845	982	645.1	502	11500	95	4220	1305	5455	186
1112	IC0476502	120	168	103	379	113	398	112	131	553.6	906	2722	233	4856	105	2711	74	545	848	16589	8	7148	111	8094	8
1113	IC0476514	109	573	102	435	113	404	108	304	674	411	2111	550	4611	143	2465	201	545	833	8056	345				



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
1119	IC0476587	116	281	85	1105	115	360	105	499	600.6	743	2222	505	2605	1270	1809	1029	501.7	993	7556	400	4105	1345	4054	674
1120	IC0476599	115	315	82	1192	99	898	99	958	578.3	785	833	1345	4042	375	1818	1019	899.7	114	2278	1295	6002	619	3060	1188
1121	IC0476602	112	410	92	876	83	1253	96	1145	797.1	165	1111	1235	3228	883	1712	1126	467.1	1062	6834	495	4345	1256	3882	772
1122	IC0476605	113	354	94	783	90	1115	99	938	689.6	375	2278	453	4424	200	2464	205	578.3	723	8211	330	5924	666	4904	331
1123	IC0476611	96	1200	83	1157	116	333	98	976	552.9	918	2611	292	4261	263	2475	194	992.6	68	5944	641	6966	175	4634	412
1124	IC0476626	100	1100	104	325	92	1079	99	969	798.8	148	3333	73	3544	692	2559	145	564.4	742	15778	12	5357	920	7233	22
1125	IC0476633	98	1188	103	386	144	9	115	62	517.6	1074	3611	46	4300	243	2810	41	564.4	781	13083	52	5574	859	6407	58
1126	IC0476642	112	424	113	92	112	435	112	121	920.6	87	2333	392	2944	1073	2066	663	603.4	694	12111	79	4444	1224	5719	135
1127	IC0476648	98	1179	108	188	109	585	105	512	645.1	529	2944	146	5286	25	2959	17	882.4	121	16778	7	6779	251	8146	7
1128	IC0476649	87	1326	84	1150	92	1089	87	1338	652.4	486	1944	680	4627	138	2408	246	759.1	230	4500	903	5989	627	3749	843
1129	IC0476651	110	505	106	244	101	854	106	461	607.9	673	2778	199	4304	240	2563	143	674.7	423	14222	28	6393	419	7097	27
1130	IC0476695	106	801	81	1233	87	1185	91	1281	723.5	246	2500	349	3759	554	2328	338	603.4	639	7056	462	6216	515	4625	417
1131	IC0476696	117	267	90	954	95	1008	101	800	924.7	85	3333	80	3864	484	2707	77	720.2	294	10544	136	7138	113	6134	84
1132	IC0476705	91	1288	87	1053	107	660	95	1165	955.9	59	1667	897	2355	1316	1659	1185	642.3	517	2722	1227	4985	1014	2783	1279
1133	IC0476710	117	252	99	537	340	2	185	2	458.8	1211	2889	165	2491	1301	1946	845	622.8	602	8033	347	4523	1186	4393	522
1134	IC0476761	107	768	106	259	104	760	106	484	674.7	403	1667	872	2351	1317	1564	1260	674.7	418	15628	13	4500	1197	6934	34
1135	IC0476769	98	1180	99	550	124	108	107	384	224.9	1375	1944	664	4870	98	2346	323	155.7	1377	10722	129	5967	642	5615	151
1136	IC0476776	121	124	91	946	96	994	102	693	536.3	980	3278	89	2997	1031	2270	393	564.4	779	5650	713	5760	764	3991	714
1137	IC0476788	104	933	100	496	97	956	100	823	435.3	1235	2778	207	2635	1259	1949	842	1012.1	61	14333	26	4944	1030	6763	41
1138	IC0476828	108	615	104	348	101	847	104	567	613	656	2056	580	3083	962	1917	884	525.5	925	11556	91	5768	759	5950	106
1139	IC0476842	117	264	85	1104	110	560	104	608	622.8	632	2667	274	3375	797	2222	463	847.8	139	9533	207	4822	1074	5068	294
1140	IC0476849	103	975	97	655	113	403	104	580	396.5	1294	2778	215	3913	450	2362	302	428.2	1155	9944	174	6168	535	5514	175
1141	IC0476927	112	415	101	453	83	1226	99	955	632.2	555	2000	626	2911	1109	1848	979	564.4	757	10878	122	4722	1109	5388	203
1142	IC0476955	91	1275	82	1199	114	384	96	1137	711.2	296	1778	810	3263	866	1917	883	432.5	1129	8667	268	4485	1209	4528	465
1143	IC0477070	89	1310	98	605	95	1009	94	1213	925.3	84	3111	112	4149	305	2728	68	1109.4	33	11000	115	6666	298	6258	68
1144	IC0477199	95	1219	96	698	87	1174	93	1251	674.7	409	4056	17	2698	1239	2476	193	681.2	406	12389	68	4307	1271	5792	127
1145	IC0478047	113	336	80	1260	126	91	106	438	642.3	537	2444	365	2588	1277	1892	922	603.4	652	4778	843	4088	1352	3156	1149
1146	IC0478110	106	829	83	1183	122	154	104	630	625.4	627	1111	1249	2889	1124	1542	1266	564.4	759	3111	1167	4605	1150	2760	1285
1147	IC0478181	117	265	73	1335	102	818	97	1058	545	927	1667	907	3596	655	1936	867	739.6	268	11000	118	5023	1001	5588	157
1148	IC0478230	129	35	87	1058	86	1203	100	826	759.1	176	1556	969	3906	455	2074	651	934.3	86	3722	1060	6764	259	3807	814
1149	IC0478233	120	171	76	1311	98	939	98	1018	817.5	135	2778	222	2826	1165	2140	557	914.8	101	11444	97	4031	1374	5463	183
1150	IC0478252	117	248	92	850	110	532	106	408	564.4	821	1167	1208	2506	1297	1412	1317	603.4	668	3500	1110	4387	1243	2830	1271
1151	IC0478289	91	1271	94	763	115	368	100	861	540.3	977	1722	845	3993	402	2085	633	545	852	9056	246	5091	988	4897	335
1152	IC0478308	94	1245	96	675	110	534	100	855	564.4	869	2444	360	3418	767	2142	554	628.7	578	2722	1226	6187	526	3179	1132
1153	IC0478319	137	22	91	924	123	130	117	40	408.7	1282	3278	88	2255	1337	1981	786	564.4	790	7611	387	4991	1010	4389	525
1154	IC0478334	103	978	66	1375	107	678	92	1269	525.5	1043	1000	1301	3934	438	1820	1017	721.9	290	2667	1239	5946	653	3112	1166
1155	IC0478337	107	712	81	1227	83	1233	90	1300	732.8	238	1278	1170	5241	36	2417	239	422.6	1156	1333	1375	7082	133	2946	1232
1156	IC0478348	102	1039	65	1378	82	1265	83	1368	650.5	508	1167	1222	2799	1189	1539	1269	603.4	648	3444	1116	4493	1203	2847	1265
1157	IC0478367	105	853	89	1007	110	549	101	783	506.1	1096	2278	465	2448	1305	1744	1091	428.2	1150	2000	1326	4779	1098	2402	1347
1158	IC0478378	101	1080	78	1285	119	236	99	915	625.4	631	1333	1141	3294	840	1751	1086	564.4	761	2444	1271	5956	648	2988	1216
1159	IC0478389	85	1339	96	706	111	511	97	1074	422.6	1266	2500	335	2945	1072	1956	833	545	858	1833	1342	4981	1017	2453	1340
1160	IC0478403	123	93	91	921	106	684	107	392	564.4	813	1667	894	2780	1196	1670	1170	603.4	667	1444	1371	4280	1281	2109	1372
1161	IC0478406	100	1123	79	1267	118	282	99	948	540.3	976	722	1358	2942	1077	1402	1319	545	851	1722	1357	4241	1293	2169	1368
1162	IC0478409	111	458	92	862	122	167	108	286	501.7	1114	2278	456	2347	1318	1709	1130	759.1	242	3778	1032	4788	1094	3108	1167
1163	IC0478418	121	140	87	1049	122	166	110	213	700.7	328	3667	44	3133	935	2500	176	447.7	1116	7556	397	6183	528	4729	380
1164	IC0478429	106	835	68	1372	120	226	98	1015	564.4	848	2000	644	2803	1184	1789	1049	767.4	212	3111	1159	4303	1273	2727	1289
1165	IC0478430	87	1336	92	845	106	685	95	1162	767.4	173	1778	800	2442	1306	1662	1181	603.4	634	4611	872	4958	1024	3391	1030
1166	IC0478442	94	1237	72	1341	110	566	92	1264	672.7	420	1278	1176	5224	38	2391	261	711.2	317	5056	806	6390	420	4052	676
1167	IC0478443	111	435	78	1290	98	934	96	1144	603.4	699	1556	980	2803	1185	1654	1192	694.9	349	2667	1236	6835	229	3399	1026
1168	IC0478444	106	818	84	1146	116	336	102	727	694.9	334	1111	1246	3271	861	1692	1149	694.3	353	2722	1230	4528	1183	2648	1308



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
1169	IC0478451	111	457	48	1388	104	762	87	1340	689.6	360	833	1347	3280	853	1601	1238	812.8	175	2000	1334	5303	939	2705	1296
1170	IC0478465	108	685	86	1074	104	765	99	928	1051	25	2889	171	3191	901	2377	279	798	185	7111	454	4240	1295	4050	678
1171	IC0478468	110	515	70	1367	108	616	96	1123	545	933	1389	1122	2418	1307	1451	1306	650.5	490	3778	1045	4373	1248	2934	1237
1172	IC0478469	110	489	89	999	101	858	100	869	603.4	703	1389	1107	2837	1157	1610	1231	603.4	663	4222	961	4337	1262	3054	1190
1173	IC0478474	110	532	87	1062	83	1225	93	1235	694.3	341	1167	1217	3882	470	1914	891	6726.6	3	3222	1148	6893	207	5614	152
1174	IC0478499	96	1191	83	1162	104	767	94	1198	630.6	585	1222	1196	3315	831	1723	1112	525.5	921	5278	774	5696	796	3833	806
1175	IC0478500	112	427	94	797	123	119	110	223	798	157	4556	4	2766	1204	2707	78	642.3	520	8222	324	4758	1103	4541	457
1176	IC0478506	103	1020	81	1229	109	573	98	1033	655.7	483	2167	537	3564	676	2129	573	369.8	1218	1778	1348	5639	822	2596	1324
1177	IC0478507	111	471	93	810	130	46	111	149	720.2	264	4611	3	3807	519	3046	10	817.5	162	4333	927	6790	247	3980	721
1178	IC0478515	117	266	88	1017	103	800	103	676	630.6	578	944	1314	2508	1295	1361	1333	525.5	919	4333	943	4008	1383	2956	1227
1179	IC0478518	105	864	76	1316	76	1334	85	1354	369.8	1316	1611	944	3963	422	1981	783	447.7	1126	3111	1163	6050	595	3203	1118
1180	IC0478520	108	664	91	911	98	915	99	931	564.4	837	2278	460	3178	905	2007	752	545	844	2278	1288	6061	589	2961	1224
1181	IC0478526	100	1091	77	1301	95	1013	90	1295	560.6	885	1722	862	3592	658	1958	829	671.5	431	3556	1088	6467	381	3565	944
1182	IC0478529	110	547	88	1027	122	140	107	395	657.4	471	2278	466	3985	407	2307	357	608	621	1000	1382	5467	899	2358	1354
1183	IC0478537	117	255	86	1077	95	999	99	913	812.8	144	1333	1136	4488	178	2211	470	369.8	1215	2500	1264	6376	431	3082	1181
1184	IC0478538	102	1049	80	1254	112	456	98	1024	564.4	862	1944	685	4497	174	2335	333	603.4	670	2556	1249	7393	30	3517	970
1185	IC0478540	107	757	84	1131	119	253	103	644	759.1	198	2444	363	3141	931	2115	592	1012.1	55	4556	881	4597	1155	3388	1031
1186	IC0478542	91	1289	91	907	102	822	95	1178	328.7	1341	1444	1054	2720	1226	1498	1285	506.1	969	6944	484	4702	1118	4051	677
1187	IC0478543	103	1009	91	938	133	28	109	240	506.1	1100	3944	24	3065	978	2505	173	1304.1	16	3056	1171	6041	600	3467	995
1188	IC0478544	129	45	79	1278	105	706	104	578	415.2	1268	500	1386	3367	799	1427	1312	711.2	327	1556	1369	5940	657	2736	1287
1189	IC0478551	104	912	89	1005	112	447	101	757	525.5	1040	2667	271	4507	171	2566	139	1226.2	23	2389	1275	6458	386	3358	1038
1190	IC0478552	126	53	72	1346	93	1044	97	1073	484.4	1156	1278	1177	2333	1323	1365	1329	545	854	2000	1330	4378	1244	2308	1360
1191	IC0478557	115	314	93	831	112	444	106	410	661.8	447	2056	599	3027	1007	1915	890	694.3	354	5944	646	4827	1070	3822	810
1192	IC0478559	129	48	82	1207	114	381	108	284	553.6	903	1000	1298	3153	917	1569	1259	564.4	773	1667	1362	5787	743	2673	1304
1193	IC0478561	102	1060	100	505	111	475	104	560	655.7	484	889	1326	4276	254	1940	854	369.8	1219	4556	894	5776	753	3567	943
1194	IC0478563	91	1284	93	838	118	279	100	829	622.8	640	722	1355	3654	628	1666	1177	564.4	762	3167	1156	5527	885	3086	1178
1195	IC0478571	108	618	92	877	94	1029	98	1021	661.8	450	4000	19	3548	688	2737	63	506.1	947	3222	1134	6930	187	3553	947
1196	IC0478572	116	273	82	1194	88	1168	95	1158	311.4	1345	3556	53	3018	1012	2295	367	798	199	8222	325	5991	625	5004	311
1197	IC0478573	113	345	72	1342	93	1061	93	1250	506.1	1086	1833	766	2821	1169	1720	1116	645.1	515	1833	1344	4318	1269	2265	1363
1198	IC0478576	105	863	91	930	111	507	102	701	709.1	322	1833	753	3148	922	1897	915	564.4	754	4333	936	5967	643	3622	909
1199	IC0478585	96	1207	95	738	84	1222	92	1275	506.1	1102	3222	94	4083	349	2604	114	428.2	1151	5111	793	6022	612	3854	790
1200	IC0478587	117	259	92	861	121	180	110	202	645.1	524	1444	1052	2838	1155	1643	1203	603.4	651	3500	1104	4338	1260	2814	1273
1201	IC0478588	124	80	94	773	124	106	114	85	632.2	552	1722	846	5294	24	2549	149	603.4	654	1056	1381	7212	95	2957	1225
1202	IC0478591	113	379	84	1135	126	86	108	311	711.2	276	2167	535	3002	1026	1960	824	603.4	641	3722	1055	4319	1268	2882	1253
1203	IC0478593	124	78	95	732	118	275	112	127	524.6	1061	1667	884	2744	1215	1645	1200	486.6	1025	1000	1383	4483	1210	1990	1374
1204	IC0478602	99	1140	91	927	122	143	104	597	207.6	1377	667	1361	4263	261	1712	1125	328.7	1262	4333	945	6579	332	3747	845
1205	IC0478604	118	237	90	958	122	169	110	209	720.2	261	2778	218	3230	882	2243	430	1012.1	57	6667	523	4495	1200	4058	670
1206	IC0478606	103	990	86	1069	106	683	98	974	628.9	604	1556	970	3399	785	1861	964	661.8	444	3278	1132	4899	1042	2946	1231
1207	IC0478607	109	588	76	1312	110	528	98	983	650.5	503	2778	223	3311	834	2246	426	603.4	646	2111	1303	6345	453	3020	1206
1208	IC0478611	94	1254	81	1234	138	22	104	589	311.4	1356	1222	1197	3013	1014	1516	1279	224.9	1343	4111	979	5932	663	3423	1009
1209	IC0478618	105	872	87	1064	102	837	98	1031	155.7	1383	1000	1293	3621	642	1592	1242	207.6	1353	3778	1048	5538	879	3174	1139
1210	IC0478620	102	1067	93	821	119	239	105	543	694.3	350	833	1342	2747	1214	1425	1315	711.2	312	6167	620	4645	1137	3841	799
1211	IC0478626	106	786	95	743	122	142	108	326	486.6	1145	2333	424	2850	1149	1890	926	590.1	711	7500	407	4515	1190	4202	603
1212	IC0478627	107	719	96	709	123	113	109	263	875.9	114	3167	98	2151	1353	2065	665	759.1							



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
1219	IC0478644	116	297	80	1263	115	347	104	628	501.7	1111	1278	1173	3655	627	1812	1025	661.8	454	389	1388	6021	614	2357	1355
1220	IC0478645	110	533	90	968	83	1254	94	1201	397.9	1288	1111	1237	2833	1159	1447	1307	155.7	1376	2000	1331	5492	895	2549	1328
1221	IC0478646	108	697	92	860	103	785	101	787	536.3	992	1778	801	2810	1180	1708	1131	467.1	1071	2000	1328	4583	1162	2350	1357
1222	IC0478649	107	771	89	1001	108	633	101	778	681.2	394	1167	1213	2811	1178	1553	1263	684	401	2389	1280	5665	810	2913	1243
1223	IC0478650	113	357	84	1145	95	1018	97	1067	506.1	1089	1500	1016	2724	1225	1577	1255	711.2	326	2778	1222	4884	1050	2791	1276
1224	IC0478651	110	490	81	1239	104	758	98	1009	328.7	1333	1000	1300	3224	885	1518	1278	328.7	1261	4611	877	4374	1247	3105	1171
1225	IC0478652	85	1350	98	581	111	474	98	998	629.5	598	2667	266	4419	202	2572	135	666.2	434	7667	374	5919	669	4751	377
1226	IC0478655	105	895	88	1024	124	105	106	471	311.4	1352	1944	678	2709	1232	1655	1188	397.9	1201	3889	1010	4421	1234	2903	1247
1227	IC0478656	84	1358	277	3	103	783	155	5	628.7	622	1944	645	3361	800	1978	791	732.8	282	3778	1034	5293	941	3268	1092
1228	IC0478660	108	689	65	1377	118	287	97	1080	603.4	714	1222	1200	2991	1034	1606	1236	628.7	576	3167	1154	4561	1169	2785	1278
1229	IC0478662	107	754	93	840	83	1235	94	1204	560.6	881	1167	1207	2709	1234	1479	1294	671.5	429	5111	801	4451	1219	3411	1016
1230	IC0478669	109	608	53	1387	103	780	88	1326	739.6	225	1222	1201	3783	540	1915	889	525.5	912	2111	1316	7265	73	3301	1081
1231	IC0478670	104	937	83	1166	111	499	99	926	721.9	254	2278	468	2927	1097	1976	798	564.4	749	6944	479	6145	549	4551	450
1232	IC0478671	112	405	63	1381	120	217	98	991	934.3	72	1278	1180	4001	395	2071	658	689.6	369	1500	1370	6332	461	2841	1269
1233	IC0478673	109	552	87	1057	111	501	102	707	914.8	92	2167	531	2234	1342	1772	1064	650.1	497	1722	1352	4878	1054	2417	1345
1234	IC0478676	108	698	77	1300	110	526	98	981	603.4	716	1778	813	2872	1133	1751	1084	689.6	374	2278	1290	4402	1239	2456	1337
1235	IC0478680	102	1058	85	1094	139	15	109	252	311.4	1355	2722	244	2934	1085	1989	774	363.3	1233	5278	768	4817	1077	3486	988
1236	IC0478683	115	310	92	851	119	234	109	254	121.1	1387	1667	890	3480	731	1756	1081	467.1	1101	4278	951	4915	1036	3220	1111
1237	IC0478686	105	866	80	1252	105	729	97	1101	447.7	1230	2222	507	2830	1163	1833	1003	506.1	966	1667	1359	4330	1265	2168	1370
1238	IC0478689	111	432	73	1332	122	138	102	710	467.1	1185	2994	143	3008	1021	2157	543	759.1	246	12111	78	4721	1110	5864	116
1239	IC0478691	113	388	64	1379	97	961	91	1279	564.4	829	667	1370	2212	1344	1148	1368	564.4	768	1611	1366	4332	1263	2169	1369
1240	IC0478693	92	1261	90	973	117	323	99	909	428.2	1260	1889	720	3266	863	1861	965	603.4	688	8722	263	6824	236	5383	204
1241	IC0478694	105	898	89	1009	90	1125	95	1186	224.9	1373	1944	677	3081	964	1750	1087	484.4	1061	4944	815	4812	1078	3414	1013
1242	IC0478696	118	223	72	1351	119	254	103	666	1148.4	11	1500	1029	3973	414	2207	474	525.5	905	2111	1310	6508	360	3048	1195
1243	IC0478698	104	918	70	1363	122	163	99	968	525.5	1041	1278	1179	4112	331	1972	807	798	195	5889	667	7443	19	4710	1389
1244	IC0478702	113	386	79	1265	116	328	103	667	914.8	91	1389	1115	3818	509	2041	701	506.1	943	2556	1253	5953	650	3005	1210
1245	IC0478703	125	61	74	1330	113	393	104	596	759.1	180	2667	276	4417	205	2614	110	625.4	582	3222	1137	5917	674	3255	1097
1246	IC0478704	121	149	73	1331	105	738	100	890	506.1	1079	1444	1069	3693	603	1881	936	564.4	782	1000	1384	6960	178	2841	1268
1247	IC0478706	111	440	72	1352	105	716	96	1124	447.7	1226	778	1352	3660	624	1628	1217	540.3	865	2111	1319	5854	704	2835	1270
1248	IC0478707	125	57	73	1333	82	1267	93	1237	603.4	680	1333	1145	2816	1175	1584	1248	603.4	660	3389	1122	4492	1205	2828	1272
1249	IC0478710	122	116	91	939	113	414	108	272	564.4	815	3111	114	3896	461	2524	163	689.6	379	11444	96	5572	860	5902	112
1250	IC0478715	116	290	80	1246	109	568	102	728	650.5	497	1556	976	3007	1022	1738	1099	628.9	567	2556	1252	4237	1297	2474	1334
1251	IC0478716	107	739	70	1366	61	1372	79	1373	798	160	833	1346	3094	957	1575	1256	630.6	557	4389	924	4562	1168	3194	1123
1252	IC0478718	113	369	81	1235	131	39	108	292	689.6	359	1722	859	4390	210	2267	400	642.3	524	7944	356	6592	329	5060	298
1253	IC0478720	103	977	79	1270	107	666	96	1107	328.7	1338	1500	1026	3120	942	1650	1196	276.8	1306	3611	1082	4179	1319	2689	1299
1254	IC0478725	119	189	77	1299	103	788	100	895	642.3	536	1833	765	5327	21	2601	118	655.7	471	9056	245	6827	235	5513	176
1255	IC0478726	104	900	100	520	119	233	108	327	603.4	723	1000	1288	2246	1340	1283	1356	694.3	358	7000	475	4086	1354	3927	749
1256	IC0478727	106	837	91	904	128	70	108	267	294.1	1360	1500	1007	4876	96	2223	458	415.2	1181	3778	1041	6285	483	3493	984
1257	IC0478729	107	742	93	839	94	1035	98	1032	672.7	415	1722	849	2786	1193	1727	1105	486.6	1020	3111	1162	4339	1259	2646	1313
1258	IC0478730	109	561	85	1100	128	75	107	350	650.1	514	4000	20	2817	1172	2489	183	545	839	8444	296	4618	1145	4536	460
1259	IC0478734	106	815	81	1226	93	1060	93	1238	369.8	1315	2278	470	3908	454	2185	508	564.4	793	2111	1308	5617	834	2764	1284
1260	IC0478739	120	156	76	1309	83	1223	93	1242	817.5	133	1500	1028	3419	766	1912	896	560.6	796	11444	99	6631	314	6212	75
1261	IC0478740	108	703	96	691	126	85	110	210	564.4	839	2056	594	2904	1113	1841	987	759.1	238	8944	252	6842	226	5515	173
1262	IC0478741	104	910	82	1221	108	634	98	1029	564.4	852	1611	939	3207	892	1794	1044	545	846	1722	1353	4442	1225	2236	1367
1263	IC0478742	79	1388	101	477	104	757	94	1189	564.4	877	833	1338	3606	649	1668	1173	622.8	596	2278	1294	5106	983	2669	1305
1264	IC0478746	110	488	94	787	118	283	107	361	603.4	702	4389	9	2706	1235	2566	140	603.4	662	2333	1281	4206	1309	2381	1350
1265	IC0478750	109	553	95	723	103	778	102	690	525.5	1027	3056	125	2277	1334	1953	837	817.5	168	1611	1363	4987	1013	2472	1335
1266	IC0478751	99	1148	100	497	103	774	101	798	603.4	735	2056	584	3027	1008	1895	918	711.2	322	5889	662	5566	867	4055	673
1267	IC0478753	108	633	84	1139	123	115	105	516	603.4	711	1778	807	3757	556	2046	692	689.6	393	1944	1336	6495	365	3043	1197
1268	IC0478760	84	1354	89	996	112	470	95	1176	294.1	1361	1889	721	3588	662	1924	876	190.3	1365	4111	976	6843	225	3715	863



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
1269	IC0478764	92	1267	83	1176	125	97	100	883	645.1	531	1500	1018	3169	909	1771	1065	224.9	1330	3167	1152	4432	1230	2608	1321
1270	IC0478765	119	199	99	534	81	1283	100	888	545	924	2500	331	3325	826	2123	585	506.1	958	2944	1190	4493	1202	2648	1309
1271	IC0478768	119	209	83	1174	95	1006	99	947	1012.1	37	1000	1296	2133	1359	1382	1325	657.4	458	5278	775	4658	1134	3531	965
1272	IC0478786	120	155	63	1382	119	255	100	831	1304.1	2	556	1384	2717	1227	1526	1276	415.2	1167	10722	130	4126	1337	5088	287
1273	IC0478788	122	110	71	1356	103	805	99	973	1226.2	5	1667	909	4710	122	2534	155	484.4	1030	7167	449	6676	295	4776	369
1274	IC0478789	119	179	84	1156	129	59	110	184	812.8	143	1389	1110	2662	1253	1621	1224	328.7	1243	3667	1073	4162	1325	2719	1292
1275	IC0478792	106	805	85	1119	101	860	97	1065	661.8	454	1889	724	2530	1292	1694	1147	694.3	355	5889	664	4072	1360	3552	949
1276	IC0478793	100	1133	90	986	112	426	101	813	689.6	377	1500	1011	2545	1285	1578	1254	207.6	1349	3000	1186	4045	1365	2418	1344
1277	IC0478800	110	519	88	1023	93	1039	97	1070	709.1	317	3333	81	2897	1119	2313	350	564.4	752	3111	1157	4049	1363	2575	1326
1278	IC0478801	146	6	71	1355	115	359	111	177	506.1	1075	1833	767	2090	1368	1476	1296	553.6	823	1389	1374	4916	1035	2286	1362
1279	IC0478807	140	9	83	1178	83	1250	102	744	798	149	2111	566	2698	1240	1869	952	632.2	540	3000	1183	4969	1022	2867	1258
1280	IC0478808	96	1197	98	576	111	487	102	732	525.5	1051	1111	1230	4579	153	2072	656	650.5	493	8500	294	7161	108	5437	192
1281	IC0478809	89	1307	84	1152	131	38	101	770	590.1	771	1056	1274	2276	1335	1307	1350	645.1	511	2444	1272	4155	1328	2415	1346
1282	IC0478810	108	621	91	926	119	246	106	455	422.6	1265	667	1360	3018	1011	1369	1328	155.7	1375	2556	1255	4821	1076	2511	1331
1283	IC0478813	100	1137	88	1022	76	1331	88	1331	564.4	864	1056	1269	3528	703	1716	1119	603.4	671	7222	445	5328	928	4385	528
1284	IC0478814	100	1087	75	1320	122	161	99	942	711.2	292	1333	1144	3253	870	1766	1073	603.4	642	1722	1354	4555	1173	2294	1361
1285	IC0478816	109	559	91	903	129	50	110	216	628.9	603	2500	340	2890	1122	2006	753	661.8	443	2111	1305	5035	999	2603	1323
1286	IC0478817	104	913	85	1117	123	121	104	598	694.3	347	2056	610	3074	972	1941	853	711.2	311	2000	1327	4424	1233	2378	1352
1287	IC0478819	95	1229	81	1228	109	605	95	1173	666.2	440	611	1376	4447	191	1908	903	689.6	385	2667	1240	6175	529	3177	1133
1288	IC0478821	100	1089	92	872	123	132	105	533	369.8	1319	3889	28	5030	64	3096	6	603.4	692	4778	840	6187	525	3856	788
1289	IC0478823	105	844	89	990	126	92	107	397	689.6	376	1111	1239	2222	1343	1341	1340	397.9	1189	3167	1155	4170	1322	2578	1325
1290	IC0478824	107	733	115	63	96	996	106	452	622.8	641	1667	868	3266	864	1852	975	622.8	592	7333	430	5904	679	4620	423
1291	IC0478826	102	1071	93	802	98	930	98	1036	671.5	427	3500	59	4052	371	2741	62	6726.6	5	4333	928	5552	871	5537	168
1292	IC0478827	108	653	89	1012	109	569	102	722	608	666	4222	14	4610	145	3147	4	447.7	1121	7556	396	7176	104	5060	297
1293	IC0478831	112	428	90	970	117	303	106	416	486.6	1139	1278	1163	3385	794	1716	1118	590.1	710	2389	1278	5609	838	2863	1261
1294	IC0478834	118	233	93	805	105	724	105	496	711.2	274	2167	526	3075	969	1984	778	545	827	3500	1098	4517	1189	2854	1263
1295	IC0478838	113	384	72	1353	116	329	100	838	767.4	172	1778	818	2812	1177	1786	1051	311.4	1274	4556	888	4286	1279	3051	1193
1296	IC0478842	95	1226	71	1361	107	655	91	1285	812.8	145	1167	1221	2932	1088	1637	1209	311.4	1273	3778	1046	4886	1048	2992	1215
1297	IC0478844	105	897	99	530	121	200	108	278	645.1	528	2667	264	2972	1046	2095	623	408.7	1183	1722	1351	4631	1139	2254	1364
1298	IC0478846	115	311	80	1258	100	878	98	1000	622.8	634	1500	1025	2868	1136	1664	1179	121.1	1381	2333	1284	4914	1037	2456	1339
1299	IC0478847	107	759	99	538	113	410	106	409	607.9	676	1944	663	3785	537	2112	596	428.2	1146	2556	1248	6228	506	3071	1185
1300	IC0478848	107	736	70	1368	118	274	98	990	564.4	842	667	1369	4344	224	1858	969	767.4	211	1722	1358	6809	240	3100	1174
1301	IC0478850	109	571	78	1288	124	102	104	619	629.5	594	1333	1142	3943	435	1969	812	666.2	433	3111	1165	5380	918	3052	1192
1302	IC0478851	119	185	79	1271	130	41	109	230	645.1	523	1333	1140	3398	787	1792	1046	190.3	1357	2167	1302	4898	1043	2418	1343
1303	IC0478852	110	503	71	1358	94	1034	92	1274	540.3	971	1278	1178	3788	534	1869	954	545	850	3056	1178	5755	770	3119	1163
1304	IC0478853	125	58	107	229	140	14	124	10	709.5	301	1278	1151	2929	1093	1639	1208	759.1	228	2000	1329	5385	917	2715	1295
1305	IC0478854	139	19	88	1042	110	557	112	132	737.7	230	1444	1057	2638	1258	1607	1234	428.2	1142	1611	1365	4239	1296	2093	1373
1306	IC0478855	105	885	92	885	121	205	106	465	545	949	1722	854	2979	1040	1749	1088	603.4	677	5778	689	6644	305	4342	542
1307	IC0478856	103	1032	99	558	114	377	105	498	564.4	861	1889	706	2603	1273	1685	1157	694.3	361	4278	950	4544	1176	3172	1141
1308	IC0478857	121	138	83	1167	96	991	100	870	1012.1	36	3111	116	2855	1144	2326	340	524.6	935	3500	1095	4579	1164	2868	1257
1309	IC0478858	113	372	84	1144	118	272	105	519	603.4	695	3000	142	3480	732	2361	306	369.8	1222	5444	730	6872	218	4229	590
1310	IC0478859	87	1329	81	1240	114	375	94	1215	603.4	741	1722	860	2966	1051	1764	1074	224.9	1335	2222	1297	4680	1127	2376	1353
1311	IC0478861	121	145	72	1343	108	621	100	822	759.1	183	4167	15	2137	1356	2354	319	592.2	704	5778	684	4812	1079	3727	854
1312	IC0478862	120	151	84	1147	111	502	105	53																



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
1319	IC0478875	115	304	85	1112	123	128	108	331	564.4	824	1889	722	4211	278	2221	464	689.6	380	7333	429	5607	841	4543	455
1320	IC0478878	104	930	90	960	120	225	105	551	739.6	227	3611	48	2725	1224	2359	310	700.7	345	3444	1111	4893	1044	3013	1209
1321	IC0478879	108	693	82	1203	111	478	100	828	603.4	715	2278	469	2717	1228	1866	958	224.9	1332	1167	1378	4252	1292	1881	1375
1322	IC0478881	94	1239	82	1211	122	158	99	929	672.7	421	1667	901	4688	127	2342	329	294.1	1291	1778	1350	5766	760	2613	1318
1323	IC0478883	95	1227	90	985	83	1237	89	1318	650.5	510	3056	127	2635	1260	2114	595	603.4	649	14778	20	4511	1191	6631	43
1324	IC0478885	129	42	83	1165	110	533	107	342	630.6	576	1944	684	4223	276	2266	403	525.5	918	6611	533	7028	152	4722	385
1325	IC0478886	126	55	88	1028	90	1146	101	782	655.7	480	1111	1240	3762	551	1843	986	369.8	1216	2056	1324	5512	889	2646	1312
1326	IC0478888	103	994	92	855	121	196	105	500	689.6	370	556	1380	3421	765	1555	1262	812.8	176	1278	1376	6778	252	2956	1226
1327	IC0478889	103	998	79	1281	108	642	96	1106	447.7	1232	1556	979	5251	32	2418	238	837.5	145	2222	1298	7007	158	3356	1043
1328	IC0478891	121	135	86	1079	96	979	101	785	553.6	904	1778	804	4313	232	2215	467	564.4	774	3611	1080	7152	109	3776	832
1329	IC0478892	98	1176	92	878	103	784	98	1035	689.6	378	2278	457	2863	1139	1943	849	506.1	946	5444	737	6924	191	4291	561
1330	IC0478894	108	665	92	857	117	310	106	476	875.9	113	3556	52	2816	1173	2416	241	501.7	976	8444	297	4881	1051	4609	427
1331	IC0478895	110	535	96	704	95	998	100	842	793.5	166	1722	843	5253	31	2590	124	650.5	482	3833	1022	6524	353	3669	890
1332	IC0478896	111	478	88	1030	103	803	101	819	711.2	277	833	1343	2709	1233	1418	1316	622.8	586	4444	917	4233	1298	3100	1173
1333	IC0478897	115	322	82	1195	112	458	103	657	545	928	2444	364	3882	469	2290	375	661.8	448	4056	983	5335	924	3351	1048
1334	IC0478898	105	890	72	1354	91	1092	89	1312	545	950	1444	1070	3931	440	1973	802	645.1	512	2111	1312	5343	923	2700	1297
1335	IC0478903	119	186	82	1200	118	260	106	407	661.8	444	3111	117	3947	431	2573	134	525.5	914	4389	920	5859	702	3591	927
1336	IC0478904	101	1076	84	1154	114	378	99	904	603.4	731	1667	899	3818	510	2029	720	689.6	394	1167	1380	5529	882	2462	1336
1337	IC0478905	109	580	72	1344	123	127	101	767	759.1	194	944	1319	2838	1156	1514	1281	536.3	869	7000	476	4744	1106	4093	653
1338	IC0478907	87	1318	80	1257	103	791	90	1307	467.1	1196	2944	155	3341	815	2251	419	709.1	343	4333	930	4946	1029	3329	1063
1339	IC0478912	108	634	91	916	119	245	106	448	650.1	515	2056	602	3065	979	1924	877	629.5	566	1167	1379	4580	1163	2125	1371
1340	IC0478920	108	630	86	1078	110	547	101	772	711.2	282	1833	756	3375	796	1973	804	422.6	1158	8111	338	4875	1056	4470	489
1341	IC0478922	100	1090	84	1151	73	1342	86	1352	536.3	1002	1722	858	4131	320	2130	572	506.1	962	4944	816	6172	530	3874	778
1342	IC0478922-A	109	603	82	1190	90	1131	94	1223	597.9	745	1111	1250	3735	578	1815	1021	798	191	7611	395	6120	566	4843	349
1343	IC0478923	104	919	66	1373	80	1292	83	1365	397.9	1291	2889	173	3757	557	2348	322	1012.1	62	9889	179	6103	570	5668	143
1344	IC0478935	113	380	77	1296	119	244	103	655	798	155	2222	508	3009	1019	2010	748	681.2	405	13500	46	4971	1021	6384	61
1345	IC0478937	110	502	122	23	113	400	115	63	709.3	307	3333	68	3037	1003	2360	309	793.5	202	6722	515	4418	1236	3978	722
1346	IC0478938	116	291	78	1294	117	320	103	640	590.1	765	1111	1254	3284	849	1662	1183	645.1	510	2000	1332	6416	400	3020	1205
1347	IC0478940	109	570	110	156	123	129	114	92	397.9	1289	2389	369	4610	144	2466	200	397.9	1200	9056	242	7377	35	5610	153
1348	IC0478942	121	137	115	67	87	1184	107	338	709.3	305	2278	436	2830	1162	1939	857	415.2	1169	6444	554	5539	878	4133	632
1349	IC0478943	102	1041	104	327	90	1129	99	962	536.3	1001	1889	699	2989	1036	1805	1032	711.2	325	7667	380	4865	1061	4414	508
1350	IC0478944	106	792	120	34	121	206	115	53	640.1	548	2778	192	3583	663	2334	335	422.6	1160	10278	152	5768	758	5489	178
1351	IC0478948	100	1127	109	178	108	652	105	491	674.7	407	2444	353	3669	620	2263	405	645.1	508	10611	134	4989	1011	5415	195
1352	IC0478950	110	498	118	40	85	1212	104	569	449.8	1213	2556	296	2876	1129	1960	823	689.6	398	9278	228	4376	1246	4781	368
1353	IC0478951	108	647	107	215	109	579	108	288	570.9	800	1778	775	2911	1108	1753	1082	536.3	879	6500	545	4712	1117	3916	752
1354	IC0478955	100	1112	101	483	85	1210	95	1159	467.1	1206	2833	181	3144	928	2148	549	422.6	1165	8500	283	4536	1180	4486	482
1355	IC0478975	107	778	109	177	90	1138	102	736	1159.2	8	1111	1226	4344	225	2205	478	467.1	1078	8278	323	5844	710	4863	346
1356	IC0479006	118	220	90	975	125	95	111	160	666.2	434	1778	803	3652	631	2032	713	689.6	384	3833	1021	5431	906	3318	1069
1357	IC0479020	104	926	112	118	117	300	111	159	276.8	1362	2333	393	2930	1092	1847	981	694.9	351	7944	352	5803	733	4814	356
1358	IC0479028	112	417	108	207	93	1062	104	594	640.1	546	1722	823	3049	994	1804	1033	812.8	177	9611	200	5283	943	5236	247
1359	IC0479048	98	1177	101	447	83	1245	94	1210	570.9	802	2333	410	3998	398	2301	361	666.2	435	7722	371	7278	68	5222	251
1360	IC0479072	111	481	112	108	111	484	111	144	674.7	401	1556	947	4724	121	2318	349	533.9	898	2500	1260	6917	193	3317	1072
1361	IC0479098	111	453	103	384	109	594	108	330	709.3	306	1444	1038	3796	527	1983	780	622.8	588	4944	818	6732	279	4100	647
1362	IC0479124	113	338	100	522	119	257	110	185	484.4	1160	1444	1046	3872	477	1934	870	812.8	181	2111	1311	5976	636	2967	1222
1363	IC0479146	108	652	109	170	94	1033	104	632	726.6	243	2444	352	4987	71	2719	69	761.4	215	3722	1053	6666	297	3717	861
1364	IC0479148	109	600	105	303	127	84	113	99	363.3	1326	2389	373	4684	128	2479	190	837.5	146	7167	446	6095	573	4700	391
1365	IC0479179	98	1174	101	456	107	675	102	719	882.4	108	3000	136	4636	135	2839	33	650.5	481	8778	258	6136	555	5188	262
1366	IC0588016	125	67	115	62	113	406	118	33	603.4	681	2111	539	4146	307	2287	376	709.1	338	15944	9	6716	282	7790	10
1367	IC0588023	107	784	103	401	87	1175	99	945	486.6	1144	2444	355	2322	1326	1751	1085	899.7	116	2778	1220	4262	1289	2646	1311
1368	IC0588025	108	649	113	87	87	1189	103	675	632.2	560	1222	1182	3835	503	1896	916	899.7	112	3889	1015	6256	491	3682	883



S.No	Acc. No	Plant Height								Grain Yield (kg/ha)								Fodder Yield (kg/ha)							
		ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R	ALMO	R	MAND	R	VIZ	R	INDIA (3)	R
1369	IC0588027	103	955	106	261	118	265	109	237	501.7	1121	2111	544	2971	1047	1861	963	882.4	125	6778	512	6382	427	4681	393
1370	IC0588028	119	175	107	232	105	730	110	200	1051	22	1333	1127	2903	1114	1762	1076	207.6	1348	9056	248	6988	164	5417	194
1371	IC0588030	100	1136	110	153	91	1105	100	849	720.2	270	1500	987	3452	749	1891	923	155.7	1368	7667	383	5980	635	4601	432
1372	GE4449	106	839	90	976	85	1207	94	1222	850.4	120	2261	472	3095	955	2069	660	677.9	409	6656	531	5058	993	4131	635
1373	KMR204	106	785	95	739	98	914	100	866	683.6	389	2711	246	4564	159	2653	94	700.7	347	7042	467	6758	266	4834	351
1374	KMR301	108	708	109	182	107	670	108	320	699.2	331	3789	32	3309	835	2599	120	848.2	135	9598	202	5895	683	5447	190
1375	UduruMallige	108	707	94	794	97	958	99	901	697.3	332	1628	911	3107	947	1811	1027	820.9	160	5930	656	5307	937	4019	695
	Mean	108		96		104		103		617		2001		3575		2065		649.5		6196		5780		4209	
	CD 5%	0.57		0.85		1.02		0.5		8.82		39.81		41.16		20.1		32.42		168.1		51.11		59.7	
	CD 1%	0.75		1.12		1.35		0.6		11.59		52.35		54.13		26.4		42.63		221.04		67.2		78.5	
	CV %	10.08		16.79		18.61		8.8		27.14		37.78		21.86		18.4		94.81		51.53		16.79		26.8	

Annexure Table 17: Finger millet germplasm 1375 acc. (2500 acc.) characterization and screening and ranking for leaf blast, neck blast and finger blast

S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
1	IC0007218	6	3	7	16.7	14.2	20	3.7	4.9	40
2	IC0007579	4	5	7	6.5	20.6	40	4.5	6.3	60
3	IC0007951	7	6	5	11.1	37.4	0	4.1	7.6	0
4	IC0007952	7	7	4	12.9	32.7	0	3.8	11	10
5	IC0043274	7	3	3	7.1	17	25	3	6.2	0
6	IC0043275	5	5	2	19.2	20	15	5.4	8.2	40
7	IC0043276	7	4	2	15.6	26.5	0	4.1	11.9	20
8	IC0044035	6	5	6	8.8	30	20	3.9	3.3	80
9	IC0045839	7	5	4	7.1	38.4	0	3	6.4	20
10	IC0045842	6	6	4	6.5	20.5	15	2.8	3	30
11	IC0045843	6	6	8	3.8	44.7	20	4.8	13.1	80
12	IC0045844	4	5	5	6.9	10	0	3.7	1.9	0
13	IC0045845	5	7	3	6.5	20.5	0	2.7	2.6	0
14	IC0045847	5	7	6	15.6	51.1	25	4.1	10.9	70
15	IC0045849	7	2	4	16.7	3.8	0	3.7	2.3	0
16	IC0045850	7	3	7	6.5	27.3	20	4.5	2.4	50
17	IC0045851	7	4	5	10.3	10.1	0	3.9	1	0
18	IC0045852	5	4	5	7.1	20	0	3	3.8	0
19	IC0045854	7	4	6	13.8	6	0	4.5	1.3	0
20	IC0045855	5	4	8	11.1	22.4	20	4.1	3.6	40
21	IC0045858	5	8	6	16.7	21.4	0	3.7	4.9	0
22	IC0045858-X	7	7	4	19.2	33.3	0	6.6	5.4	0
23	IC0045859	5	6	4	15.6	32.7	20	4.1	6.6	0
24	IC0045860	5	7	6	10.3	47.1	20	3.9	9.8	50
25	IC0045862	5	7	8	6.5	25.6	30	4.5	8.3	80
26	IC0045863	6	6	3	8.8	37.6	0	3.9	7.6	0
27	IC0045864	6	4	8	13.8	21.9	30	4.5	7.7	80
28	IC0045865	7	5	3	11.1	17.1	0	4.1	2.7	20
29	IC0045866	6	8	4	6.5	60.2	0	2.8	11.7	0
30	IC0045867	5	7	6	6.9	28.7	0	3.7	3.3	0
31	IC0045868	5	5	3	16.7	44.1	10	3.7	6.7	10
32	IC0045869	7	6	3	10.3	32.5	0	3.9	10.1	10
33	IC0045874	4	6	6	7.1	34.6	0	3	8.2	50
34	IC0045878	7	7	4	7.1	64.3	10	3	11.1	0
35	IC0045880	5	3	3	18.8	26.8	0	4.4	8.5	10

S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
36	IC0049931	7	9	4	0	39.8	0	4.8	9.1	0
37	IC0049934	6	9	5	15.6	42.7	0	4.1	6.9	0
38	IC0049935	6	5	5	8.8	25	0	3.9	4.7	0
39	IC0049936	6	5	4	6.5	19	0	2.8	4.8	20
40	IC0049937	7	3	5	6.9	16.7	0	3.7	3.6	0
41	IC0049939	7	3	4	12.5	30.4	0	3.6	3.9	0
42	IC0049940	7	2	3	8.8	35.2	0	3.9	4.5	0
43	IC0049941	5	4	3	8.8	25.5	10	3.5	6	15
44	IC0049942	8	8	4	6.5	20.8	0	4.5	7.6	0
45	IC0049944	8	8	4	0	63.3	0	4.5	5.1	0
46	IC0049947	5.5	5.5	2	11.6	20.8	5	3.2	4.1	25
47	IC0049949	6	8	6	12.9	30.9	0	3.8	6.9	0
48	IC0049951	7	7	6	18.8	35.2	0	4.4	5.7	0
49	IC0049953	7	8	8	8.8	39.3	20	3.5	8.7	20
50	IC0049955	7	8	8	6.5	46	80	2.7	8.4	80
51	IC0049956	5	7	3	12.5	23.9	0	3.6	2.8	0
52	IC0049958	5	4	4	16.7	42.9	50	3.7	10	20
53	IC0049960	7	4	5	8.8	36.7	0	3.9	11.1	0
54	IC0049964	7	7	4	7.1	18.9	20	3	4.3	40
55	IC0049965	5	7	2	0	48.7	0	3.9	11.7	0
56	IC0049966	7	8	6	7.1	38.8	20	3	4.6	0
57	IC0049967	5	9	6	19.2	34.7	20	5.4	7.9	40
58	IC0049969	4	5	6	8.8	41.3	20	3.9	4.4	20
59	IC0049973	4	7	3	19.2	20.5	10	7.2	4.5	20
60	IC0049974	5	8	3	15.6	20	15	4.1	4	25
61	IC0049976	6	5	6	8.8	27.5	0	3.9	7.5	0
62	IC0049977	7	6	8	6.5	29	50	2.8	8.4	80
63	IC0049979	6	4	2	6.5	34	25	2.7	4.8	40
64	IC0049979-X	5	8	2	10.3	25.5	20	3.9	2.9	20
65	IC0049981	5	6	3	16.7	16	0	3.7	9	0
66	IC0049982	7	5	4	6.9	19.6	0	3.7	5.8	0
67	IC0049983	5	6	2	16.7	11.8	10	3.7	3.5	50
68	IC0049986	7	5	6	6.5	33.7	20	4.5	5.8	0
69	IC0049988	7	4	7	10.3	21.3	10	3.9	4.8	30
70	IC0049991	6	4	5	16.7	16.1	0	3.7	5	10



S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
71	IC0049992	5	9	4	11.1	51.8	0	4.1	9.5	10
72	IC0049993	5	7	6	16.7	20	0	3.7	7	0
73	IC0049995	5	8	5	6.5	21.6	0	4.5	6.1	0
74	IC0049995-X	5	6	5	6.5	35.7	0	4.5	10.2	10
75	IC0049996	4	5	5	13.8	53.3	0	4.5	4.9	0
76	IC0049999	7	7	5	13.8	13.7	0	4.5	4.5	20
77	IC0049999-X	7	4	4	11.5	26.7	20	4.8	6.9	10
78	IC0050000	6	4	6	11.1	39	0	4.1	9.4	20
79	IC0050011	6	6	3	7.1	30.4	0	3	2.4	0
80	IC0050015	6	4	3	19.2	21.8	10	5.4	4.5	0
81	IC0050015-X	7	3	3	15.6	44.7	0	4.1	6.5	15
82	IC0053739	7	5	7	7.1	0	60	3	1.6	70
83	IC0065559	5	6	4	11.1	30.6	0	4.1	8	0
84	IC0065595	6	6	4	12.9	10.7	0	3.8	2.5	0
85	IC0065632	5	4	4	6.1	21.4	0	3.9	4.8	20
86	IC0065674	6	3	6	18.8	23.5	10	4.4	3.7	10
87	IC0065694-X	7	2	2	8.8	24.3	0	3.9	7.5	0
88	IC0065698-X1	6	3	4	6.5	33.7	0	2.8	5.6	20
89	IC0065699	5	7	7	13.8	34.8	0	4.5	4.7	0
90	IC0065699-X	6	2	7	6.9	36.3	0	3.7	5.6	30
91	IC0065922	4	6	2	11.1	13.6	0	4.1	1.3	10
92	IC0065946	5	5	3	8.8	35.6	0	3.5	4	0
93	IC0065956	6	5	3	12.5	26.7	0	3.6	9.9	0
94	IC0065966	5	7	3	16.7	14.2	0	3.7	3.9	20
95	IC0065983	5	7	6	6.5	20.5	40	4.5	3.5	30
96	IC0065984	7	2	3	8.8	20.5	0	3.9	6	0
97	IC0065985	5	4	8	6.5	32	0	4.5	6.8	20
98	IC0066048	6	6	2	11.1	23.6	0	4.1	3.6	0
99	IC0066088-X1	5	3	3	13.8	26.8	10	4.5	8.1	15
100	IC0066128	5	6	7	11.1	22.9	20	4.1	3.6	40
101	IC0066132	6	6	6	16.7	43.7	0	3.7	10.2	30
102	IC0066140-X1	5	4	2	12.9	25	10	3.8	4	20
103	IC0066172	5	5	6	6.1	26.6	10	3.9	3.5	25
104	IC0066178-X1	7	4	5	6.5	24.3	10	2.8	3.8	25
105	IC0066255	6	5	4	6.9	21.6	10	3.7	4.9	25
106	IC0069583	5	5	3	15.6	17.6	0	4.1	1.3	20
107	IC0069594	6	3	4	6.5	31.2	0	2.7	7.8	0
108	IC0069598	5	3	2	8.8	13.3	0	3.9	1	0
109	IC0069598-X	4	6	6	19.2	33.3	0	6	8.1	50
110	IC0071331	7	8	8	6.5	10.2	0	4.5	2.8	30
111	IC0071331-X1	5	3	3	16.7	35.3	35	3.7	10.6	20
112	IC0071333	7	5	4	13.8	14.8	10	4.5	2.4	20
113	IC0071335	5	5	6	6.5	43.4	15	4.5	4.4	50
114	IC0071338	5	5	2	11.1	10.2	0	4.1	1.4	0
115	IC0071345	7	7	6	12.9	30.5	0	3.8	5.2	0
116	IC0071355	7	6	3	18.8	28.6	0	4.4	7.9	0
117	IC0071357	6	7	6	6.1	45	0	3.9	6.3	20
118	IC0071359	5	7	6	13.8	21.2	0	4.5	4.5	10
119	IC0071365	6	5	4	11.1	19.6	0	4.1	3.2	35
120	IC0071365-X	6	8	2	18.8	20.6	0	4.4	2.8	0

S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
121	IC0071373-X	5	8	4	6.5	17.1	0	2.7	2.8	10
122	IC0071377	6	6	2	6.1	8.5	0	3.9	1.4	0
123	IC0071379	2	5	2	10.3	13.4	0	3.9	4.3	0
124	IC0071380	7	8	6	7.1	28.6	10	3	4.7	20
125	IC0071381	7	7	6	0	17.8	0	4.8	2.8	20
126	IC0071382	2	8	6	15.6	4.1	0	4.1	1.5	50
127	IC0071383	7	9	5	8.8	18.4	0	3.9	7.1	40
128	IC0071389	7	7	3	6.5	23.1	10	2.8	7.2	20
129	IC0071393	8	9	4	6.9	41.1	0	3.7	6.8	0
130	IC0071395	6	4	2	12.9	15.8	0	3.8	3.5	0
131	IC0071396	8	6	2	16.7	22.4	10	3.7	7.1	30
132	IC0071397	8	5	4	10.3	13.9	15	3.9	3.1	35
133	IC0071398	7	6	6	7.1	18.5	10	3	2.1	10
134	IC0071399	7	8	3	19.2	7.6	0	5.4	2.6	0
135	IC0071401	7	4	6	8.8	8.9	0	3.9	3.6	0
136	IC0071402	8	8	4	6.5	22.4	0	2.8	5.3	0
137	IC0071403	7	9	4	6.9	10.7	10	3.7	1.2	10
138	IC0071404	5	9	6	12.5	11.1	25	3.6	1.2	40
139	IC0071405	6	7	5	8.8	6.1	10	3.9	1.5	10
140	IC0071406	7	4	4	6.5	11.2	5	4.5	1.3	5
141	IC0071407	7	3	2	13.8	13.4	25	4.5	3.8	20
142	IC0071408	7	6	4	11.1	18.4	0	4.1	2.1	20
143	IC0071409	5	3	5	16.7	15.2	0	3.7	3.5	10
144	IC0071410	8	5	6	12.9	10.4	0	3.8	0.9	0
145	IC0071411	6	5	2	6.1	23.4	0	3.9	5.2	0
146	IC0071412	7	5	2	6.5	16.7	30	2.8	4.8	45
147	IC0071413	5	6	5	18.8	25.6	0	4.4	4.5	20
148	IC0071418	3	7	3	8.8	23.9	0	3.5	3.9	0
149	IC0071419	6	6	5	6.9	9.3	0	3.7	2.8	0
150	IC0071420	5	6	4	16.7	25.5	0	3.7	8.2	0
151	IC0073541	7	2	5	16.7	13.9	40	3.7	3.8	30
152	IC0087466	5	3	4	6.5	33.3	0	4.5	7.8	0
153	IC0087486	6	4	4	13.8	25.3	0	4.5	4.6	20
154	IC0087492	6	6	7	11.1	27.3	20	4.1	5.8	50
155	IC0087497	6	6	4	12.9	36.5	20	3.8	10.1	50
156	IC0087500	7	5	7	6.1	35	20	3.9	9	50
157	IC0087501	6	7	7	18.8	35.7	20	4.4	7.1	50
158	IC0087503	7	7	7	8.8	22.5	10	3.5	5	20
159	IC0087510	6	6	8	6.1	35.9	20	3.9	9.1	80
160	IC0087514-X	5	5	8	18.8	22.5	20	4.4	5.3	80
161	IC0087522	5	5	6	7.1	29.4	20	3	6.7	10
162	IC0087523	5	8	6	19.2	26.9	50	6	5.5	80
163	IC0087524	6	4	8	8.8	40	20	3.5	13	80
164	IC0087525	5	3	8	8.8	42.1	20	3.9	8.3	80
165	IC0087530	5	5	8	6.5	23.1	20	2.8	5.7	50
166	IC0087533	7	8	6	8.8	23.1	0	3.9	5.6	20
167	IC0087539	7	7	2	6.9	28	20	3.7	5.6	20
168	IC0087540	6	5	3	16.7	25.5	0	3.7	6.1	0
169	IC0096774	7	4	6	6.5	46.8	20	2.8	7	50
170	IC0096775	8	6	7	6.9	69.1	0	3.7	15.9	0



S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
171	IC0096776	5	7	7	12.5	38.1	0	3.6	10.8	0
172	IC0096777	5	8	5	8.8	46.7	15	3.9	9.9	35
173	IC0096781	7	6	4	6.5	61.4	15	4.5	9.5	20
174	IC0096782	7	7	6	13.8	38.8	0	4.5	9.8	0
175	IC0096783	7	6	2	11.1	43.3	0	4.1	8.2	0
176	IC0096785	7	2	4	12.9	61.9	20	3.8	14.9	30
177	IC0096793	6	5	4	6.1	28.6	0	3.9	7.3	0
178	IC0096810	5	8	4	6.5	33.3	0	2.8	5.9	0
179	IC0096815	5	4	5	6.9	26.9	0	3.7	6.9	50
180	IC0096817	4	3	5	6.5	10.2	15	2.7	1.4	25
181	IC0096844	6	3	5	16.7	16.1	0	3.7	1.9	0
182	IC0096876	7	5	5	6.5	10	0	4.5	1.1	0
183	IC0141286	7	6	4	6.1	16.1	0	3.9	4.3	0
184	IC0141287	7	9	4	6.5	23.6	20	2.8	6.5	20
185	IC0141289	7	6	5	6.5	46.7	0	2.7	4.9	0
186	IC0200123	4	7	7	18.8	17.5	30	4.4	1.9	60
187	IC0354382	7	8	7	10.7	10.7	30	4.5	2.6	80
188	IC0354385	7	2	5	6.9	0	20	3	7.1	60
189	IC0473254	6	2	8	6.5	36.4	15	2.7	8.5	70
190	IC0473263	6	6	7	16.7	31.7	10	3.7	7.7	50
191	IC0473276	7	5	6	10.3	34.3	10	3.9	8	20
192	IC0473422	5	7	8	6.9	25.2	25	3.7	7.2	50
193	IC0473423	7	8	8	12.5	21.4	10	3.6	4.7	20
194	IC0473424	4	9	7	8.8	18.7	10	3.9	3.8	15
195	IC0473425	5	8	8	6.5	28.6	10	4.5	8.9	25
196	IC0473426	4	7	8	13.8	20.6	15	4.5	3.4	25
197	IC0473427	5	3	6	11.1	22.5	10	4.1	5.3	20
198	IC0473429	5	5	3	12.9	25	0	3.8	5	0
199	IC0473431	6	4	5	18.8	36	20	4.4	6.6	25
200	IC0473432	5	5	5	8.8	20.4	10	3.5	2.8	25
201	IC0473433	5	4	8	6.5	14.7	50	2.7	3.4	70
202	IC0473435	7	3	8	16.7	18.6	50	3.7	4.1	70
203	IC0473436	6	3	7	10.3	20.4	20	3.9	4.5	50
204	IC0473437	7	6	3	7.1	24.8	0	3	5.1	20
205	IC0473438	5	6	3	19.2	29.5	0	5.4	3.8	0
206	IC0473440	7	7	3	15.6	22	0	4.1	2.8	20
207	IC0473441	6	7	5	8.8	15	10	3.9	1.4	15
208	IC0473442	5	8	4	6.5	22.8	10	2.8	3.2	15
209	IC0473444	7	7	3	6.9	13	0	3.7	2.1	0
210	IC0473445	6	6	5	6.5	23.7	0	2.7	3.7	15
211	IC0473446	5	5	3	16.7	25	0	3.7	3.1	20
212	IC0473447	6	7	8	6.5	29	20	4.5	5.8	90
213	IC0473450	4	8	9	13.8	26.9	50	4.5	2.8	90
214	IC0473452	5	4	9	11.1	24.7	50	4.1	3.3	90
215	IC0473453	6	5	9	16.7	26.5	50	3.7	3.1	90
216	IC0473454	6	6	9	6.5	19.5	60	4.5	2.7	90
217	IC0473455	6	6	7	13.8	15.5	50	4.5	2.5	80
218	IC0473456	5	7	8	11.1	13.6	50	4.1	2.1	80
219	IC0473457	5	8	8	12.9	23.7	50	3.8	3.7	80
220	IC0473462	4	8	7	18.8	26.2	50	4.4	7.2	80

S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
221	IC0473463	5	8	5	8.8	28.3	50	3.5	4	80
222	IC0473464	5	7	6	6.1	25.8	50	3.9	3.9	80
223	IC0473465	7	6	5	0	33.6	50	4.4	7.7	80
224	IC0473475	7	4	4	8.8	34.7	40	3.5	4.1	60
225	IC0473479	7	4	2	13.8	15.3	0	4.5	2.6	10
226	IC0473482	7	8	8	11.1	30.1	80	4.1	9.9	90
227	IC0473483	7	6	6	16.7	38.8	20	3.7	8.2	50
228	IC0473485	6	6	3	6.5	45.9	0	4.5	11.9	20
229	IC0473487	5	7	5	13.8	33	0	4.5	7.8	20
230	IC0473489	7	8	6	11.1	27.5	20	4.1	6.5	50
231	IC0473490	5	7	6	12.9	21.9	0	3.8	4.3	20
232	IC0473491	5	4	6	6.1	24.3	0	3.9	3.9	0
233	IC0473492	5	3	7	18.8	29.1	20	4.4	7.5	50
234	IC0473493	7	5	4	8.8	32.2	0	3.5	5.5	20
235	IC0473494	4	6	6	16.7	23.7	0	3.7	5.6	20
236	IC0473496	6	5	5	6.5	22.2	40	2.7	1.8	80
237	IC0473497	5	3	5	16.7	28	25	3.7	3.4	30
238	IC0473498	5	6	6	0	20	25	3.9	4.7	40
239	IC0473500	6	6	7	7.7	24.7	20	4.8	4.6	20
240	IC0473501	5	7	7	3.1	25	10	4.1	5.4	30
241	IC0473502	4	3	7	8.8	25	15	3.9	9.3	30
242	IC0473503	5	3	6	6.5	17.3	20	2.8	4.1	30
243	IC0473504	6	5	6	6.9	21.1	20	3.7	3.5	40
244	IC0473505	5	3	8	15.6	17.3	20	4.1	2	50
245	IC0473506	5	2	4	8.8	25.6	10	3.9	4.3	80
246	IC0473508	5	6	2	6.5	17.9	15	2.8	2.5	25
247	IC0473509	6	6	4	6.9	18.2	10	3.7	4.9	20
248	IC0473510	5	4	6	12.5	15.2	10	3.6	2.4	30
249	IC0473511	5	7	6	8.8	13.3	25	3.9	2.3	35
250	IC0473512	4	6	6	6.5	15.5	25	4.5	1.9	35
251	IC0473513	5	5	5	13.8	14	20	4.5	3.4	60
252	IC0473514	5	6	5	11.1	20	30	4.1	5	50
253	IC0473515	5	4	4	12.9	29.5	10	3.8	6.9	20
254	IC0473516	4	7	6	6.1	31.9	0	3.9	7.2	0
255	IC0473518	4	8	3	6.5	51.7	10	2.8	11	35
256	IC0473522	5	7	5	6.9	37.5	20	3.7	9.3	25
257	IC0473523	3	6	4	6.5	30.1	15	2.7	4.6	40
258	IC0473524	6	6	4	16.7	16.7	10	3.7	2.3	20
259	IC0473527	5	8	5	6.5	23.7	0	4.5	6.3	0
260	IC0473528	5	8	4	13.8	19.4	0	4.5	1.9	10
261	IC0473529	5	3	6	11.1	16.7	40	4.1	2.1	60
262	IC0473531	5	3	5	16.7	11.2	30	3.7	1.6	50
263	IC0473534	4	6	6	6.5	22.6	20	4.5	6.9	25
264	IC0473535	6	7	6	13.8	25.5	0	4.5	6.7	0
265	IC0473536	5	6	5	11.1	12	0	4.1	4.1	0
266	IC0473537	6	8	5	12.9	20.6	0	3.8	3.5	0
267	IC0473539	6	5	3	6.1	16.3	0	3.9	1.8	0
268	IC0473543	7	6	4	18.8	15.8	0	4.4	3.3	20
269	IC0473544	4	2	4	15.6	6.9	0	4.1	2.2	30
270	IC0473553	6	6	4	6.1	12.7	0	3.9	1.7	20



S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
271	IC0473560	5	4	3	18.8	23	0	4.4	5.2	20
272	IC0473561	4	6	7	8.8	11.8	20	3.5	1.6	60
273	IC0473563	4	3	4	6.5	16.3	10	2.7	1.3	20
274	IC0473564	5	7	3	16.7	25.6	20	3.7	5.3	10
275	IC0473565	5	7	5	10.3	14.6	10	3.9	4.1	40
276	IC0473566	6	4	5	7.1	15.9	10	3	2.1	40
277	IC0473568	5	5	6	19.2	11.2	15	7.8	1.5	50
278	IC0473570	5.5	5	5	12.2	13.8	17.5	4	2.4	60
279	IC0473580	5	4	4	16.7	15.3	10	3.7	1.7	25
280	IC0473583	5	4	5	10.3	21	0	3.9	2.3	0
281	IC0473592	8	5	5	10.3	27.5	0	3.9	4.5	0
282	IC0473594	5	3	3	7.1	18.6	0	3	2.8	0
283	IC0473596	5	3	3	11.5	33.8	20	4.2	5	40
284	IC0473598	6	4	8	15.6	32.1	20	4.1	3.9	60
285	IC0473603	5	2	3	8.8	12.4	10	3.9	1.2	15
286	IC0473604	5	3	6	6.5	14.4	0	2.8	2.1	0
287	IC0473614	5	3	5	6.9	12.5	0	3.7	2.8	15
288	IC0473617	5	2	4	19.2	15.2	0	6	1.9	0
289	IC0473619	4	5	4	15.6	12.7	0	4.1	1.3	0
290	IC0473634	5	6	4	8.8	12.7	0	3.9	1.3	0
291	IC0473642	6	7	5	6.5	8.4	10	2.8	1.7	0
292	IC0473651	7	4	6	7.1	21	0	3	5.1	0
293	IC0473652	7	5	4	15.4	55.2	0	4.8	12.4	0
294	IC0473654	6	3	5	15.6	12.1	0	4.1	3.3	20
295	IC0473656	6	3	4	19.2	29.9	0	6.6	7	0
296	IC0473657	7	3	4	15.6	18	0	4.1	5.9	20
297	IC0473659	5	2	5	8.8	11.8	0	3.9	3	0
298	IC0473666	5	5	3	6.5	11.4	0	2.8	4.3	0
299	IC0473668	7	4	8	6.9	15.5	50	3.7	3.9	80
300	IC0473669	5	2	3	8.8	18.4	0	3.9	2.7	10
301	IC0473671	4	5	6	6.5	20.6	25	2.8	2.5	40
302	IC0473672	6	4	4	6.9	15.8	0	3.7	3.8	20
303	IC0473673	5	4	5	12.5	11.4	15	3.6	2.5	10
304	IC0473674	5	5	4	8.8	19.2	10	3.9	2.3	10
305	IC0473676	6	5	6	6.5	14.7	25	4.5	1.6	70
306	IC0473680	5	5	7	6.5	26.9	20	4.5	4.9	60
307	IC0473682	7	3	6	16.7	13.5	0	3.7	5.8	10
308	IC0473683	7	6	3	10.3	17.5	0	3.9	4.4	0
309	IC0473688	5	7	5	13.8	15.9	15	4.5	1.8	50
310	IC0473693	7	2	4	6.1	10.1	10	3.9	3.1	10
311	IC0473694	5	6	3	11.1	21.6	20	4.1	3.9	10
312	IC0473695	7	2	6	18.8	18.3	40	4.4	3.4	60
313	IC0473696	6	8	7	12.9	12	35	3.8	3.1	75
314	IC0473697	7	5	8	8.8	4.7	30	3.5	1.4	40
315	IC0473699	8	2	3	6.5	6.2	30	2.7	1.3	60
316	IC0473700	7	7	5	16.7	5.9	40	3.7	4.2	50
317	IC0473701	8	6	5	7.1	13.3	0	3	3.1	0
318	IC0473702	8	5	9	10.3	5.6	50	3.9	1.8	30
319	IC0473703	7	2	4	7.1	8.8	0	3	2.5	0
320	IC0473706	7	7	2	15.6	9.3	10	4.1	4.2	30

S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
321	IC0473708	6	2	6	8.8	3.1	0	3.9	0.9	0
322	IC0473709	8	2	6	6.5	5.4	0	2.8	2.3	0
323	IC0473710	5	5	3	6.9	11.3	0	3.7	1.6	0
324	IC0473711	4	2	6	6.5	11.8	10	2.7	2.1	20
325	IC0473713	6	2	6	16.7	19.4	20	3.7	3.5	20
326	IC0473714	4	2	4	6.5	0	20	4.5	2.9	50
327	IC0473715	4	2	7	13.8	14.3	20	4.5	6.5	10
328	IC0473717	3	5	9	11.1	20.6	30	4.1	2.1	20
329	IC0473718	6	2	4	12.9	3.7	10	3.8	4.8	0
330	IC0473720	7	2	3	18.8	8.7	20	4.4	5.9	0
331	IC0473723	5	2	3	8.8	8.3	10	3.5	4.1	0
332	IC0473728	4	2	6	6.1	2.8	10	3.9	3	0
333	IC0473729	7	2	4	18.8	11.9	20	4.4	3.1	0
334	IC0473730	5	2	3	8.8	8.3	10	3.5	1.7	0
335	IC0473733	5	2	3	6.5	20	20	2.7	2.7	0
336	IC0473734	6	5	3	16.7	11.8	10	3.7	5.1	0
337	IC0473735	4	5	3	10.3	6.8	10	3.9	4.1	0
338	IC0473739	5	6	3	8.8	17.3	10	3.5	2.3	0
339	IC0473740	5	2	2	7.1	7.1	20	3	2.1	0
340	IC0473742	7	2	2	7.7	4.8	10	4.8	4.2	20
341	IC0473748	7	7	4	19.2	16.1	0	6.6	5.9	30
342	IC0473750	6	4	5	6.5	7.8	0	2.7	2.4	20
343	IC0473754	6	6	4	15.6	0	0	4.1	2.2	0
344	IC0473756	5	5	5	8.8	0	10	3.9	3.8	20
345	IC0473761	3	2	3	6.9	10	0	3.7	4.2	0
346	IC0473763	6	7	5	16.7	14.7	0	3.7	5.3	10
347	IC0473764	5	6	4	10.3	18.8	0	3.9	0.2	0
348	IC0473765	6	6	6	7.1	12.2	10	3	3	40
349	IC0473766	5	2	6	10.3	5.2	20	3.9	6.9	40
350	IC0473767	6	2	5	3.8	21.2	0	5.4	2.5	0
351	IC0473768	6	4	2	15.6	20.2	0	4.1	4.9	0
352	IC0473769	4	7	6	7.1	4.2	10	3	4.5	30
353	IC0473770	5	6	8	8.8	13.6	20	3.9	3.6	80
354	IC0473771	5	2	6	6.9	2.8	20	3.7	4.4	25
355	IC0473774	5	2	3	12.5	5.4	0	3.6	6.9	0
356	IC0473776	6	2	4	6.3	11	0	4.1	3.1	25
357	IC0473778	6	2	5	8.8	16.3	10	3.9	2.1	5
358	IC0473779	6	3	3	6.5	28.6	15	2.8	2.5	15
359	IC0473780	4	2	4	6.5	0	0	4.5	3.8	0
360	IC0473781	4	5	4	6.9	13.4	0	3.7	1.2	0
361	IC0473783	4	5	3	13.8	1.7	0	4.5	5.2	0
362	IC0473784	5	2	2	6.5	10.1	20	2.7	2.2	20
363	IC0473786	5	4	4	16.7	14.7	15	3.7	2.2	30
364	IC0473787	4	3	3	6.5	19.6	10	4.5	2.5	25
365	IC0473788	4	3	6	0	22.8	10	4.5	3.3	10
366	IC0473789	3	5	5	11.1	11.8	0	4.1	1.1	20
367	IC0473790	5	3	5	16.7	10.2	0	3.7	1.2	15
368	IC0473791	6	2	3	6.5	15.9	0	4.5	2.3	0
369	IC0473792	5	4	4	13.8	28	0	4.5	4.4	0
370	IC0473793	4	2	5	11.1	15.4	20	4.1	2.2	0



S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
371	IC0473795	4	5	4	12.9	8.7	0	3.8	0.8	0
372	IC0473797	3	2	3	6.1	10.2	0	3.9	1.3	0
373	IC0473798	5	2	5	12.9	10.3	0	3.8	2.4	20
374	IC0473802	5	5	4	6.5	29.9	20	2.8	3.2	30
375	IC0473804	5	2	5	18.8	11.2	0	4.4	3.7	15
376	IC0473805	6	3	4	18.8	15.9	10	4.4	2.1	15
377	IC0473806	5	5	3	8.8	9.6	0	3.5	4.5	0
378	IC0473807	5	7	5	6.5	2.9	0	2.7	1.4	20
379	IC0473808	4	9	6	16.7	2	10	3.7	3.4	30
380	IC0473809	5	9	4	10.3	0.9	0	3.9	2.2	10
381	IC0473810	3	8	4	7.1	1.8	0	3	2.8	0
382	IC0473811	6	6	3	8.8	13.3	0	3.5	1.7	20
383	IC0473813	5	7	6	6.1	10.2	0	3.9	1	0
384	IC0473814	4	5	3	6.9	18.5	0	3.7	2.6	0
385	IC0473815	3	8	5	19.2	3.7	0	5.4	2	30
386	IC0473816	3	6	3	15.6	4.2	0	4.1	1.1	0
387	IC0473817	4	6	5	8.8	4.7	0	3.9	2.9	0
388	IC0473818	5	7	4	18.8	10.3	0	4.4	1.6	0
389	IC0473819	5	5	5	8.8	19.3	0	3.5	2.6	0
390	IC0473823	5	5	6	6.9	2.6	0	3.7	2.6	0
391	IC0473825	5	4	3	0	40	0	2.7	6.2	0
392	IC0473826	5	9	4	6.5	2.8	0	2.7	3.3	0
393	IC0473827	4	3	4	16.7	17.3	0	3.7	2.6	20
394	IC0473829	4	2	7	10.3	13.4	15	3.9	1.5	40
395	IC0473832	4	8	4	16.7	1.9	0	3.7	1	0
396	IC0473833	5	3	5	7.1	9.1	0	3	1.1	20
397	IC0473835	4	3	4	19.2	14.3	0	5.4	4.5	20
398	IC0473837	4	2	2	11.1	0	20	4.1	0.8	15
399	IC0473838	4	2	1	16.7	6.3	0	3.7	3.2	0
400	IC0473841	3	2	4	6.5	0	0	4.5	1	0
401	IC0473842	5	6	4	15.6	22.8	0	4.1	5.1	15
402	IC0473844	5	7	6	13.8	15.1	0	4.5	4.5	20
403	IC0473845	5	1	4	11.1	0	0	4.1	2	0
404	IC0473846	5	4	3	6.5	11.8	0	2.8	3.7	30
405	IC0473847	5	2	3	12.9	3.7	0	3.8	2.8	0
406	IC0473850	6	4	5	6.9	15.3	20	3.7	2.8	15
407	IC0473851	3	3	2	16.7	20.6	25	3.7	4.6	45
408	IC0473853	5	5	3	10.3	10.7	15	3.9	2.6	35
409	IC0473854	7	2	4	6.5	12.2	0	2.8	2.8	0
410	IC0473855	7	5	5	6.9	11.4	20	3.7	3.1	30
411	IC0473856	5	3	5	12.5	14	10	3.6	3.8	50
412	IC0473857	5	2	4	6.1	4.7	0	3.9	5.8	0
413	IC0473859	4	3	4	8.8	15.5	10	3.9	3.5	0
414	IC0473863	6	7	5	6.5	21.4	20	4.5	4.7	60
415	IC0473864	5	6	2	16.7	7.1	0	3.7	3.7	0
416	IC0473865	4	8	2	10.3	11.5	25	3.9	3.7	40
417	IC0473866	4	8	4	13.8	25.8	15	4.5	3.3	40
418	IC0473867	4	6	6	11.1	12.4	0	4.1	1.5	60
419	IC0473868	4	9	6	7.1	10.5	10	3	4.1	10
420	IC0473872	7	2	3	8.8	1.9	0	3.9	2.2	0

S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
421	IC0473873	4	4	8	12.9	9.3	40	3.8	2.2	70
422	IC0473875	4	3	7	6.1	11.9	40	3.9	0.5	40
423	IC0473876	6	5	4	6.5	12.4	0	2.8	3.4	0
424	IC0473877	7	5	2	6.5	1.8	20	2.8	1.3	15
425	IC0473878	7	6	4	6.9	0	0	3.7	4.9	0
426	IC0473883	6	7	6	15.4	3.3	0	7.8	2.2	20
427	IC0473884	4	2	4	15.6	3.7	0	4.1	1.4	0
428	IC0473885	4	1	5	8.8	1.9	0	3.9	0.7	30
429	IC0473887	7	5	4	4.3	5.2	0	3.3	5.7	30
430	IC0473888	4	2	7	13.8	4.5	20	4.5	1.3	40
431	IC0473889	7	6	6	11.1	12.8	0	4.1	3.5	20
432	IC0473890	7	2	2	12.9	10.8	15	3.8	3.3	0
433	IC0473892	5	1	4	6.1	6.8	0	3.9	4.9	0
434	IC0473916	4	8	3	6.5	22.8	0	2.7	7	0
435	IC0473919	7	8	3	13.8	18.6	0	4.5	6	0
436	IC0473920	8	8	4	11.1	14.4	0	4.1	5.7	0
437	IC0473921-X	8	6	2	16.7	17.8	10	3.7	5.8	20
438	IC0473922	6	7	6	6.5	15.2	0	4.5	6.7	0
439	IC0473923	7	6	4	13.8	16.8	0	4.5	4.2	0
440	IC0473924	8	7	4	11.1	32.4	0	4.1	7.1	0
441	IC0473925	7	6	4	12.9	14.1	0	3.8	4.1	20
442	IC0473927	8	5	6	18.8	6.7	0	4.4	4.6	0
443	IC0473928	6	6	3	8.8	26.8	0	3.5	7.7	0
444	IC0473929	7	2	5	6.1	29.6	0	3.9	4.3	0
445	IC0473930	5	2	3	18.8	14.1	0	4.4	4.7	0
446	IC0473931	6	1	4	8.8	2.8	10	3.5	4.2	0
447	IC0473932	3	2	4	6.5	51	0	2.7	6.9	0
448	IC0473933	5	6	6	16.7	31.4	0	3.7	5.6	20
449	IC0473936	6	8	5	19.2	19.4	0	6	6.6	0
450	IC0473937	7	7	4	15.6	3.4	0	4.1	3.2	0
451	IC0473942	5	4	7	6.9	11.5	0	3.7	1.7	50
452	IC0473943	7	1	5	6.5	18.3	0	2.8	3	0
453	IC0473944	6	2	3	6.9	4.2	0	3.7	3.2	0
454	IC0473945	5	1	5	16.7	0	0	3.7	3.5	0
455	IC0473946	4	5	4	10.3	7.3	0	3.9	4.8	0
456	IC0473952	5	5	4	7.1	7.5	0	3	3.9	0
457	IC0473954	5	2	5	19.2	0	0	5.4	2.5	0
458	IC0473955	5	4	8	6.5	15.3	40	2.7	2.2	80
459	IC0473956	5	3	7	16.7	26.1	20	3.7	4.5	70
460	IC0473958	4	2	6	6.5	26.4	10	4.5	4	70
461	IC0473962	4	5	4	0	12.4	0	4.5	3	0
462	IC0473963	6	6	3	11.1	11.4	0	4.1	1.7	0
463	IC0473965	5	6	4	16.7	17.1	0	3.7	2.1	0
464	IC0473966	7	3	4	6.5	8.8	0	4.5	1	0
465	IC0473967	4	8	5	15.6	4.9	0	4.1	2.8	0
466	IC0473968	4	3	6	13.8	25.7	20	4.5	3.9	40
467	IC0473969	5	5	6	11.1	10.3	40	4.1	1.7	60
468	IC0473972	5	2	7	12.9	12.2	10	3.8	1.5	50
469	IC0473975	7	2	4	6.1	71.7	25	3.9	21.3	10
470	IC0473976	4	4	7	18.8	28.6	20	4.4	4	40



S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
471	IC0473980	6	6	7	8.8	15.3	20	3.5	2.2	50
472	IC0473981	4	7	2	6.1	10.9	15	3.9	1.4	20
473	IC0473982	5	4	3	18.8	6.9	0	4.4	1.8	30
474	IC0473984	7	3	5	2.9	12.4	0	3.5	1.6	0
475	IC0473985	4	6	7	8.8	14.3	0	3.9	5.4	0
476	IC0473992	5	2	5	6.5	9.8	20	2.7	0	40
477	IC0473998	5	4	4	16.7	6.5	0	3.7	0.5	20
478	IC0474000	3	4	7	10.3	5.2	0	3.9	0	50
479	IC0474001	5	4	2	7.1	7.3	25	3	2.7	30
480	IC0474002	6	5	5	12.5	17.9	0	3.6	1.8	0
481	IC0474003	3	6	3	19.2	9.3	0	4.8	1.9	0
482	IC0474004	5	5	6	15.6	16.1	20	4.1	4.6	50
483	IC0474006	3	6	4	8.8	14.2	0	3.9	2	0
484	IC0474007	5	3	4	6.5	11.2	0	2.8	1.4	20
485	IC0474009	5	5	3	16.7	13.9	0	3.7	1.7	10
486	IC0474011	5	7	4	10.3	4.5	0	3.9	0	20
487	IC0474012	5	6	2	7.1	5.6	25	3	0	0
488	IC0474013	6	3	3	8.8	18.6	20	3.9	4.3	35
489	IC0474017	4	7	6	6.5	5.9	0	2.8	2.2	0
490	IC0474018	6	3	3	6.5	21.4	10	4.5	1.7	0
491	IC0474019	6	2	2	13.8	20.6	15	4.5	4.5	15
492	IC0474020	6	3	5	11.1	25	0	4.1	6.8	0
493	IC0474021	7	3	7	12.9	27.8	20	3.8	2.9	30
494	IC0474022	4	6	6	8.8	23.7	0	3.9	2.9	15
495	IC0474023	6	8	5	6.9	10.7	10	3.7	4.2	0
496	IC0474024	7	5	3	6.1	36.4	0	3.9	7.7	20
497	IC0474026	5	6	4	18.8	41.8	0	4.4	4.7	20
498	IC0474027	4	7	2	12.5	12.6	10	3.6	2	15
499	IC0474028	5	7	5	8.8	30	0	3.5	4.3	20
500	IC0474029	6	2	3	6.5	43.5	0	2.7	6.5	0
501	IC0474030	4	5	4	16.7	7.7	10	3.7	0.5	30
502	IC0474031	7	3	3	10.3	27.9	10	3.9	2.3	0
503	IC0474032	6	4	4	6.5	26.4	20	2.8	6.7	0
504	IC0474033	6	3	3	6.9	33	0	3.7	2.8	30
505	IC0474034	3	5	4	6.5	18.6	0	2.7	4.7	20
506	IC0474035	4	6	5	8.8	6.8	10	3.9	2.9	25
507	IC0474038	5	6	3	6.5	0	10	4.5	1	15
508	IC0474043	7	2	4	16.7	20.4	0	3.7	1.8	10
509	IC0474046	5	6	2	13.8	27.1	30	4.5	6.6	45
510	IC0474048	4	8	3	6.5	2.5	0	4.5	0	15
511	IC0474055	6	8	5	13.8	31.6	0	4.5	7	0
512	IC0474056	5	2	5	11.1	15.2	0	4.1	4	0
513	IC0474058	7	6	6	12.5	13.7	0	3.6	6.7	0
514	IC0474061	7	7	6	8.8	29.5	0	3.9	7.1	0
515	IC0474062	8	5	6	6.5	40.4	0	4.5	12.6	0
516	IC0474063	6	5	5	13.8	7.4	0	4.5	5.2	0
517	IC0474067	5	2	4	11.1	9.2	0	4.1	1.8	0
518	IC0474068	7	6	2	26.8	40	20	34.2	4.8	30
519	IC0474072	8	5	7	10.3	0	10	3.9	9.7	15
520	IC0474073	6	6	5	7.1	39.8	10	3	9.3	15

S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
521	IC0474074	4	5	7	19.2	0	0	5.4	4.8	0
522	IC0474075	6	8	6	15.6	78.8	20	4.1	11	40
523	IC0474076	5	6	4	13.8	17.5	0	4.5	5	20
524	IC0474077	4	7	4	8.8	17	0	3.9	6.7	20
525	IC0474079	5	6	5	6.5	43.5	0	2.8	10.4	0
526	IC0474080	6	6	8	6.9	32.1	50	3.7	4.2	50
527	IC0474081	7	5	7	6.5	15.2	50	2.7	1.4	60
528	IC0474082	5	2	5	16.7	0	10	3.7	5.7	0
529	IC0474083	7	6	6	6.5	6.3	10	4.5	3.2	0
530	IC0474084	6	5	6	13.8	9.8	0	4.5	3.3	0
531	IC0474086	8	6	6	11.1	48	0	4.1	10.2	0
532	IC0474089	5	2	5	16.7	20.2	0	3.7	3.2	0
533	IC0474090	4	1	7	6.5	10.2	0	4.5	1.9	0
534	IC0474091	5	2	5	13.8	8.6	0	4.5	7.4	0
535	IC0474092	5	6	6	11.1	15.3	0	4.1	4.9	0
536	IC0474093	6	7	3	12.9	7	0	3.8	0.6	20
537	IC0474094	5	7	6	6.1	39.3	0	3.9	4.5	0
538	IC0474095	5	2	3	18.8	15.7	0	4.4	2.3	0
539	IC0474096	4	5	6	8.8	31.3	0	3.5	4.1	0
540	IC0474097	4	6	4	6.1	22.7	0	3.9	3.1	0
541	IC0474098	4	6	4	18.8	26.6	0	4.4	4.2	0
542	IC0474099	4	5	4	8.8	6	0	3.5	1.9	0
543	IC0474100	6	7	5	6.5	11.8	0	2.7	10.5	0
544	IC0474101	5	2	6	16.7	0	10	3.7	0.5	0
545	IC0474102	7	2	5	10.3	34.7	0	3.9	13.9	20
546	IC0474103	7	5	4	7.1	3.5	0	3	4.4	0
547	IC0474104	7	2	3	19.2	0	0	6.6	2.4	0
548	IC0474105	6	2	6	15.6	0	0	4.1	4.3	0
549	IC0474107	7	5	6	6.5	0	0	2.8	8.1	0
550	IC0474108	7	5	8	6.9	5.4	0	3.7	2.6	0
551	IC0474109	7	2	3	16.7	21.7	0	3.7	9.1	0
552	IC0474110	7	2	5	10.3	0	0	3.9	6.8	0
553	IC0474111	6	2	5	7.1	21.4	0	3	4.1	0
554	IC0474113	7	5	5	19.2	20.3	0	4.8	2.8	0
555	IC0474114	7	2	6	15.6	22.2	0	3.2	4.8	0
556	IC0474115	5	2	8	8.8	0	20	3.9	2	50
557	IC0474116	8	2	7	6.5	11.2	20	2.3	4.5	40
558	IC0474117	6	1	6	6.9	7.6	0	3.1	4.9	0
559	IC0474119	7	2	3	8.8	0	0	3.9	0	0
560	IC0474120	5	7	5	6.5	0	0	4.5	0	0
561	IC0474121	8	5	4	13.8	7.8	0	4.5	1.8	0
562	IC0474122	6	6	8	11.1	3	0	4.1	1.2	0
563	IC0474123	7	6	7	12.9	0	0	3.8	1.7	0
564	IC0474124	4	5	7	6.1	0	0	3.9	1.7	0
565	IC0474125	6	5	4	6.5	0	0	2.8	2.8	0
566	IC0474126	5	2	4	13.8	0	0	4.5	2.4	0
567	IC0474127	6	2	5	11.1	4.3	0	4.1	2.6	0
568	IC0474128	7	2	5	16.7	17.2	0	3.7	8	0
569	IC0474129	5	2	4	6.5	0	0	4.5	1.2	0
570	IC0474130	5	1	5	13.8	16.2	0	4.5	2.2	0



S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
571	IC0474132	7	1	6	12.9	0	0	3.8	0	0
572	IC0474133	6	1	2	6.1	0	30	3.9	1.8	45
573	IC0474134	5	2	2	18.8	5.7	20	4.4	4.6	20
574	IC0474135	5	2	5	8.8	30.3	0	3.5	4.7	20
575	IC0474136	5	1	7	6.1	16.5	20	3.9	4.1	40
576	IC0474137	5	2	5	18.8	0	0	4.4	4.4	0
577	IC0474139	7	1	5	6.5	14.2	0	2.7	3.9	0
578	IC0474140	7	2	8	16.7	0	0	3.7	3.5	40
579	IC0474141	7	6	6	10.3	0	0	3.9	7.6	20
580	IC0474142	7	8	6	7.1	0	10	3	1.3	20
581	IC0474143	7	9	8	19.2	10.8	50	6.6	3.5	60
582	IC0474144	7	7	8	15.6	10.2	40	4.1	1.1	70
583	IC0474145	7	8	8	8.8	0	40	3.9	2.2	80
584	IC0474146	7	6	5	6.5	15.7	0	2.8	3.1	20
585	IC0474148	7	5	5	16.7	28.3	0	3.7	14.1	15
586	IC0474149	5	7	3	10.3	15.7	0	3.9	8.1	0
587	IC0474150	6	7	5	7.1	0	0	3	10.9	20
588	IC0474153	7	2	4	15.6	4.7	0	4.1	0	10
589	IC0474154	7	2	4	8.8	0	0	3.9	5.4	0
590	IC0474156	6	5	5	6.9	40	0	3.7	10	0
591	IC0474158	8	2	4	8.8	0	20	3.9	7.7	50
592	IC0474160	6	2	9	13.8	88.5	0	4.5	8.4	20
593	IC0474161	6	2	4	11.1	0	0	4.1	13.2	0
594	IC0474162	5	5	5	6.5	8.2	0	2.8	10.2	0
595	IC0474163	4	8	3	6.9	13.3	0	3.7	11.6	0
596	IC0474164	7	2	3	12.5	0	10	3.6	4	0
597	IC0474166	7	5	4	6.5	58.3	40	4.5	8.9	0
598	IC0474167	7	5	3	13.8	30.8	40	4.5	5	0
599	IC0474168	7	2	3	11.1	16.8	0	4.1	5.3	0
600	IC0474169	6	2	3	12.5	7.1	0	3.6	5	0
601	IC0474171	7	6	3	8.8	0	0	3.9	2.5	0
602	IC0474173	7	5	5	6.5	8.8	0	4.5	6.9	0
603	IC0474175	5	2	6	11.1	18.8	10	4.1	8.9	20
604	IC0474183	7	6	5	6.1	0	0	3.9	2.8	30
605	IC0474185	6	8	4	18.8	0	0	4.4	0	30
606	IC0474187	6	6	6	19.2	0	0	5.4	4.6	20
607	IC0474188	6	5	6	15.6	0	0	4.1	0.9	0
608	IC0474190	4	6	5	6.5	0	0	2.8	2.1	20
609	IC0474191	4	5	5	6.9	0	0	3.7	0.7	0
610	IC0474192	7	1	2	6.5	0	20	2.7	0.6	15
611	IC0474194	4	5	7	6.5	0	20	4.5	0.6	20
612	IC0474198	4	6	4	11.1	0	0	4.1	1.5	10
613	IC0474199	5	5	5	16.7	0	0	3.7	2.3	0
614	IC0474201	7	1	4	6.5	0	0	4.5	2	30
615	IC0474202	4	1	4	13.8	0	10	4.5	1.1	0
616	IC0474204	4	5	5	12.9	0	0	3.8	5.1	0
617	IC0474205	4	4	4	11.1	25	10	4.1	1.8	15
618	IC0474214	6	3	4	6.5	50	0	4.5	6.4	0
619	IC0474215	5	3	4	8.8	15.3	5	3.9	4.7	0
620	IC0474216	7	2	4	6.1	9.1	10	3.9	1.4	10

S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
621	IC0474219	5	6	4	6.5	4	0	2.7	0.7	0
622	IC0474222	5	1	5	16.7	0	0	3.7	0	0
623	IC0474223	6	1	3	10.3	0	10	3.9	0	0
624	IC0474224	7	1	3	7.1	0	20	3	0	10
625	IC0474225	7	2	2	13.8	26.9	0	4.5	1.2	0
626	IC0474228	7	6	3	11.1	16.9	0	4.1	0.4	0
627	IC0474229	8	1	2	19.2	0	20	5.4	0	10
628	IC0474230	5	3	7	12.9	16.1	0	3.8	0.9	30
629	IC0474233	5	5	4	6.1	9.3	0	3.9	1.5	0
630	IC0474234	7	2	2	8.8	0	10	3.9	0.9	0
631	IC0474236	5	5	3	6.5	20.2	20	2.8	5.8	0
632	IC0474237	5	2	4	6.9	4.9	20	3.7	1.2	0
633	IC0474238	7	1	2	16.7	18.7	20	3.7	4.5	10
634	IC0474239	8	1	3	10.3	0	20	3.9	0	0
635	IC0474241	7	1	4	19.2	27.3	30	6.6	6.4	10
636	IC0474243	6	7	7	18.8	10	0	4.4	1.6	0
637	IC0474244	4	7	8	8.8	6.5	0	3.5	0.9	50
638	IC0474245	4	8	6	6.1	4.5	0	3.9	1.8	30
639	IC0474250	5	6	4	8.8	3.7	10	3.5	1.4	0
640	IC0474251	5	8	3	6.5	17.2	10	2.7	11.2	0
641	IC0474254	5	9	3	16.7	29.9	0	3.7	4.5	0
642	IC0474255	6	7	4	10.3	19.6	15	3.9	7.6	20
643	IC0474256	3	8	4	7.1	23	0	3	4.4	0
644	IC0474257	5	6	4	19.2	17.6	0	4.8	6	0
645	IC0474258	6	6	6	15.6	53.8	0	4.1	11.5	10
646	IC0474259	7	5	4	8.8	18.2	10	3.9	4	0
647	IC0474260	7	1	4	6.5	0	10	2.8	3.2	0
648	IC0474261	7	1	5	6.9	0	0	3.7	6.5	0
649	IC0474262	5	7	2	8.8	29.9	0	3.9	7.8	0
650	IC0474263	7	1	3	12.5	0	10	3.6	1.1	0
651	IC0474273	3	5	4	6.5	27.5	0	2.8	7.6	10
652	IC0474274	3	6	4	6.9	22.1	10	3.7	6.5	30
653	IC0474275	7	2	4	6.5	0	10	4.5	0	0
654	IC0474277	5	5	3	16.7	25.3	10	3.7	7.1	0
655	IC0474280	8	1	6	11.1	12.2	30	4.1	1.8	10
656	IC0474284	6	4	3	10.3	31.9	0	3.9	4.6	5
657	IC0474285	6	2	4	6.1	18.4	20	3.9	1.3	10
658	IC0474288	7	2	4	6.5	0	20	2.8	3.8	10
659	IC0474289	3	3	4	7.1	28.2	0	3	7.6	0
660	IC0474290	5	2	2	7.7	37.1	25	4.8	6.9	35
661	IC0474291	7	2	4	6.9	0	10	3.7	3.1	0
662	IC0474292	6	2	3	15.6	31.8	10	4.1	3.9	0
663	IC0474293	7	2	4	6.5	0	10	2.7	2.1	0
664	IC0474294	8	2	5	16.7	0	10	3.7	1.2	0
665	IC0474295	5	4	2	8.8	23.2	0	3.9	4.5	0
666	IC0474296	7	1	3	6.5	0	20	4.5	1.5	0
667	IC0474298	7	1	4	11.1	0	20	4.1	7.2	0
668	IC0474301	6	2	6	18.8	0	10	4.4	1	0
669	IC0474303	5	5	4	6.5	24.3	10	2.8	2	20
670	IC0474304	4	3	5	6.9	39.3	0	3.7	5.8	0



S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
671	IC0474306	3	6	4	12.5	34.4	10	3.6	4.4	20
672	IC0474307	3	5	4	8.8	27.5	0	3.9	5.1	20
673	IC0474308	5	2	7	6.5	26.5	30	4.5	2.3	60
674	IC0474309	4	2	4	13.8	20	20	4.5	2.1	30
675	IC0474310	2	8	3	11.1	9.5	20	4.1	1.6	5
676	IC0474311	3	6	6	12.9	29.2	0	3.8	3.6	0
677	IC0474313	3	4	6	6.1	30	20	3.9	1.2	50
678	IC0474314	4	2	5	6.1	6.1	0	3.9	1.6	0
679	IC0474316	7	8	4	18.8	12.2	0	4.4	9.9	0
680	IC0474318	5	5	3	6.9	24.3	20	3.7	2.4	35
681	IC0474319	4	3	5	6.5	15.7	20	2.7	0.8	15
682	IC0474320	6	6	4	8.8	0	10	3.5	3.5	10
683	IC0474321	7	6	5	6.5	0	10	2.7	0	10
684	IC0474322	7	6	3	16.7	0	10	3.7	3.6	10
685	IC0474323	6	1	5	10.3	0	0	3.9	2.2	0
686	IC0474324	4	1	3	7.1	0	20	3	0	10
687	IC0474325	4	2	4	19.2	0	20	5.4	0	0
688	IC0474326	5	2	4	15.6	7.4	20	4.1	1.7	0
689	IC0474327	5	1	6	6.5	0	30	2.8	1.5	20
690	IC0474329-X	5	1	5	16.7	0	30	3.7	0.6	20
691	IC0474330	3	5	4	16.7	33.3	0	3.7	1.9	0
692	IC0474331	3	6	3	6.5	35.4	0	4.5	2.8	0
693	IC0474337	5	1	5	7.1	0	0	3	0.7	20
694	IC0474338	5	4	4	13.8	29.9	0	4.5	3.2	20
695	IC0474340	5	2	4	15.6	0	20	4.1	1.6	20
696	IC0474343	3	6	4	16.7	25	0	3.7	1.9	0
697	IC0474346	5	2	6	6.5	0	0	2.8	1.4	0
698	IC0474350	3	6	4	8.8	13.3	5	3.5	3.3	5
699	IC0474351	4	3	3	6.1	23.2	0	3.9	1	0
700	IC0474352	5	4	4	18.8	15.7	10	4.4	3.5	15
701	IC0474354	5	6	3	8.8	19.4	30	3.5	2.1	30
702	IC0474355	3	5	2	6.5	26.7	30	2.7	5	45
703	IC0474357	5	4	2	16.7	17.6	25	3.7	0.6	15
704	IC0474358	5	4	3	10.3	10.3	10	3.9	1.2	10
705	IC0474359	6	2	4	7.1	18.4	10	3	4.5	10
706	IC0474360	5	4	3	19.2	26.8	10	4.8	1.7	10
707	IC0474362	5	6	4	15.6	28.2	10	4.1	2.7	10
708	IC0474365	4	2	5	8.8	0	0	3.9	1.3	0
709	IC0474366	5	2	4	6.5	0	0	4.5	0.5	0
710	IC0474367	4	2	2	13.8	0	0	4.5	1.5	20
711	IC0474368	5	3	2	6.9	27.7	20	3.7	5.7	30
712	IC0474369	4	2	3	16.7	26.2	10	3.7	2.2	0
713	IC0474370	6	4	2	10.3	24.1	15	3.9	3.7	15
714	IC0474371	7	6	4	8.8	22.9	0	3.5	2.4	15
715	IC0474373	6	2	4	11.1	0	0	4.1	3.7	20
716	IC0474376	5	5	3	6.5	20.5	10	2.7	1.3	0
717	IC0474379	4	2	4	8.8	0	0	3.9	0	40
718	IC0474380	5	4	2	16.7	23.1	5	3.7	2.2	10
719	IC0474381	6	6	2	10.3	15.2	25	3.9	4.9	30
720	IC0474382	6	7	7	7.1	15	40	3	3.4	60

S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
721	IC0474383	4	2	6	6.5	0	50	4.5	0.7	50
722	IC0474384	5	6	5	19.2	12.5	20	5.4	4.1	20
723	IC0474385	5	2	6	13.8	0	20	4.5	0.7	20
724	IC0474386	4	7	2	15.6	22	15	4.1	8.5	0
725	IC0474387	6	2	4	11.1	0	20	4.1	1.7	0
726	IC0474388	4	3	6	8.8	19.4	10	3.9	5.3	0
727	IC0474389	5	4	2	6.5	31.6	10	2.8	5.1	15
728	IC0474390	6	3	7	6.9	25.8	20	3.7	2.6	70
729	IC0474391	6	2	2	16.7	20	20	3.7	6.5	35
730	IC0474392	5	2	4	12.9	0	0	3.8	0.6	20
731	IC0474393	7	6	4	10.3	33.8	10	3.9	7.1	10
732	IC0474394	5	2	6	6.1	0	0	3.9	0.9	20
733	IC0474395	5	5	3	7.1	46.7	10	3	5.6	10
734	IC0474397	4	4	7	7.7	25	30	5.4	2.4	60
735	IC0474398	4	1	4	18.8	0	40	4.4	0.8	0
736	IC0474400	4	1	6	8.8	0	20	3.5	0	0
737	IC0474401	5	4	6	15.6	16.4	20	4.1	1.9	40
738	IC0474404	5	2	6	8.8	14.9	40	3.9	0.4	20
739	IC0474405	7	5	5	13.8	36	0	4.5	5.6	0
740	IC0474407	5	6	4	6.5	4.1	0	2.8	0.9	5
741	IC0474410	6	5	2	6.9	18.5	20	3.7	1.9	30
742	IC0474411	4	6	3	12.5	13.4	10	3.6	1.5	10
743	IC0474412	5	7	2	8.8	22.4	30	3.9	2.6	15
744	IC0474413	6	6	2	6.5	22.2	20	4.5	4.8	20
745	IC0474415	7	5	2	13.8	18.8	15	4.5	3.4	20
746	IC0474416	6	3	5	11.1	18.4	20	4.1	3.7	20
747	IC0474418	5	4	3	12.9	15.4	15	3.8	4.1	0
748	IC0474419	5	5	2	6.1	42.3	10	3.9	3.2	20
749	IC0474420	5	4	2	6.5	20	0	2.8	1.7	0
750	IC0474423	4	6	3	6.9	13.7	10	3.7	0.9	15
751	IC0474424	4	7	6	11.1	20	0	4.1	6.3	0
752	IC0474425	6	2	4	16.7	0	0	3.7	1.1	0
753	IC0474426	4	7	4	12.5	25.4	10	3.6	7.3	20
754	IC0474427	3	3	5	6.5	18.9	10	2.7	1.2	20
755	IC0474429	5	2	7	16.7	16	10	3.7	4.2	50
756	IC0474434	5	5	2	13.8	19.4	0	4.5	5.3	0
757	IC0474435	6	6	4	11.1	19.1	30	4.1	4.9	0
758	IC0474436	7	2	5	16.7	12.7	0	3.7	3.5	0
759	IC0474437	6	4	2	6.1	20.4	15	3.9	1.7	20
760	IC0474438	4	6	4	8.8	27.8	10	3.9	5.3	20
761	IC0474440	7	5	2	7.1	0	20	3	1.5	0
762	IC0474441	4	7	8	6.5	16.8	20	4.5	3.5	60
763	IC0474443	7	3	2	18.8	18.4	5	4.4	4.2	15
764	IC0474444	7	6	1	8.8	26.9	0	3.5	0.9	0
765	IC0474448	5	1	4	15.6	0	20	4.1	0.9	60
766	IC0474450	6	1	2	6.5	0	20	2.8	0	0
767	IC0474453	5	4	4	13.8	17.1	20	4.5	5.1	40
768	IC0474454	5	5	4	6.1	18.4	0	3.9	4.9	0
769	IC0474455	6	8	3	18.8	16.1	0	4.4	2	0
770	IC0474456	7	4	2	8.8	26.9	20	3.5	2.7	20



S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
771	IC0474457	5	2	6	11.1	0	0	4.1	0	20
772	IC0474460	5	2	4	16.7	0	10	3.7	4.3	0
773	IC0474462	7	1	2	13.8	0	15	4.5	3.6	35
774	IC0474463	7	2	4	11.1	0	0	4.1	2.2	20
775	IC0474464	7	1	2	12.9	0	40	3.8	0	20
776	IC0474465	5	1	4	6.1	0	10	3.9	0.7	10
777	IC0474466	5	1	6	18.8	0	0	4.4	0.6	20
778	IC0474467	7	1	6	8.8	0	20	3.5	0	20
779	IC0474468	7	2	2	6.1	0	10	3.9	5	15
780	IC0474470	5	6	4	8.8	0	10	3.5	0	10
781	IC0474472	5	6	3	6.5	32.2	0	2.7	3.7	0
782	IC0474473	5	7	4	16.7	35.7	20	3.7	7.6	50
783	IC0474474	7	3	3	10.3	46.7	0	3.9	4.4	20
784	IC0474476	6	6	2	7.1	23.5	10	3	10	30
785	IC0474477	7	6	4	16.7	0	20	3.7	0	20
786	IC0474478	6	2	4	10.3	0	10	3.9	1.7	25
787	IC0474479	6	6	2	7.1	7.2	5	3	2.1	40
788	IC0474480	6	5	4	19.2	34.3	0	4.8	5.4	10
789	IC0474481	5	4	2	15.6	17.6	15	4.1	1.2	10
790	IC0474484	7	5	2	8.8	3.4	0	3.9	0	0
791	IC0474485	6	3	4	6.5	2.4	0	2.8	0.5	0
792	IC0474487	7	2	6	16.7	6.7	0	3.7	4.4	0
793	IC0474488	8	3	6	10.3	8.2	0	3.9	1.2	20
794	IC0474490	6	5	6	8.8	23.3	0	3.9	4.2	30
795	IC0474491	6	3	7	6.5	17.1	20	2.8	1.2	20
796	IC0474492	7	2	5	6.9	26.7	0	3.7	7.6	0
797	IC0474493	7	5	3	16.7	27.1	0	3.7	2.1	0
798	IC0474494	7	3	5	19.2	6.1	0	6	1.8	0
799	IC0474495	7	6	2	10.3	16.5	0	3.9	4.6	0
800	IC0474497	7	4	5	15.6	4.7	0	4.1	2.5	0
801	IC0474499	7	7	5	6.5	2.1	0	2.8	3.1	0
802	IC0474500	8	6	3	6.9	11.4	0	3.7	3.2	0
803	IC0474501	7	8	5	12.5	9.5	0	3.6	8.9	0
804	IC0474503	5	8	3	8.8	52	0	3.9	11.3	0
805	IC0474504	5	8	3	8.8	17.6	0	3.9	5.4	0
806	IC0474505	5	8	4	6.5	19.2	0	4.5	3.8	10
807	IC0474506	5	8	5	6.5	34.3	0	4.5	9.5	30
808	IC0474507	7	9	4	16.7	36.1	0	3.7	8.1	20
809	IC0474508	6	9	2	13.8	60	20	4.5	15.9	10
810	IC0474509	6	7	3	11.1	47.6	10	4.1	12.4	0
811	IC0474510	6	5	2	11.1	20.8	20	4.1	5.4	10
812	IC0474511	5	8	2	12.9	26.3	10	3.8	3.5	15
813	IC0474512	5	5	3	6.1	16	15	3.9	3.1	0
814	IC0474513	5	6	2	18.8	25.6	10	4.4	8.1	40
815	IC0474517	5	7	4	8.8	38.9	20	3.5	8.5	0
816	IC0474518	7	6	7	11.1	20	0	4.1	9	0
817	IC0474519	5	6	2	6.5	22	0	2.7	2.8	20
818	IC0474520	5	6	4	12.9	38.3	0	3.8	9.8	20
819	IC0474776	6	7	4	6.9	10.8	50	3.7	4.2	30
820	IC0474778	7	6	5	21.3	15.2	50	35.4	7.1	50

S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
821	IC0474782	7	6	4	3.1	12.7	20	2.6	5.3	20
822	IC0474786	7	6	7	11.1	11.8	50	2.8	4.5	10
823	IC0474789	7	7	5	14.8	25	30	4.2	3.1	20
824	IC0474791	6	6	8	17.2	11.4	50	3.8	4.9	50
825	IC0474801	7	6	5	12.5	11.8	40	3.2	2.8	20
826	IC0474802	7	7	5	8.8	25	20	3.9	3.4	20
827	IC0474821	7	6	7	12.5	7.4	50	3.5	2.8	40
828	IC0474844	4	7	4	3.6	8.9	20	2.8	7.8	20
829	IC0474867	7	8	4	6.9	11.8	20	4.6	6.7	20
830	IC0474872	6	8	5	10.7	22.1	30	3.9	3.6	30
831	IC0474874	6	7	5	6.5	14.8	40	4.8	3.2	40
832	IC0474882	7	6	4	2.8	19.3	30	4.1	2.2	20
833	IC0474899	7	6	5	8.8	19.4	40	3.4	5.4	40
834	IC0474906	4	5	6	9.4	9.8	0	3.9	2.5	70
835	IC0474912	4	2	6	5.9	14.7	10	1.9	4.6	20
836	IC0474927	6	2	6	6.9	3	50	5.2	5.4	30
837	IC0474929	6	2	4	3.2	16.2	20	4.3	5.3	20
838	IC0474950	6	8	4	11.8	17.6	10	3	3.6	10
839	IC0474953	7	6	2	18.8	7.8	20	4.1	6.2	20
840	IC0474956	7	9	4	8.8	17.6	30	3.9	1.8	30
841	IC0474970	7	6	5	9.1	20.6	20	3.9	5.8	0
842	IC0475002	6	9	2	10.7	18.3	10	3.7	3.3	50
843	IC0475007	4	4	8	6.5	0	30	4.7	0	70
844	IC0475012	6	8	4	15.4	6.3	20	4.4	6.4	40
845	IC0475022	5	6	5	3.1	20.2	0	2.9	2.7	0
846	IC0475038	6	5	7	8.8	27.7	0	4.3	4.5	60
847	IC0475055	6	7	6	13.9	19.4	0	3.2	4.4	10
848	IC0475057	7	4	6	17.9	42.2	40	5.4	9.4	70
849	IC0475059	4	2	6	13.8	37	20	2.2	3.7	35
850	IC0475064	7	4	6	8.3	35.9	40	3.5	7.3	60
851	IC0475072	6	7	4	2.9	42.4	40	3.4	11.2	30
852	IC0475073	7	7	6	9.4	28.6	50	4.2	3.4	50
853	IC0475074	8	5	5	14.3	14.1	20	3.7	9.1	20
854	IC0475085	5	2	8	3.1	4.9	70	5.2	4.9	80
855	IC0475094	4	6	7	8.8	23.5	0	3.7	3.3	80
856	IC0475095	7	7	3	6.5	15.7	20	4.8	3	10
857	IC0475112	5	8	8	2.8	8.8	80	3.2	6	80
858	IC0475120	6	8	5	6.5	26.7	30	4.4	6.2	20
859	IC0475124	5	9	4	10.7	31.7	0	4.9	7.2	20
860	IC0475127	7	2	4	8.8	6.7	30	3.9	5.1	10
861	IC0475143	5	5	5	5.9	28.8	0	2.8	3.8	20
862	IC0475145	6	8	6	15.6	43.9	0	5.2	9.4	20
863	IC0475150	5	2	3	25	27.5	10	5.6	3.5	40
864	IC0475154	6	4	7	3.4	31.4	20	2.6	6	20
865	IC0475156	6	6	7	3.2	27.5	30	4	6.3	70
866	IC0475162	4	6	6	11.8	7.1	40	3	1.8	30
867	IC0475164	7	6	5	6.5	1.9	20	3.2	1.7	30
868	IC0475167	6	3	5	6.5	30.5	20	3.5	6.5	30
869	IC0475170	8	7	4	13.9	4.7	20	2.8	2.8	20
870	IC0475184	6	4	1	10.3	22.5	0	3.5	7.9	0



S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
871	IC0475187	6	3	5	7.7	35.3	40	4.8	4.3	40
872	IC0475202	6	5	6	8.3	26.5	10	3.5	3	20
873	IC0475225	5	3	3	14.7	25	40	3	7.4	40
874	IC0475226	6	3	2	7.1	21.6	0	3.6	3.3	0
875	IC0475231	6	4	3	14.8	36.4	10	5.1	4.8	30
876	IC0475250	5	5	4	5.9	32.3	20	5.1	4.7	30
877	IC0475264	4	8	5	6.9	7.4	60	3	5.7	60
878	IC0475265	7	2	8	13.9	8	0	3.7	3.9	80
879	IC0475267	6	5	6	11.8	12.5	0	3	3.9	80
880	IC0475294	6	5	6	7.1	10	0	3.1	3.9	10
881	IC0475298	7	2	8	12.5	21.6	50	2.8	5.5	40
882	IC0475300	6	5	5	6.9	5.9	50	4.4	3.8	60
883	IC0475302	7	7	4	11.1	31.3	15	4.9	6.6	25
884	IC0475307	6	2	2	11.1	33	20	6.2	4.4	20
885	IC0475310	7	4	7	14.8	6.7	60	4.5	3.2	70
886	IC0475316	6	6	2	3.2	11.4	30	4.3	3.4	40
887	IC0475325	6	3	6	3.6	21.3	40	2	7.1	40
888	IC0475332	6	2	7	9.7	28.3	0	4.8	1	70
889	IC0475348	6	3	7	9.7	33.9	20	5.5	5.9	80
890	IC0475351	4	2	5	6.5	12.2	70	4	2	50
891	IC0475352	6	6	7	12.9	13.3	10	4	5.3	70
892	IC0475354	7	4	7	17.2	22.2	20	4.4	4.5	30
893	IC0475355	5	4	4	22.6	39.8	30	6.8	9.4	20
894	IC0475357	4	4	4	17.6	37.3	20	4.9	5.8	20
895	IC0475361	7	6	5	5.6	16.2	40	2.5	5.5	20
896	IC0475364	6	5	8	17.2	17.6	60	4.4	4.6	90
897	IC0475369	6	4	8	12.5	22.2	60	4.6	7.6	90
898	IC0475385	6	6	6	11.5	21.7	20	4	4.4	70
899	IC0475390	7	3	6	2.4	24.5	47	3.8	4.5	56
900	IC0475391	8	6	4	6.9	12	30	5.2	5	10
901	IC0475398	6	4	5	13.8	28.6	10	5.4	7.9	10
902	IC0475403	8	5	2	11.1	5.4	20	4.1	3.2	20
903	IC0475407	7	6	7	18.8	32.2	10	4.3	4.7	20
904	IC0475410	7	2	7	0	32.7	30	3.3	7.4	80
905	IC0475416	6	2	5	3.4	31.3	30	1.6	5.7	30
906	IC0475417	7	5	7	10.3	17.6	50	4.3	4.6	40
907	IC0475420	5	2	4	6.3	9.3	40	1.8	4.2	40
908	IC0475423	6	3	6	5.9	15.2	20	2.4	3.8	20
909	IC0475425	7	4	4	0	10.5	30	0.9	6.1	30
910	IC0475435	7	5	6	5.6	29.5	20	3.6	6.5	70
911	IC0475444	7	5	3	11.5	35.2	0	4.5	8	20
912	IC0475469	7	4	4	10.3	5.6	0	4.4	3.9	20
913	IC0475474	7	4	8	12.9	21.9	10	4.5	5.4	25
914	IC0475479	7	2	5	9.4	22.2	30	2.2	5.1	30
915	IC0475500	7	5	5	7.4	3.3	60	6.2	1.4	40
916	IC0475506	8	7	2	2.8	24.3	10	3	7.7	10
917	IC0475507	6	4	5	16.3	29.1	23	4.7	3.4	34
918	IC0475526	6	2	6	9.1	31.4	70	3.9	8	50
919	IC0475529	6	2	7	18.5	13.7	50	5.8	7.1	80
920	IC0475534	6	5	4	3.4	7.6	50	3	3.9	30

S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
921	IC0475547	4	2	8	5.9	22.4	40	3.8	11.3	40
922	IC0475550	4	2	8	11.1	12.7	50	3.6	4.1	60
923	IC0475555	6	4	7	15.4	18.3	40	4.5	11.7	80
924	IC0475565	6	5	8	9.7	1.7	50	4	4.3	40
925	IC0475566	7	5	7	14.3	17.5	10	3.3	5.6	25
926	IC0475570	6	6	4	5.9	11.4	40	4.1	4.8	30
927	IC0475581	7	2	4	11.1	9.5	40	4.3	5.1	40
928	IC0475601	6	2	7	4.2	39.3	30	2.9	3.1	60
929	IC0475602	5	2	6	10.3	47.4	40	3.8	5.6	70
930	IC0475610	7	3	8	0	10.4	20	2.7	2.5	40
931	IC0475613	7	4	8	26.3	41.4	4	5.4	6.5	0
932	IC0475614	7	3	3	8.1	38.1	0	3.3	7.6	0
933	IC0475618	6	5	5	7.1	26.2	10	3.8	8.9	15
934	IC0475619	4	2	6	3.2	23.2	40	3.5	4.7	10
935	IC0475627	7	2	2	2.6	25.7	17	2.3	3.7	23
936	IC0475632	4	3	7	17.2	23.7	50	4.3	14.2	30
937	IC0475643	4	3	6	13.8	19.6	40	5.4	3.8	10
938	IC0475653	6	5	7	9.7	20.3	30	4.5	3.9	35
939	IC0475657	6	2	4	9.7	10.3	30	3.2	3.8	30
940	IC0475660	6	3	5	19.2	18.2	0	4.5	3.6	40
941	IC0475664	7	2	7	18.5	2	70	6.8	1.8	70
942	IC0475666	7	7	2	10.7	11.8	30	4.8	8.1	20
943	IC0475668	6	2	6	5.6	13	20	2.7	6.2	40
944	IC0475670	6	3	4	6.5	34.6	10	5	8.4	10
945	IC0475674	6	2	4	14.7	11.4	10	3.4	6.3	60
946	IC0475680	6	2	6	4.2	27.6	40	7.2	4.7	50
947	IC0475689	4	4	1	8.3	13.9	0	5.2	6.3	0
948	IC0475694	6	3	7	15.4	7.6	30	4.6	5.6	70
949	IC0475695	6	8	6	10.5	43.6	27	4.1	10.7	33
950	IC0475697	6	2	4	10.7	34.6	10	6	4.9	50
951	IC0475698	6	4	4	14.8	16.4	10	4.8	9.1	20
952	IC0475699	7	4	8	6.9	25.9	70	5.2	1.8	80
953	IC0475703	6	6	6	8.8	25.9	30	5.1	5.6	40
954	IC0475708	6	5	1	0	32.2	0	0.6	5.4	0
955	IC0475716	6	3	8	10.3	30.6	50	3.4	5.5	80
956	IC0475718	4	2	5	12.1	23.1	30	3.9	4.6	70
957	IC0475754	6	5	4	5.9	6.9	0	3.4	2.8	10
958	IC0475755	6	5	6	9.7	1.9	0	5	3.7	20
959	IC0475757	5	2	3	12.5	33.9	10	4.8	9.4	20
960	IC0475761	7	2	6	7.1	47.1	30	2.5	6.7	70
961	IC0475763	7	4	4	4.2	29.9	20	4.6	4.7	50
962	IC0475766	7	4	4	15.6	49.1	11	5.5	9.9	19
963	IC0475773	5	4	7	7.4	24.3	30	3.7	7.3	80
964	IC0475775	6	2	2	5.7	33	10	4	8.7	5
965	IC0475780	6	2	6	16.1	23.4	30	5	2.2	20
966	IC0475784	5	3	7	12.9	25	30	4.6	2.5	80
967	IC0475787	7	4	6	2.8	40.4	0	3.4	5.9	5
968	IC0475788	4	4	4	5.1	35.8	31	3.2	4.8	43
969	IC0475789	6	2	7	0	8.4	60	2.4	6.2	70
970	IC0475791	7	2	4	3.4	30.8	0	4.8	3.9	0



S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
971	IC0475793	4	3	5	8.8	9.5	40	4.7	9.5	40
972	IC0475795	6	3	7	5.9	25.8	0	4	9.1	0
973	IC0475797	4	5	5	10.3	19.1	10	3.8	6.6	15
974	IC0475798	5	4	7	17.9	39.2	0	5.3	8.5	8
975	IC0475802	7	4	5	12.5	24.8	20	4	3.9	30
976	IC0475813	5	2	5	13.8	18.9	40	6	2.5	30
977	IC0475816	6	3	6	8.3	7	30	6.7	5.1	40
978	IC0475817	4	4	7	19.4	17.6	40	4.8	5.9	50
979	IC0475828	4	3	8	11.8	23.1	80	5.3	6.9	90
980	IC0475832	6	4	6	5.3	14.7	20	3.1	4	25
981	IC0475834	6	2	1	5.9	30.3	0	2.9	5.8	0
982	IC0475837	6	3	4	13.9	17.1	10	2.8	7	20
983	IC0475839	6	3	7	3.2	26.9	50	3.7	4.6	70
984	IC0475841	4	5	8	17.2	18.2	15	5.1	4.4	25
985	IC0475844	4	4	4	9.7	20.2	10	6	7.3	10
986	IC0475845	4	2	2	33.3	8.8	0	10.6	1.7	0
987	IC0475846	7	4	5	10.3	17.6	0	3.5	7.4	0
988	IC0475851	8	8	3	10.3	40	0	4.4	4.4	10
989	IC0475856	6	2	5	29.6	37.6	20	6.4	3.2	30
990	IC0475860	5	6	3	11.4	11.5	0	3.9	6.8	0
991	IC0475864	7	3	7	14.7	3.6	20	3.5	5.1	60
992	IC0475866	6	4	7	14.3	20.6	50	4.1	5	80
993	IC0475868	7	3	7	8.8	24.3	40	3.3	4.5	70
994	IC0475872	7	2	7	12.9	19.6	40	4	3.7	70
995	IC0475873	4	4	6	7.4	18.1	10	4.8	4.1	10
996	IC0475880	6	5	4	22.2	32.4	10	3.2	4.8	30
997	IC0475882	7	4	8	10.3	18.4	50	2.5	8	80
998	IC0475884	6	4	8	23.1	0	50	6.4	6.7	80
999	IC0475888	7	3	4	14.8	20.9	20	6.9	8.4	25
1000	IC0475892	5	7	5	14.7	22.3	13	3.7	4.9	18
1001	IC0475896	7	6	7	3.2	19.6	30	2.7	7.1	70
1002	IC0475898	5	2	6	8.3	34.8	21	4.2	9	27
1003	IC0475914	7	7	8	3	28.7	50	2	3.5	80
1004	IC0475934	7	6	2	12.9	33	0	4	9.9	0
1005	IC0475950	7	5	8	9.1	29.3	70	2.2	6	80
1006	IC0475959	7	5	3	12.8	24.8	0	4.3	7.3	10
1007	IC0475962	4	7	6	5.6	35.7	40	2.6	7.1	40
1008	IC0475964	4	4	5	5.6	41.3	10	2.8	11	25
1009	IC0475965	6	3	6	2.6	38.4	60	1.9	4.5	70
1010	IC0475966	5	4	3	13.5	26.9	10	3.9	5	20
1011	IC0475968	7	5	8	5.9	29.2	70	2.9	9.6	90
1012	IC0475970	4	7	6	14.7	24.8	60	3.2	2.2	80
1013	IC0475974	6	6	5	15.6	41.2	0	4.4	7.5	80
1014	IC0475976	6	3	7	6.3	32.4	40	2.7	7.8	40
1015	IC0475979	6	4	3	21.1	8.1	10	5.8	4	10
1016	IC0475980	7	6	5	11.8	15	10	2.4	4.2	18
1017	IC0475985	7	4	6	18.8	0	10	3.8	4.6	30
1018	IC0475995	6	3	4	12.9	33.3	13	5.9	27.4	21
1019	IC0475997	6	6	5	14.3	23.9	10	2.8	4.6	30
1020	IC0476003	4	4	5	5.4	15.7	30	2.5	5.3	70

S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
1021	IC0476011	4	4	5	14.3	22.2	31	5.5	3	47
1022	IC0476013	4	3	3	16.1	27.5	0	3.9	2.2	10
1023	IC0476015	4	6	5	7.4	18.9	43	7.3	7	21
1024	IC0476018	6	2	1	3.4	7.7	0	2	2.2	0
1025	IC0476020	4	5	6	12.5	21.6	40	6.3	4.5	80
1026	IC0476021	6	4	8	6.9	51	25	3.4	9.5	30
1027	IC0476022	6	8	3	28.6	6.8	10	5.1	4.4	15
1028	IC0476024	7	6	8	3.2	14.8	80	3.7	5	80
1029	IC0476025	7	4	8	0	24.1	20	1.1	2.6	80
1030	IC0476031	6	2	5	7.1	25.4	10	2.7	8.5	50
1031	IC0476043	7	4	5	8.3	13.3	0	6.7	3.8	0
1032	IC0476044	6	2	4	13.6	56.9	20	5.3	8.2	10
1033	IC0476046	4	4	6	6.9	7.6	40	3	6.2	70
1034	IC0476055	3	5	6	9.7	20.6	30	3.7	4.5	60
1035	IC0476063	6	4	5	19.4	14.4	0	6.9	5.1	0
1036	IC0476066	5	4	8	2.9	30.4	80	3.9	6.3	60
1037	IC0476068	4	8	7	3.7	21.1	40	2.6	2.4	80
1038	IC0476074	6	3	2	11.4	27.5	30	2.9	11	50
1039	IC0476077	6	2	6	2.6	31.3	17	1.9	3.9	31
1040	IC0476084	7	7	7	18.8	21.2	30	3.8	4.8	80
1041	IC0476093	7	4	3	5.7	7.6	25	2.7	3.1	33
1042	IC0476095	5	6	8	10.3	21.2	70	3.7	6.9	80
1043	IC0476098	5	3	5	8.8	34.3	20	3.1	7.5	25
1044	IC0476104	5	3	6	11.5	24.5	10	3.6	4.6	25
1045	IC0476125	3	7	7	24.2	21.2	18	4.1	3.2	31
1046	IC0476126	4	7	6	20.7	28.6	0	4.7	4.5	0
1047	IC0476135	4	6	6	9.7	2.7	30	3.5	1.6	20
1048	IC0476142	6	6	6	6.5	30.4	20	3.2	4	30
1049	IC0476147	3	6	7	3.4	9.8	20	2.2	6.7	30
1050	IC0476153	6	7	4	15.6	10.5	0	3.8	1	5
1051	IC0476161	6	4	7	7.7	37	40	5	6.4	50
1052	IC0476166	7	7	6	3	13	20	3.5	6.3	70
1053	IC0476168	6	7	7	6.1	20.4	20	2.5	3.2	60
1054	IC0476170	5	3	4	5.3	37.4	0	4.9	5.5	0
1055	IC0476176	4	8	5	9.1	35.3	21	3.3	7.1	34
1056	IC0476180	6	4	4	9.7	12	20	3.2	4.2	30
1057	IC0476181	6	2	6	10.7	15.2	10	6.7	3.7	30
1058	IC0476183	4	4	7	11.8	18.5	30	2.9	4.8	50
1059	IC0476193	7	7	7	17.2	27	48	4.9	6.8	71
1060	IC0476204	4	3	2	5.6	22.4	0	3.2	6.2	0
1061	IC0476211	3	2	1	8.8	20.7	0	2	5.7	0
1062	IC0476213	6	4	7	7.7	22.3	40	3	3.8	50
1063	IC0476225	7	4	5	12.9	52.8	30	4	6.6	30
1064	IC0476227	4	5	5	5.7	42.6	12	2.4	5.7	20
1065	IC0476235	6	2	4	0	10.7	20	2	2.9	35
1066	IC0476239	7	8	5	25.8	35.3	0	5.4	8.3	0
1067	IC0476240	5	2	3	3.1	9.2	20	4.4	6.2	15
1068	IC0476241	6	2	0	5.9	28.7	50	3.3	11.1	50
1069	IC0476245	6	3	7	9.7	20.2	20	2.9	4	40
1070	IC0476249	5	6	7	3.2	50.9	45	1.6	7.3	38



S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
1071	IC0476261	6	4	4	14.3	42.9	20	5.4	5.7	30
1072	IC0476267	4	7	8	12.9	20.2	60	2.9	5.3	90
1073	IC0476272	6	2	4	0	6.5	21	3.1	3.3	47
1074	IC0476278	6	3	5	0	20.2	10	0.5	4	5
1075	IC0476286	7	8	4	15.8	21.3	0	3.8	4.4	0
1076	IC0476294	6	2	6	12.5	6.8	0	3.8	4.5	0
1077	IC0476301	7	3	5	3	3.4	57	2.1	2.7	27
1078	IC0476302	7	6	5	10.7	24.5	0	5.2	7.3	15
1079	IC0476303	7	3	8	19.4	21.7	60	4.7	8.3	80
1080	IC0476307	7	5	3	6.5	30.3	13	4.6	6.9	24
1081	IC0476310	6	3	4	13.9	3.8	35	5.1	1	47
1082	IC0476313	6	7	5	19.2	30.6	10	5.1	10.1	30
1083	IC0476316	4	2	5	13.6	4.3	43	5.1	1.2	64
1084	IC0476318	6	8	6	15.4	29.5	13	2.8	5.8	21
1085	IC0476323	7	8	5	10.8	10.3	21	3	11.8	43
1086	IC0476324	5	6	5	6.3	30.8	10	3.3	5	20
1087	IC0476326	7	7	6	8.3	25.5	13	2.5	3.6	23
1088	IC0476332	4	6	7	5.7	8.1	0	2	5.8	0
1089	IC0476333	6	3	5	3.2	18.8	18	1.7	1.7	29
1090	IC0476337	7	7	7	23.1	34.6	40	5.1	4.7	60
1091	IC0476340	4	2	4	10.3	71.4	10	2.6	3.4	5
1092	IC0476341	5	4	5	5.7	5.2	20	1.8	6.1	5
1093	IC0476342	4	6	5	12	18.3	30	5.6	4.1	50
1094	IC0476345	5	5	3	20.7	14.8	0	3.7	3.7	0
1095	IC0476350	6	7	5	3.7	17.6	20	2.6	6.4	60
1096	IC0476360	4	4	4	6.9	36.8	10	2.8	4.1	20
1097	IC0476362	5	2	4	5.9	19.3	10	2	8	5
1098	IC0476363	6	5	5	8.8	20.4	60	3	5.1	40
1099	IC0476364	3	7	3	3.4	21.7	5	1.7	9.5	0
1100	IC0476376	3	6	6	9.7	24.3	0	3.1	5.8	0
1101	IC0476385	4	8	4	6.9	34.3	5	2.9	28.3	5
1102	IC0476387	6	8	6	14.3	16.2	7	3.6	6.5	18
1103	IC0476392	4	4	5	10.7	9.8	0	3.2	6.1	0
1104	IC0476397	7	8	5	19.4	40	0	4.7	12	10
1105	IC0476398	3	3	8	23.8	16.5	70	7.9	3.6	90
1106	IC0476399	2	4	4	11.1	21.4	58	3	3.8	73
1107	IC0476401	7	7	6	11.1	24.3	20	3.3	4.1	10
1108	IC0476408	5	7	8	22.2	56.9	50	4.6	5.5	80
1109	IC0476450	7	7	5	14.3	33.3	20	4.7	5.2	20
1110	IC0476478	7	5	7	10.3	25	10	3.8	4.6	15
1111	IC0476501	4	6	4	3.2	16.7	0	2.2	4.9	0
1112	IC0476502	6	5	7	6.5	22	40	2.5	4	60
1113	IC0476514	4	6	4	11.8	31.5	7	3.2	10.5	9
1114	IC0476530	7	4	1	3	5	0	2.2	1.8	0
1115	IC0476545	5	6	6	5.1	15.4	31	2.7	6.3	54
1116	IC0476549	5	4	2	9.7	19.3	20	3.3	5.6	40
1117	IC0476553	5	6	3	15.2	36.3	10	3.8	7.2	30
1118	IC0476568	6	2	7	30.3	6.2	48	28.3	1.7	67
1119	IC0476587	7	3	5	2.9	27.8	0	2	5.5	30
1120	IC0476599	4	5	2	6.3	29.5	20	2.4	4.6	10

S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
1121	IC0476602	5	7	4	17.2	21.8	11	4.1	6	18
1122	IC0476605	3	2	6	6.9	29.6	0	1.7	4.3	10
1123	IC0476611	4	4	5	4.7	35	34	2.1	4.9	50
1124	IC0476626	4	6	5	17.1	13.9	20	4.9	0.4	45
1125	IC0476633	6	2	4	10.3	15.4	10	4.4	3.1	40
1126	IC0476642	5	3	3	5.3	5.6	10	3.2	3.3	30
1127	IC0476648	7	4	3	13.8	7.1	20	5.4	8.8	30
1128	IC0476649	7	3	4	38.1	27.5	7	9.7	8.4	17
1129	IC0476651	7	7	3	22.2	19.2	0	5.8	5.7	10
1130	IC0476695	7	4	5	21.4	36.4	0	5	5.9	0
1131	IC0476696	7	3	5	25	23.9	5	10.8	4	13
1132	IC0476705	7	7	4	0	18.3	9	3.4	3.1	17
1133	IC0476710	7	7	5	4.2	8.4	10	2.7	2.5	5
1134	IC0476761	7	5	4	10	7.1	21	5.5	8.1	33
1135	IC0476769	7	8	6	19.4	24.5	40	4.4	6.5	40
1136	IC0476776	4	2	7	23.1	39.4	20	9	4.2	60
1137	IC0476788	7	2	6	10.3	46.2	35	4.3	8.8	51
1138	IC0476828	6	3	7	9.7	25	20	4.1	7.1	70
1139	IC0476842	4	6	3	16.1	40.2	0	4.8	5.1	10
1140	IC0476849	8	4	6	11.4	42.9	10	4.1	5.7	20
1141	IC0476927	6	3	5	20	25.5	10	5.4	7	30
1142	IC0476955	5	6	3	10.3	33.9	10	4.7	4.9	10
1143	IC0477070	7	8	7	8.3	29.5	0	4.6	5.6	0
1144	IC0477199	6	5	6	5.1	32.4	13	3.1	10.8	29
1145	IC0478047	5	5	3	15.6	32.9	0	4.1	4.5	0
1146	IC0478110	5	7	7	6.1	44.4	20	3.9	16	30
1147	IC0478181	5	2	6	8.8	31.8	25	3.9	5.1	30
1148	IC0478230	5	2	6	6.5	20.7	20	2.8	4.4	30
1149	IC0478233	5	5	1	6.9	25.9	0	3.7	3.8	0
1150	IC0478252	6	8	8	18.8	41.5	50	4.4	8.9	80
1151	IC0478289	5	8	7	8.8	32.9	20	3.5	12.4	60
1152	IC0478308	7	5	4	8.8	18.6	0	3.5	4.9	0
1153	IC0478319	6	3	5	6.5	31.8	10	2.7	6.8	0
1154	IC0478334	7	6	1	6.5	45	0	2.7	10.9	0
1155	IC0478337	6	6	4	6.5	15.8	0	2.8	5	10
1156	IC0478348	7	8	3	8.8	18.9	0	3.5	1.8	10
1157	IC0478367	7	4	5	16.7	26.8	0	3.7	2.1	0
1158	IC0478378	7	5	4	10.3	25.5	0	3.9	6.8	0
1159	IC0478389	5	6	5	8.8	28.7	0	3.5	3.4	0
1160	IC0478403	7	4	1	7.1	18.5	0	3	2.5	0
1161	IC0478406	6	3	8	19.2	33.9	30	4.8	3.8	50
1162	IC0478409	7	6	2	6.5	27.8	25	2.8	5.5	30
1163	IC0478418	6	8	8	16.7	31.6	20	29.3	7.5	40
1164	IC0478429	7	7	6	6.9	25.3	20	3.7	2.7	20
1165	IC0478430	5	8	8	6.5	15.3	0	2.7	4.3	30
1166	IC0478442	7	5	6	16.7	20.9	20	3.7	1.6	20
1167	IC0478443	7	8	6	16.7	51.9	20	3.7	6.1	25
1168	IC0478444	5	6	6	16.7	35.1	0	3.7	7.4	0
1169	IC0478451	6	3	6	10.3	58.8	20	3.9	10.9	20
1170	IC0478465	6	7	4	6.5	26.8	20	4.5	6.7	30



S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
1171	IC0478468	6	4	5	7.1	28.6	0	3	2.4	0
1172	IC0478469	6	7	4	19.2	18.2	0	4.8	3	10
1173	IC0478474	6	5	2	15.6	18.6	20	4.1	1.5	10
1174	IC0478499	6	3	6	15.6	33.8	20	4.1	0	40
1175	IC0478500	5	2	8	13.8	18.8	50	4.5	4	80
1176	IC0478506	6	2	5	8.8	19.5	20	3.9	2.8	30
1177	IC0478507	5	5	8	11.1	27.6	50	4.1	2.8	80
1178	IC0478515	5	8	3	6.5	21.7	15	2.7	14.7	0
1179	IC0478518	6	2	4	8.8	14.3	0	3.9	2.2	0
1180	IC0478520	6	4	2	6.5	20.4	0	2.8	2.9	0
1181	IC0478526	7	3	5	6.5	21.4	0	2.8	12.9	30
1182	IC0478529	7	2	8	6.9	44.4	50	3.7	7.2	50
1183	IC0478537	6	3	4	10.3	20.4	0	3.9	4.7	0
1184	IC0478538	7	6	4	6.9	21.6	10	3.7	2.7	20
1185	IC0478540	6	6	6	12.9	32.1	30	3.8	9.1	40
1186	IC0478542	7	6	4	6.9	23.1	20	3.7	3.8	20
1187	IC0478543	5	4	6	6.1	27.1	30	3.9	5.2	40
1188	IC0478544	7	8	8	16.7	21.8	80	3.7	7.4	80
1189	IC0478551	5	3	4	18.8	16.5	10	4.4	3.4	20
1190	IC0478552	7	3	5	10.3	22.1	20	3.9	6.7	50
1191	IC0478557	7	5	5	16.7	22.5	0	3.7	3.9	10
1192	IC0478559	7	7	5	7.1	22.7	0	3	5.4	0
1193	IC0478561	7	7	3	16.7	37.3	0	3.7	12.1	20
1194	IC0478563	4	4	6	7.1	17.6	0	3	4.2	0
1195	IC0478571	7	6	7	8.8	34	20	3.5	4.9	30
1196	IC0478572	5	3	6	6.1	26.5	0	3.9	4.3	0
1197	IC0478573	6	4	5	7.7	39.2	0	4.2	3.9	0
1198	IC0478576	4	6	5	7.1	25.8	0	3	4.3	20
1199	IC0478585	5	7	5	16.7	8.8	0	3.7	1.3	0
1200	IC0478587	7	5	7	19.2	18.2	0	4.8	3.8	0
1201	IC0478588	8	6	3	0	24.3	0	2.4	0.9	20
1202	IC0478591	6	6	5	0	15.5	20	4.8	1.8	40
1203	IC0478593	5	8	3	15.6	23.5	0	4.1	5.1	0
1204	IC0478602	8	4	4	15.6	24.1	20	4.1	4.6	0
1205	IC0478604	5	3	6	18.8	27.5	0	4.4	4.1	0
1206	IC0478606	5	3	5	15.6	23.5	0	4.1	6	0
1207	IC0478607	5	5	4	15.6	19	0	4.1	1.6	20
1208	IC0478611	7	4	3	8.8	28.6	20	3.9	7.4	0
1209	IC0478618	7	3	6	6.5	37.2	50	2.8	8.5	50
1210	IC0478620	4	2	3	8.8	37.5	0	3.9	11.6	0
1211	IC0478626	5	6	4	6.5	35.9	0	2.8	8.6	10
1212	IC0478627	4	5	8	8.8	10.4	20	3.5	0.7	50
1213	IC0478629	7	6	8	6.5	33.3	20	2.7	8.3	80
1214	IC0478632	5	3	2	6.5	18.6	0	2.8	2.1	0
1215	IC0478635	5	4	3	8.8	10.3	20	3.9	0.9	40
1216	IC0478638	5	5	5	6.5	34	10	2.8	8.8	50
1217	IC0478640	6	4	5	16.7	26.2	0	3.7	6	20
1218	IC0478643	6	5	3	6.9	16.8	0	3.7	6.2	0
1219	IC0478644	5	4	4	6.9	19.7	0	3.7	2.6	30
1220	IC0478645	6	2	4	16.7	38.2	10	3.7	7.3	20

S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
1221	IC0478646	7	3	4	12.5	12.2	0	3.6	7.3	20
1222	IC0478649	5	6	4	8.8	25.5	0	3.9	7	10
1223	IC0478650	5	2	5	6.9	17.3	0	3.7	2.6	0
1224	IC0478651	6	4	4	10.3	43.4	0	3.9	10.3	0
1225	IC0478652	5	7	4	6.9	28.6	0	3.7	4.3	0
1226	IC0478655	5	6	5	7.1	29	0	3	6.9	0
1227	IC0478656	6	4	5	12.5	24.3	10	3.6	2.5	20
1228	IC0478660	5	2	4	6.5	31.6	0	4.5	9.2	30
1229	IC0478662	7	3	3	10.3	47.4	30	3.9	14.9	0
1230	IC0478669	7	5	8	13.8	32	40	4.5	7	70
1231	IC0478670	7	3	3	8.8	21.6	0	3.9	2.9	10
1232	IC0478671	8	4	6	11.1	33.8	40	4.1	9.5	50
1233	IC0478673	7	6	6	6.5	8.9	20	2.8	0	40
1234	IC0478676	7	6	4	8.8	30.9	0	3.9	5.8	0
1235	IC0478680	7	5	5	15.6	26.4	30	4.1	7.6	40
1236	IC0478683	7	5	5	8.8	36.7	0	3.9	10.8	40
1237	IC0478686	5	8	6	6.9	27	0	3.7	0.7	0
1238	IC0478689	4	6	8	10.3	23.1	30	3.9	8.1	80
1239	IC0478691	7	8	6	6.9	18.5	0	3.7	5.3	20
1240	IC0478693	7	5	4	6.5	19.6	10	4.5	7.2	0
1241	IC0478694	7	3	4	6.9	59	0	3.7	16.3	30
1242	IC0478696	6	4	6	12.5	23.7	20	3.6	3.5	50
1243	IC0478698	5	6	6	7.1	45.5	20	3	13.3	30
1244	IC0478702	7	3	6	8.8	21	20	3.9	3.2	50
1245	IC0478703	7	3	6	6.5	22.7	10	4.5	2.9	40
1246	IC0478704	5	2	4	13.8	27.6	20	4.5	4.9	30
1247	IC0478706	6	5	5	11.1	15.5	0	4.1	3.6	20
1248	IC0478707	6	4	4	8.8	23.1	0	3.9	6.5	0
1249	IC0478710	7	4	5	13.8	25.7	0	4.5	6.5	0
1250	IC0478715	5	5	3	16.7	12.1	0	3.7	1.7	0
1251	IC0478716	6	4	4	12.5	36.4	0	3.6	12.8	10
1252	IC0478718	7	5	6	19.2	36.7	20	4.8	9.2	50
1253	IC0478720	5	7	2	8.8	67.8	20	3.9	12.5	0
1254	IC0478725	7	3	4	8.8	23.7	5	3.9	6.3	25
1255	IC0478726	5	5	5	10.3	15.2	0	3.9	2.4	0
1256	IC0478727	6	9	3	13.8	78.4	20	4.5	18.4	0
1257	IC0478729	6	3	2	7.1	28.9	0	3	1.6	0
1258	IC0478730	6	7	6	15.6	28.9	10	4.1	3.8	20
1259	IC0478734	6	7	1	6.9	25.2	0	3.7	6.6	0
1260	IC0478739	7	5	5	6.5	21.8	5	4.5	5	50
1261	IC0478740	7	5	8	8.8	35.7	0	3.9	8.7	20
1262	IC0478741	4	7	4	11.1	21.4	0	4.1	2.7	0
1263	IC0478742	3	2	5	13.8	14.3	0	4.5	1.5	0
1264	IC0478746	6	7	3	12.9	17.6	0	3.8	2	0
1265	IC0478750	5	4	6	6.5	18.6	0	2.8	4.5	20
1266	IC0478751	6	3	7	11.1	28	0	4.1	1.9	0
1267	IC0478753	6	3	6	11.1	19.4	0	4.1	2.1	0
1268	IC0478760	7	6	3	12.9	46.7	0	3.8	8.4	0
1269	IC0478764	7	7	4	18.8	22.2	0	4.4	6.5	0
1270	IC0478765	5	3	3	12.9	35	0	3.8	2.1	0



S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
1271	IC0478768	7	6	3	13.8	30	10	4.5	4.2	10
1272	IC0478786	7	3	6	11.1	21.1	0	4.1	5.7	20
1273	IC0478788	6	3	5	12.9	32.1	0	3.8	4.8	20
1274	IC0478789	7	6	3	16.7	44.3	0	3.7	8.7	10
1275	IC0478792	7	6	4	6.1	31.4	0	3.9	5.5	0
1276	IC0478793	7	3	5	7.1	65.3	0	3	10	0
1277	IC0478800	6	6	4	6.9	28.9	0	3.7	6.8	0
1278	IC0478801	5	5	7	6.1	28.6	0	3.9	8.9	0
1279	IC0478807	5	4	6	18.8	9.6	20	4.4	0	40
1280	IC0478808	5	7	6	6.1	21.6	0	3.9	6.1	0
1281	IC0478809	7	8	1	13.8	36.1	0	4.5	5	0
1282	IC0478810	7	7	3	15.6	64.9	0	4.1	15.2	0
1283	IC0478813	8	4	5	13.8	0.9	0	4.5	0.3	0
1284	IC0478814	5	9	4	6.5	27.6	0	2.7	8.5	0
1285	IC0478816	5	4	4	16.7	30.9	0	3.7	3.7	0
1286	IC0478817	5	7	4	6.5	22.5	0	4.5	3	10
1287	IC0478819	4	6	5	11.1	26.5	0	4.1	5.1	0
1288	IC0478821	7	4	4	6.5	33.9	0	2.8	5	0
1289	IC0478823	7	4	4	6.5	71.1	0	2.8	13	20
1290	IC0478824	8	2	6	6.5	15.4	10	3.1	2.8	60
1291	IC0478826	5	6	4	6.9	35.8	0	3.7	4.9	0
1292	IC0478827	7	7	2	6.5	39.2	10	2.7	5.8	10
1293	IC0478831	5	8	4	13.8	20.4	0	4.5	6.3	0
1294	IC0478834	7	7	2	16.7	48.3	10	3.7	15.2	10
1295	IC0478838	6	3	4	6.5	34.7	0	2.7	7.7	0
1296	IC0478842	5	5	2	6.5	30.3	0	4.5	4.6	0
1297	IC0478844	6	6	4	6.9	31.1	20	3.7	4.6	30
1298	IC0478846	5	6	1	13.8	46.4	0	4.5	7.3	0
1299	IC0478847	7	5	4	16.7	18.3	0	3.7	3.4	0
1300	IC0478848	8	5	6	6.1	46.7	30	3.9	11.7	50
1301	IC0478850	6	7	8	11.1	35.7	0	4.1	10.9	0
1302	IC0478851	6	6	6	11.1	53.9	0	4.1	9.4	0
1303	IC0478852	8	7	6	11.1	76.5	40	4.1	12.2	40
1304	IC0478853	5	5	6	10.3	17.1	0	3.9	2.7	20
1305	IC0478854	6	4	6	7.1	25.5	0	3	5.9	20
1306	IC0478855	7	8	4	6.5	40.2	20	4.5	10.7	20
1307	IC0478856	7	4	4	13.8	22.8	20	4.5	5.1	10
1308	IC0478857	5	8	4	8.8	10.2	0	3.5	3.4	0
1309	IC0478858	4	3	6	11.1	23.7	0	4.1	5.8	0
1310	IC0478859	6	7	7	16.7	42.2	0	3.7	5.6	0
1311	IC0478861	5	5	7	6.5	23.7	0	2.7	7.2	0
1312	IC0478862	5	6	4	16.7	32.1	0	3.7	7.7	0
1313	IC0478863	5	5	6	19.2	18.6	20	5.4	2.6	50
1314	IC0478865	6	5	6	6.5	29.6	0	4.5	1.9	0
1315	IC0478869	4	3	4	16.7	16.8	0	3.7	2.4	30
1316	IC0478871	5	4	2	13.8	11.2	0	4.5	1.9	0
1317	IC0478873	7	2	3	13.8	31.6	0	4.5	5.3	0
1318	IC0478874	7	3	3	11.1	21.8	0	4.1	5	20
1319	IC0478875	6	9	3	11.1	13.6	0	4.1	3.9	0
1320	IC0478878	5	2	6	15.6	12.2	10	4.1	3.7	40

S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
1321	IC0478879	7	3	3	6.1	22.5	0	3.9	8.9	20
1322	IC0478881	5	4	6	18.8	47.4	0	4.4	8.9	20
1323	IC0478883	5	6	3	6.5	13.6	0	4.5	1.4	0
1324	IC0478885	6	9	4	12.9	48.1	0	3.8	10.5	0
1325	IC0478886	5	5	6	6.1	5.6	0	3.9	2	10
1326	IC0478888	5	8	4	8.8	23.9	0	3.5	4.3	0
1327	IC0478889	7	5	4	8.8	28.9	0	3.5	5.8	0
1328	IC0478891	7	8	6	8.8	25	0	3.5	7.4	0
1329	IC0478892	6	5	6	6.1	21.7	0	3.9	6.1	30
1330	IC0478894	6	2	5	10.3	8.1	20	3.9	0.8	30
1331	IC0478895	6	7	4	18.8	37.1	0	4.4	5.6	0
1332	IC0478896	6	8	6	6.1	23.1	0	3.9	3.7	0
1333	IC0478897	5	7	4	13.8	15.9	0	4.5	4	10
1334	IC0478898	7	3	3	6.1	44.6	0	3.9	7.7	0
1335	IC0478903	6	5	6	11.1	18.6	0	4.1	7.5	10
1336	IC0478904	7	7	5	18.8	48.5	25	4.4	9	20
1337	IC0478905	6	4	3	7.1	37.1	35	3	11.8	20
1338	IC0478907	6	5	5	12.9	24.5	0	3.8	2.9	30
1339	IC0478912	7	6	8	18.8	4.7	20	4.4	0	50
1340	IC0478920	7	3	5	3.8	33	0	2.4	10.3	20
1341	IC0478922	5	5	2	6.5	28.9	0	2.8	3	10
1342	IC0478922-A	5	8	7	6.9	35.3	40	3.7	8	60
1343	IC0478923	6	6	7	6.5	26.9	0	2.7	5.3	40
1344	IC0478935	5	4	5	19.2	30	25	5.4	7.1	20
1345	IC0478937	7	5	6	5.9	19	40	2.8	1.8	70
1346	IC0478938	7	2	4	15.6	36.5	0	4.1	6.7	20
1347	IC0478940	7	6	4	3.1	4.2	30	4.4	1.9	20
1348	IC0478942	7	6	6	17.9	2.4	40	4.7	2.6	20
1349	IC0478943	7	6	7	18.8	27.5	0	4.4	5.1	70
1350	IC0478944	7	5	6	4.8	6.4	0	5.6	7.2	70
1351	IC0478948	8	8	8	15.8	9.2	50	6.1	2.4	80
1352	IC0478950	8	7	8	17.4	0	70	3.8	2.3	80
1353	IC0478951	6	6	4	0	1.7	20	3.4	3.9	20
1354	IC0478955	8	9	3	7.1	29.1	0	3.1	3.9	30
1355	IC0478975	7	5	5	3.2	5	40	3.2	3.1	20
1356	IC0479006	6	5	4	8.8	21	0	3.9	0	10
1357	IC0479020	7	7	3	5.9	7.5	0	4.9	4.7	20
1358	IC0479028	7	5	3	3.1	4.9	0	3.4	3.1	60
1359	IC0479048	6	5	8	6.5	26	80	2.7	4.8	80
1360	IC0479072	7	7	7	3.4	9.1	30	4	3.4	80
1361	IC0479098	7	5	7	19.4	3.3	30	5	1.8	80
1362	IC0479124	8	6	7	5.9	2.2	30	2.2	2.5	80
1363	IC0479146	7	8	7	10.7	1.8	10	4.8	2.2	80
1364	IC0479148	7	5	7	6.1	5.5	30	2.5	6.6	60
1365	IC0479179	7	6	8	9.4	11.4	80	3.9	8.5	80
1366	IC0588016	4	5	8	10.7	3.2	80	5.8	2.6	80
1367	IC0588023	7	6	5	0	21.2	50	3.1	3.3	40
1368	IC0588025	7	2	5	7.1	15.9	20	3	1.6	20
1369	IC0588027	7	7	4	15.6	19.2	10	4.1	6.3	40
1370	IC0588028	7	5	6	7.7	25.9	50	2.7	5.1	40



S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
1371	IC0588030	7	7	6	8.8	26.5	30	4.4	5.5	20
1372	GE4449	5.41	1.5	1.6	10.6	20.3	1.4	3.8	1.5	1.2
1373	KMR204	5.07	2.3	1.5	11.2	4.1	1.4	4	0.3	1.3
1374	KMR301	5.76	7.9	7.5	11.5	33.5	74.9	4.2	4.9	76.8
1375	UduruMallige	6.72	8.8	7.9	25.1	67.9	77.3	25.1	37.4	79.3

S. No	Acc. No	Leaf blast			Neck Blast			Finger Blast		
		ALMO	MAND	VIZ	ALMO	MAND	VIZ	ALMO	MAND	VIZ
	Mean									
	CD 5%									
	CD 1%									
	CV %									

Table 18: Finger millet germplasm 74 acc. (200 acc.) characterization and ranking for days to 50% maturity, days to maturity and plant height

S.No	Acc. No	Days to 50% flowering												Days to maturity												Plant height (cm)																	
		VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	INDIA (6)	Rank	VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	INDIA (6)	Rank	VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	INDIA (6)	Rank
1	EN112	90	37	90	53	62	21	83	61	64	40	90	63	80	56	119	34	124	55	104	25	118	61	95	28	123	63	114	48	116	22	122	33	104	14	121	7	83	52	87	70	106	25
2	EN22	95	47	91	58	68	58	80	58	71	72	82	54	81	61	125	41	123	45	110	60	115	58	101	52	115	53	115	56	125	6	118	43	114	4	119	10	107	4	128	3	118	3
3	EN52	98	52	90	56	64	39	88	66	49	9	90	60	80	55	133	56	124	57	106	42	123	66	78	3	123	60	115	54	118	17	106	67	82	69	112	20	76	61	109	25	101	48
4	EN96	91	39	89	49	62	20	75	31	67	55	90	65	79	51	121	37	123	44	104	24	110	32	103	60	123	66	114	52	122	12	119	40	92	35	108	24	96	19	107	34	107	18
5	EN98	87	25	87	31	65	42	78	49	67	56	90	66	79	52	116	19	123	39	106	40	113	49	102	58	123	65	114	49	120	13	128	24	89	45	114	16	94	25	104	45	108	16
6	EN99	87	26	87	32	62	18	71	10	63	33	82	49	75	23	117	26	118	18	104	20	106	10	96	30	115	51	109	19	116	24	123	31	98	20	123	4	81	55	119	9	110	13
7	ER37	62	1	73	4	59	6	64	5	71	71	65	3	66	2	89	1	107	4	101	8	99	5	106	70	98	4	100	2	115	29	92	74	90	41	87	58	106	6	113	17	101	49
8	ER41	66	2	77	6	59	7	54	2	65	44	65	1	64	1	93	2	114	7	102	10	89	2	100	41	98	2	99	1	100	58	108	64	94	29	84	68	95	23	112	21	99	54
9	ER55	87	27	95	62	68	60	73	22	62	28	82	47	78	36	116	21	129	61	109	58	108	22	95	27	115	49	112	33	97	61	129	20	93	32	105	28	101	11	106	37	105	26
10	ER62	95	48	86	27	63	25	75	32	60	26	90	62	78	39	127	44	119	25	104	21	110	31	94	26	123	62	113	39	108	42	129	19	101	19	101	33	90	35	96	60	104	29
11	ER64	85	15	89	44	59	11	69	8	57	17	82	45	74	14	116	22	121	30	102	14	104	8	88	17	115	46	108	15	91	67	125	30	90	43	108	23	85	48	106	38	101	50
12	ER67	84	13	83	13	68	57	81	60	64	39	82	50	77	30	115	15	116	12	109	54	116	60	98	36	115	52	112	31	94	64	139	4	97	21	118	12	81	54	94	65	104	32
13	IC0007953	84	14	111	73	63	32	73	19	63	34	77	17	79	45	114	12	145	74	106	44	108	20	101	50	110	19	114	51	109	39	117	45	85	59	92	52	82	53	123	4	101	43
14	IC0007954	86	20	110	72	63	31	72	15	67	53	78	23	79	54	117	25	144	73	104	26	107	15	105	67	111	26	115	55	119	15	133	14	81	71	100	36	88	43	116	13	106	23
15	IC00618651	99	56	92	59	63	29	74	25	57	18	88	57	79	48	130	53	127	60	106	43	109	26	90	20	121	58	114	47	107	45	127	25	87	51	85	66	89	42	80	73	96	64
16	IC00622007	112	71	105	71	74	73	53	1	67	51	102	74	86	70	145	70	137	71	116	74	88	1	102	53	133	73	120	69	134	1	137	7	105	11	71	74	84	51	132	2	111	12
17	IC00622031	109	67	102	69	75	74	76	40	52	13	102	73	86	71	143	67	135	70	116	73	111	40	85	14	134	74	121	72	123	10	138	5	94	30	119	8	78	60	136	1	115	6
18	IC00622036	111	70	86	28	69	62	78	52	58	20	80	36	80	59	144	69	123	52	111	65	113	52	99	38	112	33	117	61	117	19	135	10	96	24	350	1	79	58	115	15	149	1
19	IC00622041	105	61	89	50	70	68	84	64	64	41	81	42	82	63	136	60	124	58	112	68	119	64	100	49	113	40	117	64	117	20	130	18	108	9	121	6	87	45	112	22	112	8
20	IC00622046	113	72	86	29	71	70	85	65	67	58	82	52	84	68	148	72	116	13	113	70	120	65	103	63	114	43	119	67	124	8	128	22	101	18	119	9	89	40	105	43	111	11
21	IC00622053	115	73	89	51	63	27	80	55	49	8	77	16	79	47	150	73	123	54	105	33	115	55	79	7	110	16	114	46	81	71	116	49	84	63	110	21	73	65	111	23	96	62
22	IC00622063	89	33	83	16	59	10	73	17	69	64	78	24	75	20	118	29	119	21	102	12	108	17	102	56	111	25	110	23	115	28	121	36	87	53	90	54	106	5	100	53	103	35
23	IC00622068	89	34	90	52	64	37	76	39	64	38	80	38	77	33	118	30	121	31	107	47	111	39	97	31	112	32	111	29	109	38	125	29	102	17	103	30	89	39	113	16	107	19
24	IC00622069	95	49	87	36	66	51	78	51	65	47	79	32	78	41	128	49	121	35	109	55	113	51	98	35	111	23	113	42	134	2	129	21	103	15	105	27	87	46	102	52	110	14
25	IC00622073	94	43	87	34	65	44	78	50	67	57	79	33	78	42	127	46	121	34	108	51	113	50	100	47	111	24	113	43	100	59	113	60	83	68	103	29	91	30	111	24	100	52
26	IC00622078	108	64	90	57	66	53	80	56	65	48	78	22	81	60	143	68	124	59	107	50	115	56	100	48	110	18	117	60	111	33	118	41	89	44	114	17	90	36	107	36	105	27
27	IC00622084	110	68	102	70	69	66	88	72	67	59	91	68	88	74	141	65	133	68	111	66	123	71	102	59	124	69	122	74	102	52	143	1	96	23	121	5	93	27	97	58	109	15
28	IC00622089	98	53	96	64	69	65	88	71	69	65	92	70	85	69	130	51	130	63	110	61	123	69	105	69	125	70	121	70	116	25	134	12	95	26	115	14	96	20	113	20	111	9
29	IC00622112	108	65	95	63	69	64	88	70	64	42	94	71	86	72	141	64	130	65	112	69	123	72	99	39	126	71	122	73	116	23	137	8	108	8	118	13	95	22	105	42	113	7
30	IC0066140	96	50	99	66	73	71	88	73	54	16	89	59	83	65	130	52	130	64	114	71	123	73	87	16	121	57	118	65	115	26	135	11	93	31	97	43	87	44	91	67	103	34
31	IC0473882	103	58	101	68	66	54	88	68	58	21	79	29	83	64	134	58	133	67	108	53	123	68	92	23	113	37	117	62	96	62	117	46	112	6	85	65	75	64	106	40	98	55
32	IC0474816	86	21	83	14	58	3	73	16	47	2	79	26	71	10	115	13	119	19	99	2	108	16	78	2	112	29	105	8	110	37	115	53	84	64	93	50	63	74	109	26	96	66
33	IC0475125	89	35	83	17	63	24	78	48	53	14	78	21	74	16	121	38	117	16	105	28	113	48	86	15	111	22	109	17	128	3	115	50	103	16	93	49	71	67	103	47	102	38
34	IC0475386	98	54	88	43	62	19	80	53	49	7	80	35	76	26	129	50	123	49	102	15	115	53	80	9	113	36	110	25	118	18	114	56	89	49	88	57	67	72	108	32	97	59
35	IC0475407	90	38	83	18	62	17	75	30	51	10	81	41	74	15	122	40	119	24	102	13	110	30	84	12	114	42	109	16	116	21	113	58	87	55	85	62	69	70	103	46	96	65
36	IC0476095	77	8	80	8	59	9	74	24	49	5	73	6	69	5	105	7	111	6	100	4	109	23	80	8	105	6	102	3	115	27	97	72	96	22	85	63	67	71	105	41		



S.No	Acc. No	Days to 50% flowering														Days to maturity														Plant height (cm)													
		VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	INDIA (6)	Rank	VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	INDIA (6)	Rank	VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	INDIA (6)	Rank
42	IC0478444	97	51	88	42	58	4	72	14	69	63	79	34	77	32	131	54	123	50	100	7	107	14	108	71	111	27	113	44	119	14	120	37	84	62	93	48	98	16	97	57	102	39
43	IC0478543	85	16	70	3	61	12	65	6	59	22	74	10	69	6	117	27	102	2	102	9	100	6	91	21	107	11	103	6	106	46	113	59	85	58	94	46	76	63	113	18	98	56
44	IC0478571	93	42	85	22	66	50	70	9	67	52	77	19	76	27	127	45	123	47	109	57	105	9	102	55	110	20	113	38	106	48	119	39	84	60	97	42	90	38	102	50	100	53
45	IC0478640	98	55	85	23	64	34	76	38	65	46	80	39	78	38	131	55	120	27	105	29	111	38	100	46	113	39	113	45	122	11	104	70	82	70	99	39	85	49	94	63	97	58
46	IC0478656	110	69	87	40	64	36	73	20	66	50	74	13	79	50	145	71	123	53	107	49	108	21	101	51	107	14	115	58	119	16	114	54	83	67	84	67	90	37	90	68	97	61
47	IC0478686	94	44	90	55	64	38	71	12	59	23	74	11	75	22	126	43	124	56	106	41	106	12	93	24	107	12	110	24	107	44	118	42	110	7	98	40	81	57	103	48	103	36
48	IC0478693	94	45	86	26	70	67	83	63	68	62	80	40	80	57	126	42	123	46	111	64	118	63	103	62	113	41	116	59	98	60	114	55	76	72	82	71	91	31	86	71	91	72
49	IC0478710	108	66	83	19	61	14	78	47	59	25	86	56	79	53	143	66	117	17	102	11	113	47	92	22	119	56	114	53	88	70	116	48	91	38	91	53	91	34	83	72	93	70
50	IC0478746	88	30	85	21	65	40	75	33	63	35	77	18	76	24	119	35	119	23	106	36	110	33	100	44	110	17	111	26	124	9	115	51	94	27	95	45	91	33	98	55	103	37
51	IC0478766	70	3	81	9	61	13	76	37	62	29	79	30	72	11	98	3	116	11	103	16	111	37	100	45	112	34	107	12	92	66	121	34	89	48	83	69	93	26	94	64	95	68
52	IC0478792	77	9	87	30	67	55	74	27	64	37	79	31	75	18	105	8	123	37	107	48	109	27	102	57	112	35	110	21	105	49	130	17	92	34	102	32	93	28	98	56	103	33
53	IC0478821	71	4	79	7	59	8	74	23	61	27	80	37	71	8	101	4	114	8	100	5	109	24	100	43	113	38	106	10	102	53	133	13	85	57	86	59	96	21	102	51	101	47
54	IC0478832	103	59	87	38	65	46	77	44	78	74	81	43	82	62	134	59	123	51	105	32	112	43	115	74	114	44	117	63	95	63	116	47	106	10	100	34	109	2	99	54	104	31
55	IC0478862	103	60	85	24	64	35	71	11	70	66	73	7	78	35	137	61	120	28	106	37	106	11	105	66	105	7	113	41	125	7	108	65	84	61	89	56	103	8	116	11	104	30
56	IC0478935	75	6	69	1	59	5	62	4	68	60	74	14	68	4	104	6	102	1	100	3	97	4	102	54	106	9	102	4	111	34	104	69	68	74	85	64	100	12	107	33	96	63
57	IC0624939	107	63	87	39	67	56	80	57	51	11	78	20	78	40	138	63	121	36	109	56	115	57	81	10	111	21	113	34	111	32	136	9	89	46	113	19	79	59	119	10	108	17
58	IC0624940	92	40	94	61	68	59	74	28	54	15	89	58	79	46	122	39	129	62	109	59	109	28	84	11	122	59	113	36	126	5	142	2	112	5	113	18	86	47	113	19	115	5
59	IC0624941	83	12	82	11	66	49	88	67	62	30	74	12	76	25	115	14	117	15	107	45	123	67	97	32	107	13	111	28	91	68	121	35	83	66	130	2	89	41	121	7	106	24
60	IC0627123	94	46	87	35	65	45	75	34	70	68	90	67	80	58	127	48	119	26	107	46	110	34	104	65	123	67	115	57	100	57	126	27	105	12	99	38	102	9	107	35	106	21
61	IC0627127	89	36	93	60	63	30	68	7	63	32	82	48	76	28	118	31	123	43	104	23	103	7	96	29	115	50	110	22	109	40	140	3	105	13	127	3	101	10	115	14	116	4
62	IC0627178	80	10	76	5	63	22	80	54	68	61	65	2	72	12	110	10	107	5	105	27	115	54	103	61	98	3	106	11	106	47	98	71	90	40	93	51	98	17	122	5	101	44
63	IC0627179	87	28	86	25	65	41	77	43	70	69	82	53	78	37	118	33	119	22	106	35	112	44	105	68	115	54	113	35	113	31	109	63	84	65	86	60	100	14	97	59	98	57
64	IC0627180	87	29	89	47	69	63	77	46	57	19	82	46	77	29	116	24	123	41	111	63	112	46	89	18	115	47	111	30	111	35	117	44	91	37	107	25	81	56	106	39	102	40
65	IC0628944	86	23	83	15	63	23	73	18	70	67	74	15	75	19	116	20	115	10	104	19	108	18	104	64	107	15	109	18	114	30	114	57	90	42	94	47	108	3	121	8	107	20
66	SEA11	85	17	89	45	66	52	75	35	65	45	82	51	77	31	116	23	123	40	108	52	110	35	93	25	115	48	111	27	108	41	123	32	119	3	109	22	100	13	108	28	111	10
67	SEA23	86	24	84	20	71	69	74	29	73	73	82	55	78	43	115	16	119	20	112	67	109	29	108	72	115	55	113	40	101	56	131	15	146	1	118	11	110	1	108	30	119	2
68	SEA38	88	31	87	33	65	43	73	21	67	54	90	64	78	44	118	32	121	32	105	30	108	19	100	42	123	64	113	37	80	72	128	23	96	25	115	15	98	15	121	6	106	22
69	SEA7	85	18	89	46	65	47	77	45	46	1	82	44	74	17	115	17	123	38	106	39	112	45	74	1	115	45	108	14	101	55	125	28	123	2	97	41	76	62	108	31	105	28
70	SEA72	88	32	89	48	65	48	74	26	59	24	90	61	78	34	120	36	121	33	106	38	109	25	90	19	123	61	112	32	104	50	115	52	94	28	106	26	84	50	103	49	101	45
71	SEJ138	85	19	111	74	73	72	88	74	62	31	99	72	86	73	116	18	141	72	115	72	123	74	97	33	132	72	121	71	94	65	119	38	87	54	85	61	92	29	104	44	97	60
72	GPU48 (C)	105	62	98	65	63	33	83	62	63	36	91	69	84	67	138	62	131	66	106	34	118	62	97	34	124	68	119	68	103	51	131	16	92	33	103	31	91	32	89	69	101	41
73	GPU67 (C)	101	57	87	37	61	15	81	59	65	43	79	25	79	49	133	57	121	29	103	17	116	59	99	37	112	28	114	50	108	43	126	26	85	56	100	37	94	24	95	62	101	42
74	VL376 (C)	76	7	81	10	62	16	76	36	65	49	65	4	71	9	106	9	114	9	104	18	111	36	99	40	98	1	105	9	101	54	111	61	89									



S.No	Acc. No	Grain yield (kg/ha)												Fodder yield (kg/ha)												Number of productive tillers																	
		VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	NDIA (6)	Rank	VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	NDIA (6)	Rank	VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	NDIA (6)	Rank
10	ER62	2653	50	2519	3	2222	64	2856	19	1399	12	2204	48	2309	40	5396	48	4296	18	5037	63	6600	7	3173	12	7177	52	5280	50	5.2	18	2.0	54	2.6	71	3.8	54	5.0	12	2.3	55	3.5	45
11	ER64	3465	5	1556	48	2148	67	2794	22	1365	18	1688	60	2169	51	5538	45	3241	45	5481	57	5444	34	3052	22	5279	67	4673	64	5.2	20	2.2	34	3.5	52	5.2	10	5.0	4	2.1	61	3.9	14
12	ER67	2470	59	2370	7	2222	65	2194	36	1299	32	1481	62	2006	60	4828	65	3259	43	8370	22	5494	31	2889	34	4457	72	4883	58	5.2	19	2.0	55	3.5	54	6.2	4	4.0	17	1.5	68	3.7	26
13	IC0007953	2978	34	1926	29	4370	4	3244	6	1265	35	4846	3	3105	1	8946	13	2704	59	8074	29	5656	27	2893	32	14936	4	7202	3	5.4	11	2.0	52	5.5	10	4.0	36	4.0	31	3.3	15	4.0	9
14	IC0007954	3275	16	1296	61	3852	10	3411	4	1232	39	4407	8	2912	3	419	74	3296	42	7037	37	6167	18	2763	44	10974	27	5109	53	5.6	9	2.6	10	3.0	62	3.4	65	4.0	42	3.0	29	3.6	37
15	IC00618651	258	74	2074	20	3037	33	1744	63	1399	16	2053	52	1761	71	5822	38	5037	11	8296	24	4028	63	3178	11	8025	46	5731	45	2.0	74	2.2	49	4.5	23	2.6	73	7.0	1	3.6	8	3.7	31
16	IC00622007	3141	24	2593	1	3111	22	1828	58	1299	34	1374	67	2224	45	4544	67	4167	22	8296	26	3556	67	2887	35	13000	12	6075	35	2.8	73	2.2	48	4.6	16	3.8	47	4.0	34	2.5	50	3.3	57
17	IC00622031	3285	15	2074	17	3185	19	2844	20	1332	25	1617	61	2390	33	4828	64	815	74	7926	31	6444	11	2936	31	15341	3	6382	24	5.8	5	2.6	7	4.6	14	5.8	5	4.0	18	3.0	25	4.3	2
18	IC00622036	3054	29	1926	28	3333	18	1722	66	1399	17	3400	23	2472	24	5112	58	3333	41	5778	51	5389	35	3172	13	12899	13	5947	40	5.6	7	2.6	9	3.0	61	7.2	2	4.0	16	3.0	24	4.2	4
19	IC00622041	3478	4	1778	39	2296	62	3828	1	1465	7	2464	43	2551	20	5112	57	3704	24	9185	16	5722	25	3256	8	13237	10	6703	13	4.4	36	2.4	17	3.0	64	4.4	24	5.0	6	4.0	2	3.9	13
20	IC00622046	3717	2	2333	9	2815	39	2622	27	1399	14	2654	39	2590	15	4260	71	3704	28	5185	59	6389	13	3112	16	11976	20	5771	44	5.2	17	2.2	33	3.6	46	5.6	6	4.0	19	2.3	56	3.8	17
21	IC00622053	3238	18	1593	46	2074	69	1606	71	1232	42	4413	7	2359	36	6816	24	1222	73	6963	41	6944	4	2768	42	16388	1	6850	8	4.0	55	2.2	45	4.0	34	4.6	18	4.0	25	3.5	11	3.7	27
22	IC00622063	3246	17	2407	6	3556	14	1889	54	1399	15	3377	25	2646	10	6532	26	4333	17	8296	25	5226	42	3117	15	9533	38	6173	31	4.4	41	2.4	19	4.3	25	3.8	48	5.0	11	2.6	47	3.8	25
23	IC00622068	3191	20	1963	23	3037	34	1822	59	1332	29	3981	15	2554	19	5112	56	5185	8	7556	35	6278	15	2966	29	13484	9	6763	11	4.2	47	2.0	60	4.0	37	4.8	12	4.0	23	3.9	4	3.8	18
24	IC00622069	3171	21	1852	34	3407	17	1478	74	1365	23	3377	26	2442	26	5112	59	3111	49	8370	23	5944	19	3059	21	11312	25	6151	32	4.4	42	2.4	20	3.6	44	3.8	51	4.0	36	3.7	6	3.7	30
25	IC00622073	2804	42	1704	41	3481	16	1911	52	1365	21	3057	34	2387	34	5112	60	4704	15	9778	13	6944	3	3093	19	10141	32	6629	17	5.0	22	1.8	68	4.5	24	4.6	16	4.0	24	3.0	26	3.8	19
26	IC00622078	2969	36	1889	31	4148	5	2667	24	1365	19	3341	29	2730	7	6390	27	6463	2	7556	34	6889	5	3051	23	10051	33	6733	12	3.6	64	2.2	46	4.0	35	4.0	41	4.0	33	3.2	20	3.5	42
27	IC00622084	3146	23	2222	12	2593	49	3056	13	1465	8	767	74	2208	47	4544	68	3704	26	14889	1	6389	12	3296	7	5414	66	6373	25	4.4	39	2.2	40	3.6	48	3.2	68	5.0	15	1.2	73	3.3	63
28	IC00622089	2976	35	1844	36	2593	50	3722	2	1532	3	1434	64	2350	38	5680	40	6296	4	6296	44	6599	8	3443	4	14070	7	7064	4	3.8	61	2.6	13	3.6	42	4.0	43	6.0	2	2.7	41	3.8	22
29	IC00622112	3332	11	1852	33	4593	3	3128	11	1432	10	1007	73	2557	18	5112	55	6444	3	5556	55	5500	30	3132	14	4412	73	5026	55	3.4	70	2.4	25	3.6	45	4.0	44	3.0	56	1.2	74	2.9	72
30	IC0066140	2472	58	1478	52	3852	9	1728	65	1332	31	2097	50	2160	52	8804	15	4444	16	14222	2	6194	17	2966	30	9967	35	7766	1	4.8	26	2.2	37	4.0	33	3.8	50	4.0	35	1.7	63	3.4	50
31	IC0473882	3309	13	1630	42	2519	55	1744	64	1132	53	1831	55	2027	59	9514	9	3426	38	12074	6	5667	26	2831	38	8132	45	6941	6	4.0	53	2.4	23	4.0	32	3.6	59	4.0	40	2.2	59	3.4	54
32	IC0474816	2997	33	1296	62	2593	52	2500	34	1066	60	4739	5	2532	22	7100	22	2907	56	8074	28	5372	37	2558	53	14013	8	6671	14	5.8	4	2.2	29	4.5	21	4.0	40	3.0	54	3.2	21	3.8	20
33	IC0475125	2737	45	1537	50	2370	60	2011	44	999	68	1754	57	1901	66	9514	10	2870	58	12148	5	4444	56	2376	62	8250	43	6600	21	4.4	38	1.4	73	4.6	18	4.0	39	3.0	53	2.4	53	3.3	60
34	IC0475386	3130	26	1926	27	2148	66	3039	15	1166	46	4176	13	2597	14	7100	21	3111	47	4519	67	5778	23	2784	40	15465	2	6459	23	5.2	14	2.2	32	3.5	51	3.0	71	4.0	44	3.8	5	3.6	32
35	IC0475407	3199	19	1926	24	3111	26	2594	29	1099	57	2304	46	2372	35	11147	1	3241	44	5630	54	5944	21	2766	43	8926	40	6276	27	4.8	28	2.4	16	4.0	30	3.4	63	3.0	60	3.0	32	3.4	47
36	IC0476095	2578	54	1178	66	3037	37	1706	67	1166	49	3898	16	2260	43	7810	19	2463	63	9259	15	4056	62	2789	39	6855	55	5539	46	4.2	49	2.4	22	5.0	12	3.2	67	3.0	61	2.9	35	3.5	46
37	IC0476587	2536	55	1444	54	2815	42	2650	25	1132	51	4005	14	2430	29	8023	17	3537	33	12296	4	6789	6	2761	45	8183	44	6932	7	4.0	54	2.4	24	6.5	4	4.2	27	3.0	50	3.6	9	4.0	11
38	IC0476623	3462	6	2215	14	2667</																																					



S.No	Acc. No	Grain yield (kg/ha)														Fodder yield (kg/ha)														Number of productive tillers													
		VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	NDIA (6)	Rank	VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	NDIA (6)	Rank	VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	NDIA (6)	Rank
60	IC0627123	2508	56	1370	57	2148	68	2000	45	899	74	1410	65	1723	73	5254	54	1537	71	5704	53	5211	43	2060	73	4902	71	4111	73	5.0	25	2.2	36	10.0	1	3.8	46	2.0	71	1.5	70	4.1	8
61	IC0627127	2411	62	1074	69	2519	57	1950	48	1365	20	3590	17	2151	54	5538	46	3333	40	6148	48	4811	49	3091	20	7778	48	5117	52	6.2	2	2.0	51	4.0	36	4.4	23	5.0	5	2.9	36	4.1	7
62	IC0627178	2664	49	1241	64	3185	20	1572	72	1365	22	3466	21	2249	44	6248	28	3074	50	3852	71	5194	44	3105	17	4295	74	4295	72	3.6	67	2.2	47	3.0	67	3.4	66	5.0	14	2.5	49	3.3	61
63	IC0627179	3069	27	2556	2	3037	31	3028	17	1432	11	2524	41	2608	13	5254	53	2963	54	4680	66	2556	74	3095	18	9533	39	4680	62	5.0	24	2.0	56	3.0	68	4.2	33	5.0	10	2.5	48	3.6	34
64	IC0627180	2723	47	2074	19	2667	45	2606	28	1332	26	3116	32	2420	30	5964	34	5074	9	5259	58	5750	24	3033	26	10659	29	5957	39	5.8	6	2.6	8	3.5	50	5.2	9	4.0	21	2.9	37	4.0	10
65	IC0628944	2786	43	1556	49	3037	35	2556	33	1332	27	3380	24	2441	27	6106	30	2963	53	8667	19	5028	47	3016	27	9759	37	5923	42	5.6	8	2.2	30	4.3	26	5.4	7	4.0	20	3.2	19	4.1	6
66	SEA11	2964	38	1296	63	2370	61	2089	39	932	72	1386	66	1840	70	5396	51	1315	72	9481	14	5333	39	2104	70	5909	62	4923	57	6.0	3	2.2	28	3.0	65	3.8	53	2.0	72	1.7	64	3.1	68
67	SEA23	2335	65	1407	56	3037	36	2561	31	1099	58	2213	47	2109	55	5680	42	1630	70	7704	32	4706	51	2452	58	5431	65	4600	66	5.2	21	2.2	35	4.3	27	3.8	49	3.0	57	1.4	72	3.3	58
68	SEA38	3153	22	1926	25	1778	71	1922	50	1332	28	1268	70	1896	67	4970	63	3704	25	4074	69	5389	36	2996	28	5707	63	4473	70	5.4	12	2.6	11	3.0	63	4.6	22	4.0	28	1.5	69	3.5	41
69	SEA7	2684	48	1426	55	3556	15	1683	69	1232	41	1801	56	2064	56	5396	50	5185	7	12963	3	3811	65	2733	46	9911	36	6667	16	5.2	13	2.2	31	4.5	22	2.6	72	3.0	63	2.6	46	3.4	56
70	SEA72	2773	44	481	74	2667	48	1917	51	1132	52	2494	42	1911	65	4686	66	3519	35	5185	60	5600	28	2560	52	6753	56	4717	61	4.0	59	2.0	62	3.3	58	4.2	32	3.0	52	2.2	60	3.1	67
71	SEJ138	2727	46	2148	16	3111	24	1694	68	1232	40	1354	68	2044	58	4402	70	3704	27	8815	18	6278	14	2773	41	10006	34	5996	38	3.6	65	2.8	6	5.6	7	4.0	35	4.0	30	2.6	45	3.8	23
72	GPU48 (C)	2398	63	2346	8	3062	30	2426	35	1499	5	2089	51	2303	41	5396	49	4167	21	5975	50	4589	55	3319	6	5219	68	4777	60	4.5	33	1.7	70	3.2	60	3.6	60	4.0	41	1.5	71	3.1	69
73	GPU67 (C)	2919	39	2494	4	2691	43	3176	9	1498	6	3466	22	2707	8	5254	52	3599	31	11432	8	6219	16	3385	5	12246	17	7022	5	4.7	30	2.2	50	3.7	40	3.7	55	4.0	38	3.3	17	3.6	38
74	VL376 (C)	3053	30	2148	15	3148	21	3069	12	1340	24	4451	6	2868	4	5574	43	3042	51	6222	47	5447	33	3044	24	7384	51	5119	51	4.3	46	2.3	27	3.4	55	3.9	45	3.5	45	3.0	23	3.4	52
	Mean	2804		1731		2948		2374		1246		2809		2319		6431		3569		7442		5202		2807		9499		5825		4.53		2.23		4.10		4.20		3.71		2.74		3.59	
	CD (5%)	142.5		107.6		160.1		137.8		41.1		258.2		72.2		443.4		284.4		587.8		250.6		92.6		723.4		206.7		0.19		0.08		0.27		0.21		0.24		0.17		0.08	
	CD (1%)	187.3		141.5		210.3		181.1		54.1		339.3		94.9		582.8		373.7		772.4		329.3		121.6		950.7		271.7		0.25		0.10		0.36		0.27		0.31		0.22		0.11	
	CV (%)	22.3		27.3		23.8		25.5		14.5		40.3		13.7		30.3		35.0		34.7		21.1		14.5		33.4		15.6		18.1		15.6		29.0		21.7		27.9		26.8		10.0	

Table 20: Finger millet germplasm 74 acc. (200 acc.) characterization and ranking for finger number and finger length

S.No	Acc. No	Number of fingers														Finger length (cm)													
		VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	INDIA (6)	Rank	VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	INDIA (6)	Rank
1	EN112	7.8	25	6.4	42	5.6	56	7.8	14	8.0	10	6.8	57	7.1	25	8.6	35	7.6	17	7.5	5	5.8	42	7.0	58	9.8	11	7.7	18
2	EN22	6.2	61	6.4	46	6.5	33	7.2	29	8.0	21	7.0	45	6.9	40	8.2	45	6.4	29	5.0	44	6.6	30	8.9	3	9.6	13	7.4	25
3	EN52	8.0	19	6.4	41	5.5	66	9.0	1	7.0	39	7.0	47	7.2	24	8.8	31	6.2	32	5.5	35	8.4	7	7.3	46	7.4	53	7.3	26
4	EN96	5.6	70	6.8	32	7.0	12	6.6	44	8.0	28	6.5	65	6.8	47	7.4	64	5.8	40	4.5	59	4.8	67	7.8	28	8.7	26	6.5	60
5	EN98	5.2	71	6.8	33	5.5	64	7.4	23	8.0	17	7.5	22	6.7	49	9.6	16	5.6	44	4.5	61	4.8	68	8.8	5	7.9	42	6.9	39
6	EN99	7.2	46	6.2	50	6.0	48	8.6	2	8.0	6	7.2	41	7.2	20	10.3	7	5.8	38	5.0	46	5.2	57	7.2	52	7.9	40	6.9	38
7	ER37	8.8	7	5.8	58	5.3	70	6.4	57	7.0	57	7.1	43	6.7	48	10.2	8	5.0	65	5.6	28	5.0	59	7.2	53	7.3	57	6.7	48
8	ER41	8.6	10	6.8	25	7.0	10	5.8	63	8.0	35	7.2	38	7.2	19	9.1	22	5.4	54	5.5	39	5.2	56	8.0	18	7.7	46	6.8	41
9	ER55	7.2	47	7.6	5	6.0	39	6.6	46	7.0	53	7.3	30	7.0	33	6.9	71	7.0	22	5.5	33	5.4	50	7.6	36	7.5	49	6.6	52
10	ER62	7.6	30	6.4	43	7.7	1	7.6	15	8.0	11	6.8	58	7.4	9	10.8	4	7.6	15	5.5	30	7.2	18	9.2	1	7.9	41	8.0	13
11	ER64	7.8	26	6.0	55	6.5	34	7.2	30	8.0	22	7.4	24	7.2	23	8.8	34	5.6	48	4.3	70	5.0	64	8.7	6	7.0	64	6.6	57
12	ER67	6.8	53	6.4	45	7.0	14	7.2	25	8.0	19	6.0	68	6.9	38	8.3	43	6.0	36	5.5	36	7.2	19	7.6	32	8.1	36	7.1	30
13	IC0007953	7.2	41	4.8	70	6.0	49	6.2	59	6.0	65	6.9	56	6.2	69	8.8	32	6.2	33	5.0	45	6.4	32	5.8	70	7.1	60	6.6	58
14	IC0007954	7.4	37	7.4	10	4.5	73	6.8	43	7.0	51	7.0	51	6.7	51	9.0	27	5.6	46	5.5	38	7.4	17	6.5	65	8.1	35	7.0	35
15	IC00618651	8.2	15	7.0	19	6.0	43	6.6	47	7.0	54	7.0	52	7.0	32	7.7	61	6.8	24	5.0	42	8.2	9	7.8	22	7.9	43	7.2	28
16	IC00622007	6.4	59	5.8	61	5.6	60	6.6	48	8.0	29	5.8	71	6.4	66	7.5	63	13.8	1	11.6	1	4.2	72	7.4	44	13.6	1	9.7	2
17	IC00622031	6.8	52	6.2	51	7.3	7	7.8	9	8.0	7	6.2	67	7.1	26	8.1	51	9.8	6	6.6	13	6.6	28	7.6	33	10.4	7	8.2	10
18	IC00622036	7.2	40	7.0	22	6.6	21	6.4	51	7.0	55	6.4	66	6.8	46	7.8	60	6.6	26	5.5	34	6.8	25	7.8	24	8.0	38	7.1	32
19	IC00622041	7.2	42	6.8	29	7.0	11	7.2	24	8.0	18	6.8	60	7.2	22	7.1	67	8.6	10	6.8	12	5.6	48	8.3	11	9.2	20	7.6	22
20	IC00622046	6.0	65	6.6	40	6.0	46	6.8	41	7.0	50	7.0	50	6.6	58	8.4	39	7.8	13	6.6	16	4.6	70	8.4	10	7.8	44	7.3	27
21	IC00622053	9.6	1	7.4	6	6.0	40	7.8	13	7.0	43	7.8	7	7.6	4	7.0	69	5.2	64	5.0	51	6.0	37	7.5	40	6.9	68	6.3	69
22	IC00622063	9.2	3	7.4	7	7.0	9	8.4	3	9.0	1	7.3	33	8.1	1	8.5	38	7.4	19	5.5	32	6.0	36	9.2	2	8.2	34	7.5	24
23	IC00622068	7.2	43	6.4	44	6.0	47	6.2	58	8.0	33	7.6	16	6.9	37	8.9	29	5.2	59	4.5	65	5.6	49	7.8	25	8.3	32	6.7	45
24	IC00622069	7.2	45	7.0	23	6.6	22	5.8	64	8.0	36	7.4	25	7.0	30	8.6	36	5.8	39	5.0	47	5.4	51	7.8	26	7.3	58	6.6	51
25	IC00622073	7.2	44	6.2	49	3.5	74	7.2	32	8.0	24	7.6	15	6.6	56	8.5	37	5.2	60	6.0	23	5.2	55	7.9	20	7.5	50	6.7	49
26	IC00622078	9.0	5	7.0	18	5.6	50	7.4	21	8.0	15	7.3	34	7.4	7	8.8	33	6.2	34	4.0	71	4.8	69	7.9	21	7.4	55	6.5	50



S.No	Acc. No	Number of fingers														Finger length (cm)													
		VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	INDIA (6)	Rank	VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	INDIA (6)	Rank
27	IC00622084	6.4	60	7.2	17	7.3	6	8.2	6	7.0	41	5.9	70	7.0	29	10.0	11	10.4	4	7.1	7	7.6	13	7.6	31	9.4	17	8.7	6
28	IC00622089	8.0	17	6.2	48	5.6	57	6.0	62	8.0	34	5.2	73	6.5	62	9.3	19	8.2	11	6.5	18	6.8	24	8.2	12	8.5	31	7.9	14
29	IC00622112	7.2	48	7.2	15	5.5	63	6.4	56	8.0	32	7.3	29	6.9	36	9.0	25	10.2	5	9.5	2	6.8	22	7.5	39	9.5	14	8.8	5
30	IC0066140	6.0	66	7.0	24	5.6	52	7.2	31	8.0	23	7.2	37	6.8	44	10.0	12	5.6	43	6.5	20	8.0	11	8.0	16	8.9	25	7.8	15
31	IC0473882	5.8	67	5.8	63	7.6	3	7.4	17	8.0	13	9.2	2	7.3	13	9.9	14	6.8	23	7.0	10	9.4	4	7.7	29	9.4	16	8.4	7
32	IC0474816	6.4	58	6.0	57	5.5	67	7.6	16	8.0	12	7.5	21	6.8	43	11.5	3	5.6	42	4.5	60	7.6	15	7.8	23	9.7	12	7.8	17
33	IC0475125	6.8	54	4.6	73	6.6	28	6.4	53	7.0	56	6.9	55	6.4	65	9.9	13	4.2	73	4.0	74	5.4	53	6.9	60	7.0	65	6.2	70
34	IC0475386	4.0	74	4.8	71	5.0	71	6.6	49	8.0	30	6.9	54	5.9	73	8.1	56	5.2	63	4.5	66	6.0	38	7.7	30	6.8	71	6.4	64
35	IC0475407	6.2	64	5.8	62	6.6	25	5.6	66	7.0	60	6.8	61	6.3	67	7.4	65	5.4	58	5.0	50	7.2	20	6.5	66	8.1	37	6.6	53
36	IC0476095	7.4	38	6.8	27	6.5	32	7.8	11	8.0	8	7.7	14	7.4	8	9.3	20	7.6	16	5.5	31	8.4	6	7.1	54	10.7	6	8.1	12
37	IC0476587	7.8	24	5.2	67	5.5	69	7.0	38	7.0	48	7.6	17	6.7	50	9.1	23	5.6	45	4.6	56	5.8	45	6.8	62	9.0	23	6.8	42
38	IC0476623	8.0	18	6.8	26	5.6	53	7.4	22	8.0	16	7.9	5	7.3	15	5.8	72	4.6	70	4.5	68	6.0	39	7.2	51	6.3	74	5.7	74
39	IC0478181	8.0	20	5.8	59	5.5	68	5.2	72	7.0	63	7.1	44	6.4	63	10.0	10	6.0	35	4.0	72	7.6	16	7.4	42	7.3	56	7.1	34
40	IC0478319	8.4	13	5.2	66	5.6	61	5.0	73	7.0	64	7.3	35	6.4	64	8.9	30	5.4	55	4.0	73	6.2	35	7.6	34	7.4	54	6.6	55
41	IC0478442	7.0	51	4.2	74	5.0	72	3.2	74	5.0	69	5.0	74	4.9	74	13.3	1	9.4	7	7.0	9	9.6	3	6.5	64	13.1	2	9.8	1
42	IC0478444	7.2	49	7.2	16	6.6	20	7.4	19	7.0	44	5.8	72	6.9	41	9.7	15	5.4	53	5.6	26	11.2	1	7.0	57	6.8	70	7.6	21
43	IC0478543	4.8	72	6.2	54	5.6	59	5.2	71	7.0	62	7.9	4	6.1	72	5.7	74	5.6	52	5.0	49	7.8	12	7.2	50	9.0	22	6.7	46
44	IC0478571	7.6	31	6.6	38	7.0	13	5.4	69	8.0	37	7.2	39	7.0	31	8.2	48	5.4	56	7.0	11	5.8	43	7.0	59	7.4	52	6.8	43
45	IC0478640	6.6	56	6.8	30	5.6	54	6.0	61	7.0	58	7.4	27	6.6	59	9.0	28	5.6	47	5.0	48	6.8	26	6.8	61	6.9	69	6.7	50
46	IC0478656	5.6	69	6.8	31	6.6	23	6.4	52	4.0	74	7.5	23	6.2	70	8.1	53	5.2	62	5.6	27	6.6	29	5.1	71	8.2	33	6.5	62
47	IC0478686	4.6	73	6.8	34	6.0	45	6.4	55	9.0	3	6.8	59	6.6	57	9.0	26	8.8	9	5.5	29	6.2	33	8.0	17	8.5	30	7.7	19
48	IC0478693	7.8	28	8.0	3	7.0	8	7.0	35	4.0	72	7.3	31	6.9	42	10.3	6	9.2	8	6.6	14	8.0	10	4.8	73	10.1	9	8.2	11
49	IC0478710	9.2	4	8.2	2	6.6	18	7.8	10	4.0	70	7.7	13	7.3	18	12.2	2	8.0	12	6.6	15	6.8	23	5.0	72	11.5	4	8.4	8
50	IC0478746	8.6	9	5.4	64	6.6	26	7.2	26	9.0	2	7.5	19	7.4	6	8.1	54	4.8	68	5.0	52	9.2	5	8.1	14	6.6	72	7.0	37
51	IC0478766	6.8	55	6.2	52	7.0	15	6.4	50	4.0	73	7.3	32	6.3	68	8.1	52	6.6	25	5.6	24	5.8	44	4.0	74	8.9	24	6.5	61
52	IC0478792	5.8	68	5.4	65	6.6	27	7.4	20	8.0	14	6.6	62	6.6	55	8.1	55	4.8	69	4.5	67	7.0	21	7.3	48	6.5	73	6.4	66
53	IC0478821	9.2	2	7.8	4	6.0	38	8.0	7	5.0	68	6.0	69	7.0	28	10.4	5	10.8	3	8.6	3	6.4	31	6.4	68	12.5	3	9.2	3
54	IC0478832	8.4	12	7.2	12	6.6	19	7.4	18	4.0	71	7.2	40	6.8	45	9.3	18	7.4	18	6.0	22	10.2	2	5.9	69	10.9	5	8.3	9
55	IC0478862	6.2	63	6.2	53	5.6	58	5.2	70	6.0	67	7.6	18	6.1	71	8.2	46	5.2	61	4.8	55	6.2	34	6.5	67	8.6	29	6.6	54
56	IC0478935	7.8	27	6.6	37	5.6	55	5.6	67	6.0	66	7.4	28	6.5	61	10.1	9	6.4	27	5.0	43	7.6	14	7.1	55	8.7	28	7.5	23
57	IC0624939	8.2	14	7.4	8	6.5	30	7.2	27	7.0	45	7.4	26	7.3	16	7.0	68	6.4	31	5.6	25	4.8	66	7.6	38	9.1	21	6.8	44
58	IC0624940	7.6	29	7.2	13	6.0	41	8.4	4	7.0	40	7.7	12	7.3	11	8.3	42	13.6	2	8.2	4	5.2	54	7.8	27	10.1	8	8.9	4
59	IC0624941	8.0	16	5.0	68	5.6	62	6.8	42	8.0	27	6.6	63	6.7	53	7.3	66	6.4	30	4.5	57	8.4	8	7.3	47	9.3	18	7.2	29
60	IC0627123	7.4	35	7.0	21	6.0	44	6.8	40	7.0	49	7.8	8	7.0	27	8.0	57	5.4	57	5.5	40	4.4	71	6.8	63	6.9	67	6.2	71
61	IC0627127	7.8	23	6.6	36	6.3	36	7.8	12	8.0	9	7.2	36	7.3	14	8.2	47	5.6	49	4.5	62	5.8	46	8.5	8	7.7	45	6.7	47
62	IC0627178	8.8	6	4.6	72	6.5	35	6.4	54	8.0	31	9.6	1	7.3	12	6.9	70	3.6	74	5.0	53	5.0	61	8.5	9	7.0	66	6.0	73
63	IC0627179	7.4	36	7.2	14	6.0	42	6.0	60	9.0	4	7.5	20	7.2	21	7.9	58	4.4	72	4.5	69	5.0	63	8.9	4	7.4	51	6.4	65
64	IC0627180	8.4	11	6.6	35	5.5	65	5.6	68	7.0	61	7.0	53	6.7	52	8.2	50	5.6	50	4.5	63	5.0	62	7.1	56	7.3	59	6.3	68
65	IC0628944	8.6	8	6.2	47	6.6	24	6.6	45	7.0	52	6.6	64	6.9	35	9.4	17	6.4	28	4.8	54	5.2	58	7.4	43	7.6	47	6.8	40
66	SEA11	7.6	33	6.6	39	7.6	2	7.8	8	7.0	42	7.0	48	7.3	17	8.2	44	4.8	67	5.3	41	5.0	60	7.3	49	7.0	63	6.3	67
67	SEA23	8.0	21	7.4	9	6.5	31	7.2	28	8.0	20	7.8	6	7.5	5	8.2	49	4.4	71	7.5	6	5.6	47	7.6	35	8.7	27	7.0	36
68	SEA38	7.0	50	5.8	60	7.0	16	6.8	39	8.0	26	7.0	46	6.9	34	7.8	59	6.0	37	4.5	58	5.4	52	8.2	13	7.5	48	6.6	56
69	SEA7	7.6	32	7.0	20	5.6	51	7.0	37	7.0	47	7.1	42	6.9	39	8.4	41	4.8	66	6.6	17	4.2	73	7.5	41	7.1	61	6.4	63
70	SEA72	6.6	57	6.0	56	6.3	37	7.0	36	7.0	46	7.0	49	6.7	54	7.6	62	5.6	51	4.5	64	4.2	74	7.4	45	7.0	62	6.1	72
71	SEJ138																												



S.No	Acc. No	Number of fingers														Finger length (cm)													
		VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	INDIA (6)	Rank	VIZI	Rank	WAGH	Rank	BENG	Rank	MAND	Rank	ATHI	Rank	PERU	Rank	INDIA (6)	Rank
	CD (1%)	0.33		0.26		0.23		0.29		0.35		0.22		0.14		0.39		0.57		0.39		0.44		0.28		0.45		0.26	
	CV (%)	15.2		13.4		12.3		14.1		16.1		10.2		6.9		15.2		29.3		23.3		23.1		12.8		17.8		11.9	

Table 21: Multi-whorled Finger millet germplasm 51 acc. (57 acc.) Characterization and ranking for days to 50% maturity, days to maturity and plant height

S. No	Acc. No.	Days to 50 % flowering												Days to maturity												Plant height											
		ATHI	Rank	BENG	Rank	MAND	Rank	VIZ	Rank	WAGH	Rank	INDIA (5)	Rank	ATHI	Rank	BENG	Rank	MAND	Rank	VIZ	Rank	WAGH	Rank	INDIA (5)	Rank	ATHI	Rank	BENG	Rank	MAND	Rank	VIZ	Rank	WAGH	Rank	INDIA (5)	Rank
1	EC0002194-X	70	47	63	38	66	1	76	11	84	19	71	7	105	46	103	17	101	1	107	11	116	12	106	5	114	3	85	47	83	48	103	39	129	27	103	38
2	IC0045854	63	10	61	9	81	44	96	48	84	22	77	44	97	14	101	3	116	44	128	46	120	28	112	43	95	36	99	15	93	24	121	9	139	4	109	7
3	IC0071335	62	4	63	26	75	22	88	35	85	26	74	26	96	11	105	35	110	22	119	36	121	34	110	30	87	49	97	19	96	15	118	13	135	13	107	14
4	IC0071411	63	7	60	2	79	38	73	7	81	12	71	6	94	3	101	5	114	39	104	8	118	17	106	6	93	40	93	28	86	45	126	4	126	36	105	26
5	IC0071411-A	68	41	59	1	79	37	83	27	75	2	73	15	101	33	101	4	114	38	113	23	111	2	108	16	99	21	90	35	89	37	111	27	125	43	103	39
6	IC0262368	67	36	68	50	88	50	93	43	96	50	82	50	101	37	109	50	123	50	124	42	129	50	117	50	99	22	104	5	101	5	102	41	127	31	106	16
7	IC0283758	68	45	61	7	70	9	79	15	89	40	73	19	97	16	102	10	105	9	108	14	123	37	107	12	102	16	100	11	90	31	128	2	141	2	112	3
8	IC0283800	72	49	61	8	79	36	86	33	85	27	76	42	108	50	103	22	114	36	117	31	122	36	113	45	122	2	106	2	97	13	128	1	134	14	118	2
9	IC0283822	67	35	60	4	77	30	80	17	79	6	72	12	102	38	101	7	112	30	110	17	114	7	107	15	110	6	90	34	88	41	106	35	126	37	104	29
10	IC0283853	67	34	63	36	77	32	94	45	77	5	76	36	102	43	104	29	112	32	128	47	118	18	113	47	92	42	83	48	89	39	123	6	133	17	104	30
11	IC0308859	63	11	63	27	70	7	74	9	74	1	68	1	95	6	105	34	105	7	103	6	108	1	103	1	91	45	92	30	93	25	97	44	121	48	99	50
12	IC0308860	63	13	61	6	79	39	85	29	84	25	74	25	96	10	101	2	114	37	117	30	120	25	109	23	91	43	90	36	89	36	113	17	126	39	102	43
13	IC0308899	63	6	66	48	82	45	93	44	88	36	78	48	95	9	108	48	117	45	124	40	124	42	113	48	90	46	94	25	109	2	123	5	135	12	110	6
14	IC0312005	66	29	63	29	73	17	68	1	90	43	72	8	100	29	104	26	108	17	97	1	123	38	106	7	99	26	105	4	90	33	121	8	140	3	111	5
15	IC0312325	63	8	62	22	76	29	88	36	88	32	75	33	90	1	104	23	111	28	118	33	120	26	108	19	87	48	92	29	102	4	117	14	131	23	106	19
16	IC0321797	68	39	64	41	77	33	80	18	88	34	75	34	101	36	106	44	112	33	110	18	120	24	110	27	108	7	86	45	113	1	107	33	128	29	108	8
17	IC0326825	68	40	66	49	74	20	82	21	77	4	73	18	102	41	108	49	109	20	111	19	114	8	109	20	101	17	100	9	106	3	113	19	137	9	111	4
18	IC0331680	68	44	64	43	73	18	95	46	80	10	76	40	103	45	105	40	108	18	129	48	115	10	112	41	103	14	87	44	85	47	112	26	132	19	104	33
19	IC0331687	67	33	65	46	73	19	83	25	82	15	74	21	102	39	107	47	108	19	113	22	119	22	110	24	98	27	87	42	89	34	113	18	134	15	104	27
20	IC0331688	72	48	64	44	71	11	82	20	91	46	76	39	107	49	106	45	106	11	112	20	126	47	111	38	123	1	107	1	100	7	127	3	138	6	119	1
21	IC0344216-X	62	1	62	14	77	31	72	3	91	45	72	13	93	2	103	11	112	31	102	4	124	41	106	9	91	44	87	43	94	23	112	23	126	42	102	41
22	IC0344951	64	17	63	33	71	13	79	16	83	17	72	10	97	15	104	31	106	13	109	16	117	14	107	10	93	38	100	12	90	30	106	34	137	8	105	24
23	IC0344972	63	12	62	15	67	2	97	49	89	42	75	35	95	8	103	18	102	2	130	50	125	45	111	35	100	18	101	7	92	27	115	16	132	22	108	10
24	IC0344977	65	23	61	10	79	40	91	39	84	21	76	37	98	19	102	8	114	40	121	38	118	16	110	34	96	34	97	18	98	10	121	10	121	47	107	15
25	IC0345072	63	9	62	23	75	21	96	47	89	39	77	45	96	12	103	19	110	21	129	49	124	44	112	44	87	47	99	13	99	9	120	12	132	21	107	11
26	IC0345088	66	31	62	25	78	35	74	10	80	8	72	9	99	24	104	25	113	35	107	13	113	6	107	13	93	39	91	31	101	6	116	15	127	34	105	21
27	IC0403242	66	30	60	3	81	43	70	2	84	23	72	11	100	31	100	1	116	43	100	2	119	19	107	11	103	13	89	37	87	43	97	45	133	18	102	44
28	IC0403326	65	26	62	18	79	41	88	37	86	30	76	38	99	26	103	13	114	41	119	37	120	27	111	36	100	19	98	16	94	22	95	47	138	7	105	25
29	IC0403412	62	5	62	21	73	16	85	28	91	47	75	28	94	4	104	24	108	16	119	34	126	46	110	29	97	30	78	50	94	21	113	20	138	5	104	28
30	IC0403728	68	42	63	31	71	12	73	6	81	11	71	5	102	40	103	16	106	12	103	5	113	5	105	4	106	9	98	17	89	38	80	50	130	25	100	47
31	IC0473493	65	22	62	24	67	4	74	8	80	7	69	2	99	22	104	32	102	4	104	7	114	9	104	2	105	10	91	33	81	50	101	43	132	20	102	42
32	IC0473644	65	20	63	35	70	8	81	19	95	49	74	27	99	25	105	38	105	8	114	25	128	49	110	31	96	35	105	3	91	29	97	46	128	30	103	35
34	IC0474052	66	32	61	13	73	14	76	12	87	31	72	14	100	32	103	20	108	14	106	10	121	29	107	14	104	11	95	22	95	20	112	24	123	45	106	20
35	IC0474306	64	16	65	45	73	15	92	40	89	41	76	43	98	20	106	42	108	15	124	41	124	43	112	40	98	28	93	27	96	18	112	25	129	26	105	23
36	IC0474345	64	15	62	16	78	34	97	50	88	33	78	47	97	17	103	12	113	34	128	45	123	40	113	46	99	23	103	6	96	16	104	37	136	10	107	12
37	IC0478181	69	46	62	20	69	6	79	14	92	48	74	24	105	47	104	30	104	6	109	15	127	48	110	25	113	4	81	49	96	17	101	42	126	38	103	34
38	IC0478317	67	37	63	37	84	49	92	41	90	44	79	49	101	35	104	28	119	48	125	44	123	39	114	49	103	12	100	8	99	8	103	40	135	11	108	9
39	IC0478319	62	3	64	40	80	42	85	30	84	20	75	29	95	7	106	41	115	42	116	28	121	30	110	32	84	50	89	39	97	12	113	21	120	49	100	48
40	IC0478382	65	21	62	17	76	24	82	22	82	13	73	17	101	34	103	15	111	24	112	21	119	20	109	22	107	8	97	20	83	49	111	30	119	50	103	36
41	IC0478543	65	27	61	12	67	3	77	13	84	24	71	4	98	21	102	9	102	3	107	12	118	15	105	3	97	32	93	26	88	40	111	29	126	40	103	37
42	IC0478571	677																																			



S. No	Acc. No.	Days to 50 % flowering												Days to maturity												Plant height											
		ATHI	Rank	BENG	Rank	MAND	Rank	VIZ	Rank	WAGH	Rank	INDIA (5)	Rank	ATHI	Rank	BENG	Rank	MAND	Rank	VIZ	Rank	WAGH	Rank	INDIA (5)	Rank	ATHI	Rank	BENG	Rank	MAND	Rank	VIZ	Rank	WAGH	Rank	INDIA (5)	Rank
46	IC0478862	65	19	63	34	76	27	72	4	75	3	70	3	99	23	106	43	111	27	104	9	112	3	106	8	102	15	88	41	95	19	87	49	126	41	100	49
47	IC0519664	68	43	64	42	67	5	83	26	89	38	74	23	102	42	105	39	102	5	114	24	121	31	109	21	111	5	96	21	87	44	112	22	129	28	107	13
48	GPU 48 (C)	65	28	62	19	83	46	86	34	86	29	76	41	99	27	103	14	118	46	117	32	121	33	111	39	93	41	94	24	85	46	103	38	127	32	100	46
49	GPU 67 (C)	65	25	65	47	83	47	89	38	83	18	77	46	99	28	106	46	118	47	121	39	116	13	112	42	96	33	88	40	96	14	105	36	133	16	104	31
50	PR 202 (C)	73	50	63	39	70	10	83	24	82	14	74	22	107	48	103	21	105	10	115	26	119	23	110	26	99	24	99	14	89	35	122	7	123	46	106	18
51	VL 376 (C)	62	2	63	32	76	26	93	42	82	16	75	30	94	5	105	37	111	26	125	43	115	11	110	28	94	37	89	38	87	42	111	28	123	44	101	45
	Mean	65		62		75		83		85		74		98.9		103.6		110.2		114.2		119.3		109.3		99		94		93		110		130		105	
	CD (5%)	0.73		0.48		1.40		2.17		1.38		0.71		1.05		0.54		1.40		2.41		1.27		0.76		2.27		1.87		1.81		2.90		1.59		1.11	
	CD (1%)	0.96		0.63		1.84		2.86		1.82		0.93		1.38		0.70		1.84		3.17		1.67		1.00		2.99		2.46		2.38		3.81		2.09		1.47	
	CV (%)	4.0		2.8		6.7		9.4		5.9		3.4		3.8		1.9		4.6		7.6		3.8		2.5		8.3		7.2		7.0		9.5		4.4		3.8	

Table 22: Multi-whorled Finger millet germplasm 51 acc. (57 acc.) Characterization and ranking for grain yield, fodder yield and number of productive tillers

S.No	Acc. No.	Grain Yield (kg/ha)												Fodder Yield (kg/ha)												No. of Productive Tillers											
		ATHI	Rank	BENG	Rank	MAND	Rank	VIZ	Rank	WAGH	Rank	INDIA (5)	Rank	ATHI	Rank	BENG	Rank	MAND	Rank	VIZ	Rank	WAGH	Rank	INDIA (5)	Rank	ATHI	Rank	BENG	Rank	MAND	Rank	VIZ	Rank	WAGH	Rank	INDIA (5)	Rank
1	EC0002194-X	2624	12	1926	25	1861	30	1520	45	825	38	1751	43	5869	12	4630	40	3733	44	6467	42	1841	49	4508	49	7.0	2	3.3	19	3.4	47	3.7	48	2.4	31	4.0	30
2	IC0045854	2296	39	2185	10	2250	4	2497	26	1175	21	2080	16	5084	43	7963	3	5206	18	8137	11	4127	17	6103	5	5.0	34	2.8	45	3.4	48	4.1	42	2.8	14	3.6	49
3	IC0071335	2149	48	1667	43	1761	40	2851	21	1746	2	2035	21	4824	46	8704	1	6256	4	6786	36	4317	12	6177	1	4.5	45	3.3	34	3.9	30	4.4	34	3.3	4	3.9	39
4	IC0071411	2263	42	1852	29	2083	18	1320	49	921	35	1688	46	5265	35	3778	47	4311	35	5799	48	5063	4	4843	45	4.5	49	4.3	3	4.0	21	3.2	50	2.7	20	3.7	45
5	IC0071411-A	2646	10	2148	14	1806	33	2370	29	921	33	1978	28	5983	9	5148	34	3694	46	6673	39	4029	19	5105	38	5.5	29	3.3	23	4.3	15	4.6	24	2.5	28	4.0	23
6	IC0262368	2384	28	1741	38	1750	41	2546	25	444	49	1773	42	5255	36	6185	20	4633	30	6873	33	3111	35	5211	35	5.5	27	2.8	44	4.9	4	5.4	7	2.3	32	4.2	10
7	IC0283758	2503	18	2037	18	2300	1	2807	23	1238	15	2177	8	5576	18	6259	19	4061	43	8523	8	4644	10	5813	10	5.0	35	4.1	4	4.6	7	4.9	19	2.1	40	4.1	13
8	IC0283800	2908	1	1852	28	2150	15	2430	28	698	47	2008	22	6626	1	4222	43	6000	6	7186	28	4000	20	5607	18	6.0	8	3.0	38	3.9	32	5.8	3	2.9	12	4.3	2
9	IC0283822	2592	14	1667	40	1783	38	1907	37	1206	19	1831	40	5867	13	7037	8	4289	38	8091	12	4746	8	6006	6	5.5	16	3.3	29	3.7	37	5.3	10	2.6	26	4.1	19
10	IC0283853	2438	26	1926	26	2028	22	3380	6	1429	8	2240	4	5423	25	5519	27	4411	34	9692	2	3273	34	5664	15	5.5	19	3.3	31	3.9	29	3.9	44	2.3	36	3.8	43
11	IC0308859	2325	35	1519	47	2033	21	1781	40	889	37	1709	45	5167	39	5333	31	6811	1	6609	41	3937	21	5571	20	5.5	20	3.0	39	4.4	11	4.5	30	2.6	25	4.0	28
12	IC0308860	2395	27	1741	37	2139	17	2476	27	794	39	1909	35	5372	28	6407	17	5133	20	8749	7	5143	2	6161	3	5.0	33	3.5	15	3.6	41	4.2	38	3.1	6	3.9	37
13	IC0308899	2373	30	1778	34	2072	19	3093	12	1143	23	2092	15	5319	32	4481	41	6589	2	8452	9	3717	26	5712	14	5.0	37	3.3	24	4.9	3	5.2	12	2.6	22	4.2	7
14	IC0312005	2297	38	2444	2	2139	16	1767	42	1079	26	1945	29	5192	38	6407	18	5633	10	5389	49	4730	9	5470	27	6.0	10	3.8	5	3.9	25	5.0	16	2.3	33	4.2	6
15	IC0312325	2557	17	2259	7	2167	12	3076	14	1302	11	2272	3	5568	19	4222	44	6478	3	7220	27	2079	48	5113	37	4.5	47	3.5	18	4.3	13	4.2	37	2.5	29	3.8	42
16	IC0321797	2286	40	2185	11	2167	13	1834	39	730	44	1840	39	5134	41	4444	42	5589	13	5085	50	3651	29	4780	48	5.0	44	3.8	8	4.9	2	3.7	46	3.1	7	4.1	18
17	IC0326825	2362	32	2074	17	2278	2	3434	4	889	36	2207	5	5286	33	4815	39	5311	17	7496	24	2365	44	5054	40	6.0	12	3.5	13	4.2	18	4.1	40	2.9	13	4.1	15
18	IC0331680	2468	21	1778	32	2167	11	3088	13	1000	29	2100	14	5482	24	5407	30	4822	26	6869	34	1683	50	4853	44	6.5	5	3.5	11	3.6	42	4.7	21	2.6	24	4.2	9
19	IC0331687	2443	25	1778	33	1806	35	2122	33	1206	18	1871	37	5393	27	5778	26	4150	40	8090	13	4825	6	5647	17	6.0	7	3.8	7	4.0	22	4.6	25	2.7	17	4.2	5
20	IC0331688	2677	7	1926	24	1806	34	2820	22	698	46	1985	26	6016	6	7185	6	5589	12	8334	10	3673	27	6159	4	7.0	1	3.8	6	4.9	1	5.1	13	2.6	23	4.7	1
21	IC0344216-X	2223	44	1556	45	2200	9	1652	44	1016	28	1729	44	5076	44	5296	32	4717	28	5919	47	3079	36	4817	46	5.5	31	3.6	9	4.5	9	4.1	39	2.7	19	4.1	20
22	IC0344951	2383	29	1963	23	1989	24	2058	35	1238	17	1926	30	5395	26	6815	10	4689	29	7522	23	2698	41	5424	28	5.5	24	4.3	2	4.3	12	3.6	49	3.0	10	4.1	16
23	IC0344972	2472	20	1778	36	1856	31	2870	20	1651	5	2125	11	5648	16	5963	22	5067	21	7522	22	5095	3	5859	9	5.5	17	3.5	14	4.5	10	4.5	29	2.2	37	4.0	25
24	IC0344977	2448	23	1519	46	1750	42	3483	3	762	42	1992	23	5555	20	5852	24	4072	41	9100	4	3362	33	5588	19	5.0	39	3.5	16	3.3	49	5.2	11	2.7	16	3.9	32
25	IC0345072	2177	46	1704	39	2006	23	3023	15	1270	13	2036	20	4879	45	4852	38	4311	37	8054	14	3419	32	5103	39	5.5	30	3.3	32	3.7	38	3.7	47	2.9	11	3.8	41
26	IC0345088	2159	47	1667	42	2222	8	1355	47	921	34	1665	48	4823	47	5185	33	5450	14	6896	32	4032	18	5277	33	5.5	26	3.0	40	4.0	23	4.4	32	3.0	9	4.0	29
27	IC0403242	2309	37	2259	8	1972	25	1748	43	1333	10	1924	31	5218	37	6444	15	4211	39	6981	31	4254	13	5422	29	5.0	41	3.0	41	3.7	39	5.0	18	3.0	8	3.9	31
28	IC0403326	2312	36	1667	41	1922	27	3198	8	1175	20	2055	18	5135	40	5519	29	4439	33	7437	25	4149	16	5336	32	5.0	42	3.5	17	4.1	19	5.4	8	2.7	15	4.1	14
29	IC0403412	2365	31	1778	35	2228	6	2742	24	1238	16	2070	17	5339	31	7000	9	3500	47	8915	6	3857	23	5722	12	5.5	18	3.3	30	3.9	28	4.2	35	3.3	5	4.0	26
30	IC0403728	2588	15	1370	48	1806	36	1353	48	794	40	1582	50	5742	15	8074	2	2967	50	6702	38	2762	39	5249	34	6.0	11	3.3	20	3.9	26	4.4	33	3.3	2	4.2	8
31	IC0473493	2673	8	2000	20	2058	20	1296	50	1079	27	1821	41	6005	7	7556	4	3461	48	6667	40	3819	24	5501	24	5.5	22	3.3	21	4.3	14	4.7	22	1.9	47	3.9	33
32	IC0473644	2281	41	1593	44	1728	44	2166	32	349	50	1623	49	5488	23	7148	7	4506	32	6704	37	2111	47	5191	36	5.5	28	3.3	22	3.6	43	6.1	2	2.6	21	4.2	4
34	IC0474052	2669	9	2556	1	2167	10	1865	38	1270	12	2105	13	5999	8	6519	13	4589	31	7173	29	5429	1	5941	7	6.0	6	3.3	25	3.8	35	4.9	20	2.6	27	4.1	17
35	IC0474306	2706	6	1815	30	1944	26	3725	1	762	41	2190	7	6050	5	4185	45	4978	23	9298	3	3730	25	5648	16	5.0	38	2.8	50	4.0	24	6.6	1	2.4	30	4.2	12
36	IC0474345	2232	43	1815	31	2244	5	2967	18	1270	14	2106	12	5100	42	6593	12	4311	36	7780	18	3921	22	5541	22	5.0	40	3.3	33	4.8	5	5.1	14	2.1	39	4.1	22
37	IC0478181	2718	5	2074	16	1583	47	1361	46	1841	1	1915	33	6152	4	3111	50	3133	49	6835	35	2752	40	4397	50	6.0	14	3.3	27	3.9	27	4.7	23	1.6	50	3.9	35



S.No	Acc. No.	Grain Yield (kg/ha)												Fodder Yield (kg/ha)												No. of Productive Tillers												
		ATHI	Rank	BENG	Rank	MAND	Rank	VIZ	Rank	WAGH	Rank	INDIA (5)	Rank	ATHI	Rank	BENG	Rank	MAND	Rank	VIZ	Rank	WAGH	Rank	INDIA (5)	Rank	ATHI	Rank	BENG	Rank	MAND	Rank	VIZ	Rank	WAGH	Rank	INDIA (5)	Rank	
38	IC0478317	2122	50	2185	13	1767	39	2982	17	508	48	1913	34	4694	49	6481	14	5311	16	6286	44	4638	11	5482	26	5.5	23	2.8	47	4.2	17	5.1	15	1.9	46	3.9	36	
39	IC0478319	2744	3	2185	9	1361	49	2221	31	730	43	1848	38	6181	3	3667	48	4067	42	7920	16	2508	43	4868	43	4.5	48	3.0	42	4.7	6	4.5	28	2.7	18	3.9	38	
40	IC0478382	2631	11	2111	15	1806	37	2257	30	1143	24	1989	24	5349	30	5852	25	4811	27	6084	45	2784	38	4976	41	5.0	43	3.6	10	3.8	33	3.9	45	1.8	49	3.6	50	
41	IC0478543	2577	16	1296	50	1611	45	1927	36	952	32	1673	47	5880	11	3556	49	5811	7	6047	46	2625	42	4784	47	5.5	32	2.8	49	3.8	36	5.0	17	1.8	48	3.8	44	
42	IC0478571	2623	13	1889	27	1417	48	3004	16	984	31	1983	27	5843	14	5852	23	5694	9	7404	26	2222	46	5403	30	6.5	4	3.0	37	4.3	16	5.5	5	2.0	41	4.3	3	
43	IC0478640	2718	4	2259	6	1278	50	2892	19	1651	4	2160	9	5947	10	6037	21	4867	24	8936	5	5041	5	6165	2	5.5	15	3.3	28	3.5	46	4.6	27	3.4	1	4.1	21	
44	IC0478766	2344	33	2370	3	1906	28	1771	41	1143	25	1907	36	5282	34	5519	28	3722	45	7054	30	2810	37	4877	42	6.0	13	3.3	26	3.5	45	5.4	9	2.0	42	4.0	27	
45	IC0478808	2331	34	2000	21	1728	43	3094	11	1492	6	2129	10	5354	29	5148	35	6189	5	7684	19	4206	14	5716	13	5.0	36	3.1	36	3.9	31	4.1	41	2.3	35	3.7	47	
46	IC0478862	2443	24	2037	19	1600	46	2078	34	1460	7	1924	32	5514	21	4148	46	5633	11	7587	21	4749	7	5526	23	5.5	21	4.5	1	4.5	8	4.2	36	2.2	38	4.2	11	
47	IC0519664	2790	2	1333	49	1889	29	3276	7	984	30	2054	19	6369	2	4963	37	5367	15	7667	20	3460	31	5565	21	6.0	9	3.5	12	3.8	34	4.6	26	2.3	34	4.0	24	
48	GPU 48 (C)	2494	19	2296	4	2161	14	3396	5	1746	3	2419	1	5645	17	6407	16	4983	22	7942	15	3654	28	5726	11	6.5	3	2.8	46	3.1	50	4.1	43	2.0	43	3.7	46	
49	GPU 67 (C)	2453	22	2296	5	2250	3	3523	2	1143	22	2333	2	5493	22	6704	11	4850	25	6410	43	3556	30	5402	31	5.5	25	2.8	48	3.7	40	5.5	6	1.9	45	3.9	40	
50	PR 202 (C)	2207	45	2000	22	1844	32	3180	9	698	45	1986	25	4760	48	7296	5	5172	19	9964	1	2270	45	5892	8	4.5	46	3.3	35	4.1	20	4.4	31	3.3	3	3.9	34	
51	VL 376 (C)	2139	49	2185	12	2222	7	3095	10	1365	9	2201	6	4533	50	5074	36	5800	8	7906	17	4159	15	5494	25	4.0	50	3.0	43	3.6	44	5.7	4	1.9	44	3.6	48	
	Mean	2446		1921		1941		2493		1086		1977		5483		5735		4868		7418		3642		5429		5.5		3.3		4.0		4.7		2.5		4.0		
	CD (5%)	53.11		79.81		68.53		191.27		92.50		51.79		123.36		343.71		246.56		294.77		264.88		121.66		0.17		0.11		0.12		0.19		0.13		0.06		
	CD (1%)	69.79		104.89		90.06		251.37		121.56		68.06		162.13		451.71		324.04		387.39		348.11		159.88		0.23		0.14		0.16		0.25		0.17		0.07		
	CV (%)	7.8		15.0		12.7		27.7		30.7		9.4		8.1		21.6		18.3		14.3		26.2		8.1		11.6		11.9		11.0		14.6		18.0		5.1		

Table 23: Multi-whorled Finger millet germplasm 51 acc. (57 acc.) characterization and ranking for finger number and finger length

S.No	Acc. No.	Finger Number												Finger length (cm)											
		ATHI	Rank	BENG	Rank	MAND	Rank	VIZ	Rank	WAGH	Rank	INDIA (5)	Rank	ATHI	Rank	BENG	Rank	MAND	Rank	VIZ	Rank	WAGH	Rank	INDIA (5)	Rank
1	EC0002194-X	9.0	23	6.3	12	7.0	30	8.6	5	5.8	45	7.3	14	9.9	2	6.3	13	4.9	39	6.6	49	6.0	19	6.7	33
2	IC0045854	8.5	38	6.1	22	6.3	46	6.5	41	5.9	43	6.7	45	9.1	31	6.0	22	5.3	28	9.1	18	6.2	15	7.1	19
3	IC0071335	8.0	47	6.6	7	7.2	20	7.1	27	7.5	5	7.3	18	9.0	37	6.1	19	5.1	33	9.9	6	6.3	9	7.3	8
4	IC0071411	8.5	37	6.5	10	7.5	13	7.6	17	7.5	3	7.5	5	9.0	35	5.3	39	5.4	25	7.8	37	6.7	4	6.8	29
5	IC0071411-A	9.0	20	5.3	43	7.2	22	8.7	3	7.3	8	7.5	6	9.2	25	4.5	48	5.8	5	10.5	4	5.9	21	7.2	11
6	IC0262368	9.0	14	6.1	19	6.2	48	8.1	11	5.8	46	7.0	33	9.3	22	7.1	4	5.6	14	9.1	17	5.3	39	7.3	6
7	IC0283758	9.0	16	6.0	24	7.1	26	7.4	22	6.6	24	7.2	21	8.7	44	5.3	40	5.5	20	9.7	8	6.1	17	7.0	22
8	IC0283800	9.5	3	6.0	23	6.0	50	5.7	48	6.5	28	6.7	42	9.9	4	4.8	44	4.7	50	8.5	23	6.6	5	6.9	26
9	IC0283822	9.0	18	5.8	36	6.7	40	8.5	6	5.4	49	7.1	31	9.6	11	5.3	35	4.9	42	8.4	26	5.1	42	6.6	38
10	IC0283853	7.5	49	5.8	38	6.6	43	6.7	37	6.7	22	6.7	44	9.3	23	4.5	47	4.8	45	8.5	24	5.9	23	6.6	41
11	IC0308859	8.5	34	6.3	17	7.4	17	4.4	50	7.2	12	6.8	41	9.6	10	6.5	11	5.3	27	8.1	32	6.8	3	7.3	7
12	IC0308860	8.0	45	4.8	49	7.7	6	7.3	24	5.7	47	6.7	43	8.7	43	5.0	42	5.7	11	8.5	25	6.2	13	6.8	30
13	IC0308899	9.0	13	4.8	48	7.0	34	8.3	9	6.1	36	7.0	34	8.8	41	4.8	45	5.1	34	9.1	15	5.5	30	6.7	36
14	IC0312005	9.0	12	6.1	18	7.7	7	7.4	20	7.5	4	7.5	4	9.7	6	7.5	2	6.3	1	7.8	38	6.6	6	7.6	1
15	IC0312325	8.5	36	4.3	50	7.1	29	7.7	14	6.4	29	6.8	40	8.2	48	5.8	26	5.2	30	7.3	45	4.7	48	6.2	50
16	IC0321797	8.5	32	5.3	40	7.4	16	8.1	10	5.5	48	7.0	36	9.3	20	5.8	25	4.9	41	11.0	1	4.9	45	7.2	15
17	IC0326825	8.0	42	5.3	44	7.0	33	6.6	39	5.9	42	6.6	48	9.4	17	4.5	46	5.0	37	9.8	7	4.5	50	6.6	39
18	IC0331680	8.0	41	4.9	46	6.5	44	7.1	28	6.3	32	6.6	47	9.3	24	5.3	38	4.9	44	8.2	30	5.5	31	6.6	40
19	IC0331687	8.0	40	6.5	11	6.6	41	8.5	7	7.0	15	7.3	15	8.9	38	4.3	50	4.8	47	9.3	12	6.0	18	6.7	37
20	IC0331688	10.0	1	5.8	33	7.3	19	6.3	42	6.0	40	7.1	30	9.9	3	4.3	49	5.0	38	9.1	16	5.3	37	6.7	35
21	IC0344216-X	8.5	33	6.5	9	7.5	12	7.5	19	6.2	34	7.2	19	8.1	50	7.3	3	5.6	13	9.2	13	5.7	26	7.2	13
22	IC0344951	8.5	30	6.3	13	7.8	5	5.8	46	7.3	9	7.1	26	8.8	40	5.8	23	5.7	10	7.1	46	5.4	35	6.6	43
23	IC0344972	9.0	21	5.8	29	7.2	23	7.4	21	7.1	14	7.3	16	8.6	45	5.6	31	5.8	7	9.6	9	5.6	27	7.0	23
24	IC0344977	9.0	25	6.0	25	6.7	39	6.6	40	6.3	33	6.9	37	8.8	42	6.1	20	5.6	15	10.6	3	5.5	28	7.3	5
25	IC0345072	8.5	35	5.3	41	7.0	32	7.0	32	6.4	30	6.8	39	9.0	34	6.8	8	5.4	22	9.2	14	5.5	29	7.2	14
26	IC0345088	9.5	7	5.3	42	6.4	45	7.4	23	6.7	21	7.1	32	9.6	7	6.3	16	5.7	9	9.4	11	4.8	46	7.1	17
27	IC0403242	9.0	24	6.3	16	6.2	49	7.7	15	6.6	23	7.2	25	9.6	9	6.0	21	5.2	31	7.1	47	6.4	8	6.9	27
28	IC0403326	9.0	17	5.8	35	7.6	9	8.3	8	7.3	6	7.6	3	9.6	8	6.3	14	5.4	23	7.3	43	5.3	41	6.8	31

S.No	Acc. No.	Finger Number												Finger length (cm)											
		ATHI	Rank	BENG	Rank	MAND	Rank	VIZ	Rank	WAGH	Rank	INDIA (5)	Rank	ATHI	Rank	BENG	Rank	MAND	Rank	VIZ	Rank	WAGH	Rank	INDIA (5)	Rank
29	IC0403412	7.5	48	5.8	32	6.8	38	6.1	44	6.7	20	6.6	46	8.6	46	6.6	10	4.7	49	7.4	42	5.0	44	6.4	47
30	IC0403728	9.5	4	5.8	27	6.3	47	7.1	29	7.0	17	7.1	27	9.8	5	7.0	6	5.4	21	9.0	20	6.2	12	7.5	2
31	IC0473493	9.0	26	7.8	1	7.4	14	5.3	49	7.8	1	7.5	7	9.2	26	6.1	18	5.9	3	7.3	44	7.1	2	7.1	20
32	IC0473644	9.0	11	6.5	8	7.2	21	7.7	16	6.3	31	7.3	12	9.0	33	7.1	5	5.8	6	7.9	36	5.9	24	7.1	18
34	IC0474052	8.5	31	5.8	30	7.0	31	6.9	35	4.2	50	6.5	50	9.4	15	5.0	41	5.0	36	8.1	35	5.3	40	6.5	45
35	IC0474306	8.5	29	6.6	6	7.5	11	6.9	34	6.5	27	7.2	22	9.5	12	5.6	29	5.2	32	11.0	2	5.3	36	7.3	4
36	IC0474345	9.0	19	5.8	37	7.4	15	7.7	13	7.3	7	7.4	9	9.3	18	5.3	36	5.6	16	9.4	10	6.3	10	7.2	12
37	IC0478181	9.5	8	4.8	47	6.9	36	8.6	4	5.8	44	7.1	28	10.0	1	4.8	43	5.7	12	7.7	40	5.5	32	6.7	34
38	IC0478317	8.0	44	6.8	4	8.3	2	8.0	12	7.0	16	7.6	2	9.1	32	7.8	1	5.3	26	8.6	22	6.5	7	7.4	3
39	IC0478319	8.0	46	5.8	31	6.9	35	5.8	47	6.1	39	6.5	49	8.4	47	5.6	32	5.4	24	7.8	39	5.0	43	6.4	48
40	IC0478382	8.5	39	6.8	2	7.5	10	6.2	43	6.0	41	7.0	35	9.5	13	6.1	17	4.9	40	7.5	41	6.2	16	6.8	28
41	IC0478543	9.5	9	6.3	14	7.3	18	7.0	31	7.2	11	7.5	8	9.3	21	5.3	37	4.9	43	8.3	29	6.2	14	6.8	32
42	IC0478571	10.0	2	5.8	26	7.1	27	7.6	18	6.2	35	7.3	13	9.4	16	5.3	34	4.7	48	8.1	33	5.4	34	6.6	42
43	IC0478640	9.5	5	5.8	34	7.1	28	5.9	45	6.1	38	6.9	38	9.5	14	5.3	33	5.5	19	5.7	50	5.9	25	6.4	49
44	IC0478766	9.0	22	6.1	20	8.0	4	6.7	38	6.6	25	7.3	17	9.0	36	6.3	15	6.1	2	8.3	28	6.3	11	7.2	10
45	IC0478808	9.5	10	5.8	28	8.5	1	8.8	1	7.2	10	8.0	1	8.9	39	6.5	12	5.5	17	6.8	48	4.7	49	6.5	46
46	IC0478862	9.0	15	6.3	15	6.8	37	6.7	36	7.1	13	7.2	24	9.2	30	6.6	9	4.8	46	10.0	5	5.3	38	7.2	16
47	IC0519664	9.5	6	6.1	21	6.6	42	7.0	33	7.0	18	7.2	20	9.2	28	5.6	30	5.3	29	9.0	19	5.4	33	6.9	25
48	GPU 48 (C)	9.0	28	6.6	5	8.1	3	7.1	26	6.1	37	7.4	10	9.2	27	5.7	28	5.0	35	8.1	34	4.8	47	6.6	44
49	GPU 67 (C)	9.0	27	5.1	45	7.2	25	7.3	25	6.9	19	7.1	29	9.3	19	5.8	24	5.8	4	8.6	21	5.9	22	7.1	21
50	PR 202 (C)	8.0	43	6.8	3	7.6	8	7.0	30	6.6	26	7.2	23	9.2	29	6.8	7	5.7	8	8.3	27	6.0	20	7.2	9
51	VL 376 (C)	7.5	50	5.5	39	7.2	24	8.8	2	7.7	2	7.3	11	8.2	49	5.8	27	5.5	18	8.2	31	7.5	1	7.0	24
	Mean	8.8		5.9		7.1		7.2		6.6		7.1		9.2		5.8		5.3		8.5		5.8		6.9	
	CD (5%)	0.17		0.18		0.15		0.26		0.19		0.09		0.12		0.24		0.11		0.31		0.18		0.09	
	CD (1%)	0.22		0.23		0.20		0.35		0.25		0.12		0.16		0.31		0.14		0.41		0.24		0.12	
	CV (%)	7.0		10.8		7.5		13.2		10.5		4.6		4.9		14.7		7.3		13.0		11.4		4.6	

Table 24: Foxtail millet germplasm 73 acc. (100 acc.) characterization and ranking for days to 50% flowering, days to maturity and plant height

S.No	Acc. No.	Days to 50% flowering														Days to maturity														Plant height (cm)													
		VIZ	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	INDIA (6)	Rank	VIZ	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	INDIA (6)	Rank	VIZ	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	INDIA (6)	Rank
1	IC0403787	46	10	51	5	44	18	37	31	47	26	55	2	46	3	75	5	86	5	76	24	89	46	79	11	79	7	80	8	124	3	102	34	78	52	134	42	129	5	110	28	113	17
2	IC0404094	53	66	58	65	46	56	44	71	50	69	64	50	52	67	83	62	93	62	42	3	83	4	84	66	89	54	79	3	97	68	113	5	88	16	147	11	126	9	131	5	117	5
3	IC0479647	51	59	50	4	45	36	43	63	49	59	57	9	49	35	83	60	85	60	78	50	93	67	79	13	80	14	83	29	126	1	109	9	80	49	153	6	135	1	108	34	119	4
4	IC0480820	51	60	56	52	44	33	39	47	49	52	72	70	52	65	83	65	91	65	76	31	89	47	81	36	95	69	86	65	115	29	106	21	89	12	121	65	119	25	139	2	115	12
5	IC0479633	45	5	51	6	46	49	31	1	46	1	70	64	48	16	75	8	86	8	79	57	82	1	78	3	79	4	80	6	112	44	103	29	81	46	203	1	120	19	120	13	123	1
6	IC0403564	53	67	59	68	46	57	37	36	49	56	71	67	52	69	84	67	94	67	79	55	88	41	82	58	93	67	87	68	114	32	98	51	86	23	136	36	119	23	135	3	115	11
7	IC0480946	53	68	61	73	49	70	40	55	50	61	71	69	54	72	84	68	96	68	82	69	92	66	81	51	91	60	88	72	116	22	107	14	88	14	124	62	120	20	141	1	116	8
8	IC0022179	51	56	52	15	46	50	35	20	47	24	65	54	49	44	83	63	87	63	78	46	85	14	80	16	87	48	83	40	117	15	94	63	81	47	142	22	115	33	121	9	112	21
9	IC0479605	48	20	53	26	41	5	41	57	47	21	58	13	48	11	77	17	88	17	73	11	91	59	80	19	80	15	81	15	116	18	103	31	75	61	123	64	118	30	112	25	108	38
10	IC0479804	46	8	53	23	50	71	40	51	48	38	69	63	51	59	75	6	88	6	84	72	88	35	79	10	78	2	82	17	125	2	102	36	98	2	144	17	133	2	125	6	121	3
11	IC0480861	51	61	53	29	46	53	44	67	50	67	61	52	64	83	61	88	61	80	62	88	43	83	62	91	61	85	64	112	42	106	23	84	30	134	41	118	26	114	16	111	23	
12	IC0403871	47	12	52	12	42	7	38	37	48	35	62	41	48	14	76	13	87	13	74	13	90	55	80	27	86	44	82	21	109	53	108	11	81	45	144	14	113	42	98	61	109	32
13	IC0403951	50	46	53	20	45	37	40	52	47	19	60	28	49	33	80	31	88	31	77	39	91	61	81	37	84	31	83	41	100	65	86	70	82	43	120	67	118	29	112	24	103	65
14	IC0404216	46	11	56	49	44	32	44	66	48	46	61	34	50	48	76	12	91	12	76	28	96	71	81	38	80	17	83	38	114	34	109	10	84	32	118	69	113	41	101	51	106	47
15	IC0403862	49	40	52	9	50	72	33	3	47	12	65	51	49	39	80	41	87	41	85	73	82	2	81	28	84	35	83	36	118	10	96	56	92	4	140	27	117	32	103	46	111	24
16	IC0479507	49	42	57	62	43	17	37	30	48	34	58	14	49	23	81	46	92	46	75	23	88	37	78	2	85	38	83	39	112	43	108	12	72	70	124	61	114	36	106	41	106	51
17	IC0403487	49	30	57	61	46	55	33	6	48	40	59	20	49	24	79	27	92	27	41	2	83	3	81	39	81	19	76	2	109	57	98	50	83	36	140	28	120	21	100	57	108	36
18	EC0529794	50	49	55	40	45	42	41	56	47	20	58	12	49	37	81	47	90	47	77	41	89	49	79	12	82	21	83	30	114	31	99	47	85	24	124	63	122	16	101	54	108	40
19	IC0403742	47	14	52	13	44	29	35	13	47	15	57	7	47	4	75	7	87	7	77	36	85	13	80	15	80	11	81	11	115	23	107	16	76	59	132	45	108	58	109	33	108	30



S.No	Acc. No.	Days to 50% flowering														Days to maturity														Plant height (cm)													
		VIZ	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	INDIA (6)	Rank	VIZ	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	INDIA (6)	Rank	VIZ	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	INDIA (6)	Rank
20	IC0403816	51	58	53	28	46	52	38	42	49	51	63	44	50	51	82	52	88	52	80	61	89	52	82	59	89	57	85	59	109	50	100	41	83	33	141	26	124	14	120	12	113	15
21	IC0283925	50	50	56	50	48	65	35	23	48	32	59	25	49	40	81	48	91	48	80	63	87	32	81	34	80	16	83	37	100	64	96	58	89	13	126	58	107	62	99	58	103	66
22	IC0345126	46	9	55	37	45	38	42	59	48	45	59	21	49	31	76	14	90	14	75	21	94	69	79	8	84	34	83	31	116	19	118	2	82	39	141	24	112	44	97	63	111	26
23	IC0403505	49	38	55	44	46	54	35	21	46	8	58	11	48	18	80	36	90	36	78	48	86	29	84	68	83	29	83	46	122	5	97	52	84	28	144	15	126	10	113	21	114	13
24	IC0479635	49	43	52	10	44	28	42	61	46	11	62	35	49	38	80	40	87	40	78	43	91	60	78	7	91	59	84	53	114	36	103	28	83	37	116	72	114	37	102	50	105	57
25	IC0413273	44	1	47	2	47	59	34	9	46	3	54	1	45	1	73	1	82	1	79	51	85	15	78	5	79	5	79	5	111	45	105	24	87	18	128	51	125	12	110	29	111	25
26	IC0479349	50	47	53	27	48	64	36	27	47	17	62	36	49	36	82	51	88	51	82	68	85	10	80	21	86	40	84	49	113	39	107	17	85	27	129	48	111	50	107	39	109	33
27	IC0480653	45	6	56	48	45	43	35	14	48	31	57	10	47	8	76	10	91	10	79	52	86	30	81	44	83	26	82	27	114	37	104	27	92	6	127	56	104	66	99	60	107	45
28	IC0403860	45	3	56	54	39	1	34	10	48	41	56	4	46	2	75	4	91	4	70	5	85	11	81	30	78	3	80	7	116	17	93	65	71	71	139	31	110	53	107	37	106	50
29	IC0403952	47	13	57	59	48	68	35	24	46	9	56	5	48	17	76	11	92	11	82	67	85	17	80	17	79	6	82	19	95	71	100	43	92	5	148	9	124	15	117	15	113	18
30	IC0120235	48	22	57	57	41	6	34	7	46	7	59	17	47	6	79	22	92	22	72	10	85	9	80	20	81	18	81	14	112	41	100	44	76	57	149	8	112	46	114	17	110	27
31	IC0403440	50	45	58	66	44	34	43	64	49	60	64	49	51	62	80	44	93	44	78	49	92	64	81	50	87	51	85	63	99	67	97	55	85	26	136	35	111	49	101	52	105	59
32	IC0078225	49	36	56	55	41	3	32	2	48	30	66	58	49	27	81	45	91	45	71	6	83	5	81	29	89	56	82	28	109	54	90	68	78	53	141	23	114	35	95	66	104	62
33	IC0283926	50	44	59	67	45	44	40	50	50	66	65	56	51	63	82	54	94	54	78	45	90	57	81	48	90	58	86	66	115	24	102	35	84	31	120	68	108	59	97	64	104	63
34	IC0479977	50	48	44	1	45	35	43	62	49	58	62	38	49	26	82	50	79	50	77	42	90	56	82	60	91	63	83	47	96	69	114	4	79	50	116	71	117	31	112	26	106	55
35	IC0345141	48	24	55	43	46	47	37	35	46	10	56	6	48	13	79	23	90	23	77	38	88	39	80	24	79	8	82	20	110	48	100	45	76	55	130	47	108	60	107	40	105	58
36	IC0403470	54	70	55	47	45	40	39	43	48	36	64	47	51	57	83	64	90	64	78	47	87	33	80	18	92	66	85	60	84	73	106	19	87	22	136	37	127	7	120	10	110	28
37	IC0403869	48	18	55	42	44	26	36	25	47	25	60	29	48	20	78	20	90	20	76	29	86	26	80	23	83	30	82	22	105	60	86	71	83	38	127	55	108	61	94	68	100	71
38	IC0283715	49	37	52	14	43	14	35	16	48	42	64	48	48	22	80	37	87	37	76	26	84	8	80	14	87	49	82	24	116	20	106	22	82	40	143	19	112	45	95	67	109	31
39	IC0480959	49	34	60	70	43	13	38	39	50	65	62	39	50	54	79	28	95	28	74	15	89	45	82	54	83	27	83	45	110	47	99	48	87	19	117	70	119	22	104	43	106	49
40	IC0479719	50	52	57	58	47	62	45	72	49	53	68	62	52	68	82	55	92	55	81	66	96	72	81	52	92	64	87	69	117	13	103	32	91	7	110	73	111	48	122	8	109	30
41	IC0345124	49	29	54	35	42	10	38	38	49	49	62	42	49	34	80	32	89	32	74	14	89	44	81	35	86	46	83	32	115	27	110	7	41	73	141	25	118	27	110	30	106	52
42	IC0403900	45	4	53	18	43	15	40	49	47	18	57	8	47	5	76	9	88	9	75	18	86	23	79	9	80	13	80	9	107	58	95	60	83	35	130	46	111	47	111	27	106	48
43	IC0403859	47	15	53	24	44	30	33	5	49	48	62	37	48	12	77	15	88	15	77	32	83	6	81	40	70	1	79	4	109	55	96	57	70	72	138	32	103	68	89	71	101	69
44	IC0345123	48	17	53	25	44	22	38	40	49	50	58	16	48	19	79	24	88	24	77	33	92	62	81	49	88	52	84	54	118	11	109	8	76	58	134	43	127	8	112	23	113	19
45	IC0479445	50	51	55	41	49	69	39	45	48	43	63	43	50	56	82	57	90	57	82	71	89	50	80	25	87	50	85	58	120	6	99	49	97	3	153	7	114	38	119	14	117	7
46	IC0480408	56	71	53	30	43	12	46	73	51	72	70	65	53	71	89	72	88	72	76	27	97	73	84	72	91	62	87	70	118	9	127	1	74	64	167	2	111	51	133	4	122	2
47	IC0479711	47	16	57	56	47	61	44	68	48	47	59	22	50	53	77	16	92	16	80	60	92	65	82	61	85	39	84	57	109	56	97	53	85	25	138	34	113	39	101	53	107	43
48	IC0479306	59	73	60	71	48	67	43	65	53	73	76	73	56	73	91	73	95	73	80	64	95	70	85	73	99	72	91	73	118	12	115	3	90	10	145	13	115	34	110	31	115	9
49	IC0022180	53	64	61	72	47	63	35	22	50	63	66	59	52	66	85	69	96	69	44	4	86	22	84	67	89	55	80	10	111	46	99	46	82	41	144	16	101	71	113	20	108	35
50	IC0479623	48	26	57	60	45	41	37	34	49	55	61	32	49	43	77	18	92	18	77	37	87	31	82	57	84	33	83	35	114	38	108	13	90	9	146	12	120	18	113	22	115	10
51																																											



S.No	Acc. No.	Days to 50% flowering														Days to maturity														Plant height (cm)													
		VIZ	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	INDIA (6)	Rank	VIZ	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	INDIA (6)	Rank	VIZ	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	INDIA (6)	Rank
71	SIA 3156 (C)	50	55	52	11	44	19	35	17	47	22	59	18	48	10	80	35	87	35	75	22	86	25	81	42	79	9	81	13	93	72	95	61	82	42	128	53	106	64	103	47	101	68
72	SIA 326 (C)	54	69	52	16	46	51	35	15	50	62	61	33	49	45	85	70	87	70	79	56	86	21	82	56	82	23	83	44	106	59	101	39	87	21	148	10	127	6	100	56	111	22
73	Suryanandi (C)	48	28	58	64	48	66	40	54	48	44	55	3	49	42	78	19	93	19	81	65	88	34	81	45	79	10	83	33	104	63	101	40	88	15	127	54	121	17	102	49	107	44
	Mean	49.1		54.3		44.7		37.9		47.8		62.3		49.3		79.8		89.3		75.0		87.8		80.7		85.1		83.0		111		101		82		136		114		108		109	
	CD (5%)	0.64		0.69		0.54		0.82		0.36		1.18		0.43		0.80		0.69		1.99		0.77		0.40		1.26		0.56		1.80		1.80		1.91		3.11		2.45		2.79		1.23	
	CD (1%)	0.85		0.90		0.70		1.08		0.47		1.55		0.56		1.06		0.90		2.61		1.01		0.53		1.65		0.74		2.36		2.37		2.51		4.09		3.22		3.67		1.61	
	CV (%)	5.7		5.5		5.2		9.5		3.2		8.3		3.8		4.4		3.4		11.5		3.8		2.2		6.4		2.9		7.0		7.7		10.2		10.0		9.3		11.3		4.9	

Table 25: Foxtail millet germplasm 73 acc. (100 acc.) characterization and ranking for grain yield, fodder yield and number of productive tillers

S.no	Acc. No.	Grain yield (kg/ha)														Fodder yield (kg/ha)														No. of productive tillers													
		VIZA	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	INDIA (6)	Rank	VIZ	Rank	MAND	Rank	ATHI	Rank	NAND	Rank	SOLA	Rank	NDIA (6)	Rank	VIZ	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	NDIA (6)	Rank		
1	IC0403787	2286	69	1833	22	1441	44	2717	39	2519	37	1350	41	2024	45	5353	66	3000	39	3312	43	4593	21	3131	22	3878	36	3.3	10	3.4	60	3.0	64	3.6	32	3.2	29	6.8	43	3.9	48		
2	IC0404094	2978	24	1844	21	1613	20	5767	1	1748	64	2081	14	2672	3	6510	13	3589	16	3764	18	3052	66	3975	7	4178	14	2.7	55	4.4	41	4.0	31	3.4	61	2.6	40	5.3	52	3.7	53		
3	IC0479647	3208	12	1361	63	1544	28	3133	29	3052	17	1250	44	2258	29	6328	22	3172	33	3641	24	5630	7	2158	48	4186	12	2.8	51	5.6	15	4.0	19	3.4	56	3.8	14	5.7	49	4.2	34		
4	IC0480820	3337	6	1728	34	1760	7	1700	61	5126	2	1883	19	2589	5	6206	32	1983	69	4021	8	7111	2	2661	34	4396	7	2.8	54	6.4	7	4.0	16	3.5	45	2.1	52	2.4	66	3.5	56		
5	IC0479633	2396	65	2044	7	1383	52	917	70	2178	50	917	57	1639	71	5191	69	4300	3	3183	52	2852	69	1603	60	3426	67	3.2	17	3.3	61	3.5	56	3.8	3	3.6	17	7.5	37	4.2	38		
6	IC0403564	3286	9	1967	10	1533	31	1783	58	1896	59	1192	47	1943	52	6928	1	2561	55	3624	27	3111	64	2989	26	3843	41	2.3	68	3.2	64	4.5	13	3.3	69	2.8	34	2.6	65	3.1	63		
7	IC0480946	3299	8	1989	9	1683	13	1633	62	2274	45	1517	34	2066	40	6774	3	2628	52	3867	12	3556	53	2486	41	3862	39	3.1	25	3.1	65	3.0	65	3.4	67	2.7	37	2.9	62	3.0	67		
8	IC0022179	3308	7	1489	53	1401	46	3817	10	2489	39	3153	2	2609	4	6227	31	3256	31	3242	45	3948	38	3611	13	4057	23	2.9	44	5.6	14	3.5	47	3.6	42	2.5	41	6.8	45	4.2	37		
9	IC0479605	2244	71	1294	68	1389	50	2040	52	3407	12	1997	15	2062	41	6008	45	3467	21	3197	50	4778	15	3728	11	4235	9	4.1	2	6.0	9	3.5	46	3.4	64	2.4	43	9.4	22	4.8	14		
10	IC0479804	2238	72	1639	42	1996	1	3333	16	2474	40	928	56	2101	35	5119	72	3389	24	4601	1	3630	50	2469	42	3842	42	2.8	48	3.7	57	4.5	12	3.3	68	2.3	45	10.0	16	4.4	25		
11	IC0480861	2977	26	1878	19	1584	24	1617	64	2607	32	1633	29	2049	44	6500	14	3072	36	3641	23	3407	59	3497	17	4023	28	3.3	14	4.7	32	4.5	7	3.6	19	4.0	13	12.0	7	5.4	9		
12	IC0403871	2562	56	1546	50	1366	56	3107	30	2119	54	1661	25	2060	42	5614	60	3567	17	3187	51	4296	29	4258	4	4184	13	3.3	11	4.9	28	4.0	27	3.7	6	3.7	15	9.5	19	4.9	13		
13	IC0403951	2846	31	1778	30	1315	61	667	72	3837	4	592	68	1839	61	5931	51	2361	60	3024	60	6074	3	1486	66	3775	43	2.8	52	4.3	43	3.5	53	3.6	29	1.7	61	2.7	64	3.1	65		
14	IC0404216	2419	60	1733	33	1774	4	3817	9	3496	10	1686	24	2487	14	5608	62	3694	13	4072	4	5000	12	2931	28	4261	8	2.6	63	3.8	55	3.5	55	3.5	52	3.7	16	10.2	14	4.6	22		
15	IC0403862	2913	28	1694	37	1622	19	3800	11	2756	25	1139	51	2321	23	6377	19	2722	50	3693	22	3926	40	2500	40	3844	40	3.1	26	4.4	39	4.5	9	3.5	44	3.3	27	7.7	34	4.4	26		
16	IC0479507	2800	40	1417	58	1212	71	1883	57	2193	49	2242	11	1958	50	6240	29	4667	1	2700	71	3333	61	3408	18	4070	20	3.0	34	5.8	13	2.5	67	3.7	13	4.2	9	15.0	3	5.7	4		
17	IC0403487	2675	49	1906	17	1543	29	3283	19	2296	43	814	64	2086	37	5662	58	3378	25	3470	32	3926	42	1903	55	3668	48	3.2	15	5.0	24	5.0	3	3.6	37	2.1	51	5.5	50	4.1	43		
18	EC0529794	2670	50	1706	35	1463	41	3583	13	2844	22	1394	39	2277	25	6150	36	2450	57	3334	42	4563	22	4539	3	4207	10	3.0	33	3.7	56	4.0	36	3.3	71	1.9	56	7.6	36	3.9	47		
19	IC0403742	2413	62	1811	26	1560	25	2183	51	1793	62	1800	22	1927	54	5281	67	2667	51	3625	26	4185	32	1428	69	3437	66	3.0	31	4.0	52	4.0	35	3.6	38	5.0	3	9.8	18	4.9	12		
20	IC0403816	2758	43	1956	11	1408	45	2567	42	2519	38	1400	38	2101	36	6128	38	3222	32	3224	46	5037	11	2708	32	4064	21	2.7	59	4.8	31	4.0	28	3.5	47	2.8	33	6.0	48	4.0	45		
21	IC0283925	3062	19	1833	23	1813	3	4367	4	2607	31	1439	36	2520	9	6657	7	2306	63	4131	3	4385	27	2819	31	4060	22	2.5	65	2.9	68	5.0	5	3.6	17	3.4	24	7.5	38	4.2	39		
22	IC0345126	2334	68	1939	14	1475	39	4250	6	2593	34	1964	18	2426	15	5957	48	3889	7	3403	37	4481	24	3014	25	4149	15	3.6	4	5.2	17	4.0	21	3.5	46	4.2	10	13.5	5	5.7	5		
23	IC0403505	2681	47	1488	55	1720	11	1913	54	2163	51	917	58	1814	65	6301	25	3639	15	3906	11	2815	10	2833	30	3899	35	2.9	45	3.0	67	4.0	38	3.4	62	1.8	59	3.6	59	3.1	62		
24	IC0479635	2880	29	1613	43	1498	32	2650	40	3185	15	2094	13	2320	24	5778	53	2961	40	3422	35	4370	28	3650	12	4036	25	2.9	46	4.7	33	3.5	51	3.4	59	4.3	8	9.4	24	4.7	18		
25	IC0413273	2361	67	1528	52	1559	26	1583	66	3733	6	1172	48	1989	49	5017	73	2433	58	3575	29	4222	30	2083	51	3466	63	3.0	30	3.1	66	4.5	14	3.6	23	1.8	57	7.1	41	3.9	52		
26	IC0479349	2584	53	2256	1	1491	36	4783	2	4948	3	2467	8	3088	1	6348	20	3833	10	3282	44	5941	4	2961	27	4473	5	3.0	36	4.1	48	2.0	73	3.6	36	5.4	1	10.2	13	4.7	15		
27	IC0480653	2143	73	1806	27	1752	9	2743	38	2385	41	2783	6	2269	28	5662	57	2944	42	4037	6	3926	39	4050	6	4124	18	3.3	13	6.4	6	5.0	1	3.2	72	3.6	18	11.1	11	5.4	8		
28	IC0403860	2841	35	1611	44	1249	66	3173	26	2148	53	1586	30	2101	34	5276	68	1822	71	2850	66	3970	37	3064	23	3396	69	3.3	9	5.8	12	2.5	66	3.6	33	3.2	30	9.9	17	4.7	17		
29	IC0403952	2442	59	1483	56	1607	21	2800	36	2252	47	600	67	1864	59	5453	65	3950	6	3699	21	3526	56	1856	57	3697	46	3.1	20	2.6	72	5.0	6	3.6	18	1.0	69	4.1	58	3.2	59		
30	IC0120235	2703	46	1589	46	1301	63	3650	12	2593	33	1783	23	2270	27	6233	30	3839	8	2987	63	4000	36	2514	39	3914	34	3.2	18	5.1	22	3.0	60	3.7	12	2.0	54	8.0	32	4.2	35		
31	IC0403440	2714	45	2200	2	1386	51	3167	28	3585	9	1881	20	2489	13	6085	41	1694	73	3183	53	4815	14	2558	38	3667	49	2.1	73	4.1	50	4.5	11	3.6	22	4.2	11	7.9	33	4.4	27		
32	IC0078225	2853	30	1367	62	1224	68	2433	47	2059	56	956	55	1815	64	6182	34	3711	11	2826	67	3852	45	1806	58	3675	47	3.0	32	4.1	47	2.5	70	3.6	35	3.5	21	8.0	30	4.1	40		
33	IC0283926	3241	11	1650	41	1937	2	4700	3	2844	21	1661	26	2672	2	6267	27	4378	2	4300	2	5630	6	3553	16	4825	1	2.7	60	2.8	70	4.0	40	3.7	7	3.3	26	8.0	31	4.1	41		
34	IC0479977	2789	41	1828	24	1495	34	3250	22	3007	18	2933	4	2550	6	6147	37	2506	56	3550	31	4074	34	3761	10	4007	30	3.5	5	5.1	21	4.0	24	3.6	43	2.4	42	16.0	2	5.8	3		
35	IC0345141	2667	51	1322	66	1558	27	4317	5	2785	24	1572	31	2370	18	6192	33	2856	46	3579	28	3556	55	2650	35	3766	44	3.4	6	4.9	27	3.5	49	3.5	50	1.2	67	11.6	9	4.7	19		
36	IC0403470	3244	10	1939	13	1382	53	1883	56	1800	61	1147	49	1899	57	6338	21	2617	53	3179	54	3630	51	2033	52	3559	53	2.2	72	4.1	49	4.0	34	3.6	27	2.1	50	4.3	56	3.4	58		
37	IC0403869	280																																									



S.no	Acc. No.	Grain yield (kg/ha)																Fodder yield (kg/ha)																No. of productive tillers															
		VIZA	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	INDIA (6)	Rank	VIZ	Rank	MAND	Rank	ATHI	Rank	NAND	Rank	SOLA	Rank	NDIA (6)	Rank	VIZ	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	NDIA (6)	Rank								
40	IC0479719	2842	34	1850	20	1629	18	2500	44	3615	8	2528	7	2494	12	6696	5	3539	20	3711	20	4407	26	4256	5	4522	3	3	1	29	6.7	4	3.5	44	3.6	40	5.1	2	9.4	21	5.2	10							
41	IC0345124	2817	36	1756	32	1488	37	3880	8	3837	5	1294	42	2512	11	6060	43	3678	14	3398	38	5711	5	3572	15	4484	4	2.9	41	4.2	45	4.0	33	3.5	49	3.4	23	11.6	8	4.9	11								
42	IC0403900	2390	66	1900	18	1352	58	3057	31	2163	52	839	62	1950	51	5560	63	2333	61	3101	57	3630	52	1522	64	3229	71	2.7	56	4.9	29	3.5	50	3.7	8	3.5	19	5.4	51	4.0	46								
43	IC0403859	2583	54	1994	8	1213	69	3403	15	3615	7	1294	43	2350	21	5750	54	1972	70	2753	70	4889	13	2417	45	3556	54	3.2	16	4.5	35	2.0	72	3.7	14	3.5	20	7.4	39	4.1	44								
44	IC0345123	2811	38	1817	25	1318	60	3300	18	1726	65	2436	9	2235	31	5645	59	3833	9	2961	64	3704	48	3575	14	3944	33	3.4	8	3.5	58	2.5	71	3.5	54	2.6	39	7.6	35	3.9	51								
45	IC0479445	3144	13	2089	5	1647	17	3200	24	3259	14	1864	21	2534	7	6581	10	2367	59	3768	17	4593	19	4797	2	4421	6	2.9	47	4.6	34	4.0	29	3.5	48	2.2	48	10.7	12	4.7	20								
46	IC0480408	3587	1	1356	65	1731	10	1567	67	2904	20	908	59	2009	46	6801	2	3322	29	3995	10	3407	58	2694	33	4044	24	2.5	66	3.9	54	5.0	4	3.6	16	1.4	64	2.3	67	3.1	64								
47	IC0479711	2455	58	1528	51	1479	38	3240	23	2696	27	1983	17	2230	32	5609	61	2078	68	3336	41	4681	16	2458	43	3632	50	3.1	27	5.2	19	4.0	22	3.9	1	2.6	38	9.5	20	4.7	16								
48	IC0479306	2962	27	1944	12	1666	15	2800	35	2267	46	839	61	2080	39	6581	11	3544	18	3825	14	4593	18	1922	54	4093	19	3.0	39	5.8	11	5.0	2	3.6	15	4.4	6	4.1	57	4.3	28								
49	IC0022180	3363	5	1239	72	1349	59	3050	32	2281	44	1639	28	2153	33	6547	12	3306	30	3075	58	3810	46	2583	36	3864	38	2.2	70	4.3	42	4.0	32	3.4	57	1.8	58	6.1	47	3.6	55								
50	IC0479623	2462	57	1272	70	1586	23	1283	68	2844	23	853	60	1717	69	6106	40	2806	47	3633	25	3111	63	1556	62	3442	65	2.9	43	5.0	25	4.0	25	3.4	60	1.4	65	6.5	46	3.9	49								
51	IC0479598	2582	55	2056	6	1675	14	2633	41	1764	63	2939	3	2275	26	6404	18	2933	43	3863	13	2911	68	3225	20	3867	37	2.8	50	5.2	20	4.0	23	3.3	70	4.1	12	17.6	1	6.2	1								
52	IC0479660	3058	20	1411	59	1758	8	3167	27	3319	13	1483	35	2366	19	6309	24	3061	37	4031	7	4407	25	2889	29	4139	17	3.1	22	6.3	8	4.0	17	3.7	5	4.6	4	11.2	10	5.5	7								
53	IC0479860	3104	16	1800	28	1251	65	2750	37	2637	30	3625	1	2528	8	6596	9	4178	4	2871	65	4667	17	4908	1	4644	2	4.2	1	6.5	5	3.5	45	3.6	41	4.4	7	14.4	4	6.1	2								
54	IC0403863	3394	3	1489	54	1441	43	3333	17	2637	29	1247	46	2257	30	6033	44	2778	49	3371	39	4593	20	3311	19	4017	29	3.1	19	3.3	62	4.0	37	3.4	58	3.1	31	8.9	26	4.3	29								
55	IC0547316	2408	63	1767	31	1212	70	2553	43	5689	1	636	66	2377	17	5179	70	3078	35	2778	69	7407	1	1711	59	4031	26	2.9	40	4.0	53	3.5	54	3.5	51	2.1	53	3.2	61	3.2	60								
56	IC0479644	2638	52	1356	64	1765	5	1617	63	1481	72	1656	27	1752	67	6450	17	3544	19	4018	9	3556	54	2583	37	4030	27	2.7	61	5.4	16	4.0	20	2.9	73	1.8	60	10.1	15	4.5	24								
57	IC0610531	3138	14	1578	47	1144	73	1200	69	1452	73	747	65	1543	72	6175	35	2106	66	2634	73	5259	9	1464	68	3528	57	2.3	69	4.2	46	3.0	61	3.4	66	0.9	70	1.8	70	2.6	73								
58	IC0120213	3046	21	1372	61	1401	47	3917	7	2548	35	2803	5	2514	10	6451	16	3122	34	3223	47	4074	35	3039	24	3982	31	2.2	71	4.5	37	3.5	52	3.7	9	3.0	32	8.8	27	4.3	32								
59	IC0610533	2773	42	1700	36	1763	6	867	71	2007	57	831	63	1657	70	5903	52	2806	48	4058	5	3333	60	1517	65	3523	58	2.6	64	4.5	36	4.0	30	3.6	26	0.9	71	2.3	68	3.0	68								
60	IC0403738	2843	32	1672	39	1650	16	3250	21	3496	11	1389	40	2383	16	6070	42	2572	54	3769	16	5037	10	2431	44	3976	32	2.7	58	4.3	44	4.5	10	3.6	21	1.2	66	9.4	23	4.3	30								
61	IC0403950	2746	44	1800	29	1224	67	2017	53	1585	68	1567	32	1823	62	5737	55	2333	62	2800	68	3467	57	3811	8	3630	51	3.3	12	4.0	51	3.0	62	3.6	30	3.2	28	8.6	29	4.3	31								
62	IC0426714	3115	15	2133	3	1497	33	2307	50	1511	70	481	71	1840	60	6717	4	2917	45	3425	34	3704	47	886	70	3530	56	3.0	37	2.8	69	4.0	39	3.8	2	0.2	73	2.1	69	2.7	71								
63	IC0326988	3387	4	2122	4	1368	55	1600	65	1985	58	1003	53	1911	55	6496	15	2944	41	3143	56	3111	65	1875	56	3514	62	2.5	67	3.5	59	3.0	63	3.6	31	1.6	62	3.4	60	2.9	69								
64	IC0403956	2843	33	1389	60	1592	22	3500	14	1704	66	983	54	2002	48	6109	39	3694	12	3731	19	3111	62	2139	50	3757	45	3.1	24	4.4	38	4.5	8	3.6	20	2.7	35	9.1	25	4.6	21								
65	IC0426728	3094	17	1283	69	1394	49	1783	59	2319	42	506	70	1730	68	5941	50	2922	44	3211	49	4222	31	811	71	3421	68	2.8	53	2.7	71	4.0	41	3.6	28	1.1	68	1.5	73	2.6	72								
66	IC0519825	2417	61	1572	49	1295	64	3267	20	2652	28	1147	50	2058	43	5980	47	2167	65	3005	61	3681	49	1556	63	3278	70	2.6	62	4.8	30	2.5	68	3.6	34	2.2	47	2.8	63	3.1	66								
67	IC0427920	2249	70	1028	73	1474	40	600	73	1867	60	542	69	1293	73	5140	71	3389	23	3414	36	4148	33	1483	67	3515	61	3.1	21	3.2	63	3.5	57	3.7	10	2.3	44	1.7	71	2.9	70								
68	IC0257896	3517	2	1461	57	1356	57	2383	48	2096	55	417	72	1872	58	5943	49	3333	28	3057	59	3037	67	492	73	3172	72	3.0	35	6.8	3	3.5	43	3.6	39	0.6	72	1.6	72	3.2	61								
69	IC0324333	2977	25	1917	15	1189	72	2933	33	1496	71	417	73	1821	63	6691	6	3044	38	2690	72	2252	72	586	72	3053	73	3.0	38	4.4	40	2.5	69	3.8	4	1.4	63	5.2	53	3.4	57								
70	DHF1 109-3 (C)	3011	23	1611	45	1456	42	2883	34	2756	26	2428	10	2357	20	6324	23	2200	64	3336	40	5333	8	3797	9	4198	11	3.1	28	5.9	10	4.0	18	3.6	24	2.2	46	6.8	44	4.3	33								
71	SIA 3156 (C)	2812	37	1261	71	1399	48	1750	60	2193	4																																						



S.no	Acc. No.	Panicle length														1000-Seed weight (g)													
		VIZ	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	NDIA (6)	Rank	VIZ	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	INDIA (6)	Rank
6	IC0403564	22.7	5	16.3	42	16.0	30	16.7	48	19.0	10	23.9	3	19.1	9	2.70	31	2.82	37	2.50	17	3.05	46	2.94	17	3.95	1	3.0	6
7	IC0480946	20.5	12	19.5	5	17.1	8	18.4	23	15.5	50	23.1	6	19.0	11	3.00	3	2.84	35	2.25	61	3.00	59	3.41	6	3.41	8	3.0	7
8	IC0022179	18.1	36	15.9	48	15.2	44	18.7	19	17.1	31	21.9	8	17.8	21	2.80	14	2.80	44	2.30	53	3.15	24	3.32	7	3.34	11	3.0	8
9	IC0479605	16.6	55	15.1	58	14.2	54	16.6	51	17.3	27	18.7	38	16.4	51	3.03	2	2.72	60	2.35	47	2.95	66	3.47	4	3.17	21	2.9	9
10	IC0479804	18.4	30	17.9	19	18.0	1	18.6	20	20.2	5	20.0	23	18.8	14	2.84	10	2.82	38	2.50	18	3.10	36	3.00	14	3.41	7	2.9	10
11	IC0480861	17.8	41	13.5	71	16.2	27	16.6	49	14.7	59	15.7	67	15.7	64	2.96	5	2.89	22	2.35	44	3.15	29	3.46	5	2.78	54	2.9	11
12	IC0403871	17.6	43	17.0	33	14.7	49	18.8	17	14.7	57	17.4	51	16.7	42	2.69	32	2.90	18	2.45	23	3.05	47	2.76	35	3.46	5	2.9	12
13	IC0403951	17.8	42	17.6	22	14.3	53	18.8	18	17.5	21	18.9	36	17.5	28	2.62	42	2.98	3	2.35	37	3.20	16	2.73	42	3.38	9	2.9	14
14	IC0404216	19.2	21	18.9	11	16.5	19	15.5	59	14.2	62	16.5	61	16.8	38	2.74	25	2.86	32	2.50	16	3.30	6	2.75	36	3.05	26	2.9	15
15	IC0403862	16.9	54	14.8	64	17.0	12	14.5	67	16.4	38	16.7	57	16.1	59	2.50	55	2.91	15	2.45	22	3.30	7	3.13	10	2.89	43	2.9	16
16	IC0479507	14.8	70	14.6	67	13.5	62	14.3	69	15.3	53	17.7	50	15.0	68	2.76	20	2.73	59	2.45	27	3.00	56	2.85	24	3.34	10	2.9	17
17	IC0403487	18.6	29	16.3	44	15.4	40	16.9	45	15.2	54	18.1	46	16.7	40	2.80	15	2.80	45	2.30	54	3.05	51	2.87	21	3.26	16	2.8	20
18	EC0529794	16.4	61	16.8	36	16.0	31	17.4	39	17.9	15	19.3	29	17.3	32	2.65	40	2.76	56	2.60	10	2.95	61	2.88	19	3.22	20	2.8	21
19	IC0403742	18.1	32	19.2	10	15.5	37	16.2	54	12.8	69	18.5	44	16.7	41	2.29	66	3.01	2	2.60	7	3.30	4	2.57	54	3.28	15	2.8	22
20	IC0403816	22.8	4	17.3	27	15.3	42	20.2	9	19.6	8	21.4	11	19.4	4	2.74	22	2.98	5	2.35	41	3.15	28	2.80	30	3.02	30	2.8	23
21	IC0283925	17.8	40	15.1	59	16.4	24	15.4	60	15.1	55	17.7	49	16.3	54	2.77	18	2.81	42	2.65	6	3.30	3	2.86	22	2.64	60	2.8	24
22	IC0345126	17.0	52	16.7	38	16.6	15	16.7	47	13.4	67	17.1	56	16.2	55	2.82	12	2.87	26	2.55	12	3.20	14	2.78	32	2.80	53	2.8	25
23	IC0403505	21.2	7	15.3	56	16.4	26	20.5	7	21.2	4	21.4	10	19.3	5	2.54	51	2.89	23	2.85	1	3.10	32	2.63	50	3.01	34	2.8	26
24	IC0479635	16.5	59	17.5	24	15.7	33	15.2	64	15.7	47	19.2	31	16.6	45	2.83	11	2.73	58	2.45	26	3.00	55	3.19	8	2.80	52	2.8	27
25	IC0413273	20.2	16	18.3	16	16.8	14	18.3	25	19.8	7	20.0	24	18.9	13	2.72	27	2.91	17	2.60	8	3.05	45	2.84	27	2.81	51	2.8	28
26	IC0479349	16.5	58	16.2	47	15.7	34	15.3	63	16.8	35	19.1	32	16.6	46	2.90	7	2.70	63	2.45	28	3.15	22	3.04	11	2.66	58	2.8	29
27	IC0480653	18.0	38	15.6	51	16.5	22	18.4	24	17.2	29	18.4	45	17.3	31	2.74	23	2.88	25	2.35	45	3.10	43	2.71	46	3.10	23	2.8	30
28	IC0403860	19.1	22	16.2	45	12.4	69	17.5	38	15.7	48	19.1	33	16.6	43	2.77	17	2.68	66	2.05	73	2.85	70	2.93	18	3.54	4	2.8	31
29	IC0403952	17.2	45	17.2	29	17.7	3	18.0	31	18.5	12	20.5	16	18.2	18	2.66	38	2.89	21	2.60	9	3.00	53	2.73	43	2.94	39	2.8	32
30	IC0120235	24.3	2	19.9	3	12.3	70	20.6	6	17.4	22	23.9	4	19.7	3	2.57	48	2.77	53	2.20	67	3.20	19	2.81	29	3.23	18	2.8	33
31	IC0403440	19.7	20	13.5	70	15.6	35	14.8	66	15.6	49	16.7	58	16.0	63	2.68	33	2.95	7	2.30	49	3.20	17	2.73	40	2.86	46	2.8	34
32	IC0078225	16.6	56	15.0	62	14.7	48	19.0	15	16.0	45	14.8	70	16.0	62	2.90	8	2.81	41	2.10	70	2.90	69	2.99	15	3.02	32	2.8	35
33	IC0283926	17.9	39	16.4	41	16.8	13	13.8	70	13.6	65	17.9	48	16.1	58	2.59	46	2.69	65	2.75	4	3.10	33	2.74	39	2.84	47	2.8	36
34	IC0479977	19.9	19	19.3	8	14.3	52	13.0	73	15.5	51	16.2	63	16.3	52	2.74	24	2.86	28	2.25	58	3.15	30	2.86	23	2.83	48	2.8	37
35	IC0345141	16.6	57	15.6	52	15.2	43	17.3	41	16.8	34	19.0	34	16.7	39	2.71	29	2.80	46	2.20	65	2.80	72	2.84	26	3.32	13	2.8	38
36	IC0403470	24.9	1	15.3	55	14.0	57	16.4	53	16.1	41	17.9	47	17.4	29	2.60	45	2.72	61	2.30	55	3.15	25	2.83	28	3.06	24	2.8	40
37	IC0403869	14.8	69	14.6	66	13.7	61	14.3	68	14.0	63	15.4	68	14.5	73	2.57	49	2.86	30	2.25	59	3.15	26	2.77	34	3.05	25	2.8	41
38	IC0283715	19.1	24	15.9	49	15.2	45	16.6	50	14.9	56	16.3	62	16.3	53	2.78	16	2.81	39	2.40	31	3.10	37	2.74	38	2.82	49	2.8	42
39	IC0480959	17.2	46	12.8	72	16.1	29	17.3	40	17.3	26	13.4	72	15.7	65	2.66	37	2.76	55	2.40	36	3.10	38	2.72	44	3.00	35	2.8	43
40	IC0479719	18.7	28	15.0	61	15.8	32	13.1	71	14.0	64	17.1	54	15.6	66	2.72	28	2.90	20	2.45	24	2.95	63	2.88	20	2.74	55	2.8	44
41	IC0345124	15.7	66	14.2	68	17.6	5	16.5	52	15.8	46	17.2	53	16.2	56	2.70	30	2.92	11	2.35	42	2.95	64	2.85	25	2.82	50	2.8	45
42	IC0403900	15.5	68	14.1	69	15.4	39	18.6	22	16.7	36	18.6	41	16.5	50	2.58	47	2.90	19	2.35	38	3.05	49	2.65	49	3.03	29	2.8	46
43	IC0403859	18.8	25	15.0	60	13.3	64	16.9	46	14.5	61	15.1	69	15.6	67	2.81	13	2.64	73	2.10	72	3.30	9	3.14	9	2.55	61	2.8	47
44	IC0345123	16.1	63	15.5	54	13.0	66	15.4	61	16.1	42	20.9	14	16.2	57	2.56	50	2.87	27	2.25	57	3.05	52	2.75	37	3.03	28	2.8	48
45	IC0479445	17.2	48	17.6	23	17.5	6	21.4	3	21.2	3	23.9	2	19.8	2	2.51	53	2.68	68	2.45	29	3.35	2	2.56	55	2.95	38	2.7	49
46	IC0480408	22.6	6	22.7	1	17.1	7	23.0	1	16.0	43	23.7	5	20.9	1	2.60	44	2.65	69	2.35	40	3.05	50	2.59	52	3.22			



S.no	Acc. No.	Panicle length														1000-Seed weight (g)													
		VIZ	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	INDIA (6)	Rank	VIZ	Rank	MAND	Rank	ATHI	Rank	HAGA	Rank	NAND	Rank	SOLA	Rank	INDIA (6)	Rank
56	IC0479644	18.2	31	17.2	4	16.5	21	21.0	5	22.4	1	20.2	18	19.2	6	2.61	43	2.68	67	2.50	20	3.15	27	2.33	63	2.71	56	2.7	60
57	IC0610531	20.7	10	19.5	4	10.8	72	17.6	36	17.2	30	20.4	17	17.7	22	2.65	39	2.74	57	2.10	71	3.40	1	2.71	45	2.13	72	2.6	61
58	IC0120213	17.0	53	20.7	2	13.8	59	19.7	11	16.6	37	19.7	27	17.9	20	2.32	64	2.65	72	2.25	64	3.20	18	2.44	60	2.70	57	2.6	62
59	IC0610533	20.3	15	18.3	15	16.5	20	20.4	8	18.1	14	21.2	12	19.1	8	2.18	70	2.86	29	2.75	3	3.20	13	2.13	68	2.42	66	2.6	63
60	IC0403738	20.9	9	19.4	6	16.5	18	18.0	32	18.2	13	21.5	9	19.1	10	2.39	61	2.79	47	2.80	2	2.95	60	2.32	65	2.20	71	2.6	64
61	IC0403950	17.6	44	16.2	46	12.9	68	19.7	12	16.0	44	18.7	39	16.8	37	2.45	58	2.77	54	2.15	68	3.20	20	2.47	59	2.41	67	2.6	65
62	IC0426714	15.8	65	16.7	39	14.7	47	15.8	56	9.6	73	15.8	65	14.7	71	2.67	34	2.81	40	2.30	52	3.00	57	2.32	64	2.31	68	2.6	66
63	IC0326988	16.2	62	15.5	53	12.9	67	17.0	44	17.6	20	19.9	26	16.5	48	2.36	63	2.98	4	2.50	14	3.10	35	2.00	70	2.45	64	2.6	67
64	IC0403956	14.6	71	17.1	32	17.7	4	21.0	4	17.2	28	15.7	66	17.2	34	2.15	71	2.94	10	2.50	15	3.30	5	2.07	69	2.30	69	2.5	68
65	IC0426728	23.3	3	16.8	35	13.8	58	18.3	29	11.8	72	17.1	55	16.8	36	2.22	68	2.65	70	2.40	33	3.10	42	2.28	66	2.43	65	2.5	69
66	IC0519825	21.2	8	12.0	73	13.4	63	15.2	65	12.9	68	14.8	71	14.9	69	2.04	73	3.09	1	2.25	56	3.10	44	2.14	67	2.45	63	2.5	70
67	IC0427920	20.0	17	19.3	7	14.1	56	23.0	2	18.6	11	18.9	35	19.0	12	2.47	57	2.81	43	2.40	34	3.15	23	1.90	72	2.27	70	2.5	71
68	IC0257896	17.1	50	17.0	34	14.4	51	17.0	43	17.6	19	16.1	64	16.5	47	2.12	72	2.91	16	2.30	51	2.80	71	1.93	71	2.66	59	2.5	72
69	IC0324333	15.6	67	17.5	25	11.8	71	15.8	57	17.3	25	11.1	73	14.9	70	2.20	69	2.88	24	2.10	69	2.70	73	1.13	73	1.39	73	2.1	73
70	DHf1 109-3 (C)	20.4	14	15.6	50	9.3	73	18.3	26	16.2	40	20.1	22	16.6	44	2.75	21	2.91	14	2.35	43	3.25	12	2.97	16	3.04	27	2.9	13
71	SIA 3156 (C)	18.1	33	18.4	14	13.8	60	17.3	42	17.4	24	18.5	42	17.2	33	2.66	36	2.70	64	2.25	62	3.15	31	3.01	12	3.33	12	2.9	18
72	SIA 326 (C)	18.8	27	15.3	57	16.5	23	20.1	10	17.8	16	17.2	52	17.6	27	2.72	26	2.83	36	2.55	13	3.10	34	2.59	51	3.31	14	2.8	19
73	Suryanandi (C)	14.6	73	16.5	40	17.0	11	16.1	55	15.4	52	16.7	59	16.0	61	2.41	59	2.86	33	2.40	30	3.25	10	2.50	57	3.25	17	2.8	39
	Mean	18.3		16.8		15.2		17.5		16.5		18.8		17.2		2.6		2.8		2.4		3.1		2.7		2.9		2.8	
	CD (5%)	0.52		0.44		0.40		0.49		0.54		0.58		0.32		0.05		0.02		0.04		0.03		0.10		0.10		0.04	
	CD (1%)	0.69		0.57		0.52		0.65		0.71		0.77		0.42		0.07		0.03		0.05		0.04		0.14		0.12		0.05	
	CV (%)	12.4		11.4		11.4		12.3		14.3		13.6		8.1		8.6		3.5		7.0		4.4		16.5		14.1		5.8	

Table 27: Little millet germplasm 36 acc. (196 acc.) characterization and ranking for days to 50% flowering, number of productive tillers, plant height, grain yield and fodder yield

S.No	Acc. No/ Line	Days to 50% flowering								Number of productive tillers								Plant height (cm)								Grain yield (kg/ha)								Fodder yield (kg/ha)							
		ATHI	Rank	VUJA	Rank	WAGH	Rank	INDIA (3)	Rank	ATHI	Rank	VUJA	Rank	WAGH	Rank	INDIA (3)	Rank	ATHI	Rank	VUJA	Rank	WAGH	Rank	INDIA (3)	Rank	ATHI	Rank	VUJA	Rank	WAGH	Rank	INDIA (3)	Rank	ATHI	Rank	VUJA	Rank	WAGH	Rank	INDIA (3)	Rank
1	E264	48	17	65	27	99	34	71	32	8.0	3	9.8	26	3.8	31	7.2	19	100	12	114	18	184	9	132.7	8	2320	5	1188	25	1111	25	1539.7	25	5457	5	6050	21	15556	2	9020.9	2
2	EN03	56	36	74	36	82	23	71	30	7.0	12	9.8	27	6.2	2	7.7	8	105	5	139	1	159	18	134.6	5	2089	18	1759	4	944	32	1597.5	20	4963	18	9254	1	11111	9	8442.7	4
3	EN05	43	5	49	8	42	3	45	5	3.0	36	9.2	32	5.0	13	5.7	35	74	35	128	7	129	29	110.1	30	1414	35	1288	16	1044	29	1248.8	34	3122	36	6024	22	2222	33	3789.3	34
4	EN07	50	25	67	30	99	35	72	36	7.0	13	8.8	34	4.8	19	6.9	26	90	22	109	24	190	8	129.9	11	1922	30	1697	6	3689	2	2436.0	1	4581	28	5500	24	12778	6	7619.6	9
5	EN09	42	2	48	5	43	7	44	4	4.0	31	8.8	35	4.6	22	5.8	34	79	32	126	9	129	28	111.4	29	1408	36	1092	31	944	33	1148.1	36	3182	35	5325	25	2778	30	3761.7	35
6	EN101	47	14	64	26	53	17	55	20	7.0	10	10.7	16	5.2	8	7.6	10	100	11	111	22	154	20	121.7	22	2088	19	1105	30	1111	27	1434.7	31	4912	20	6548	15	5556	21	5671.7	23
7	EN116	49	22	62	24	51	16	54	19	7.0	9	10.5	20	4.4	25	7.3	16	104	8	101	33	149	22	118.3	25	2096	17	1222	21	1333	20	1550.4	24	4934	19	6635	13	4444	25	5337.8	24
8	EN14	53	33	49	13	43	8	48	9	7.0	7	11.0	13	4.0	29	7.3	14	103	9	125	10	144	24	123.8	17	1973	28	1089	32	1000	31	1354.0	33	4573	29	4147	32	5000	24	4573.3	31
9	EN27	43	6	62	21	49	14	51	14	6.0	19	9.3	30	4.8	16	6.7	29	86	28	114	19	143	25	114.2	27	2200	14	1134	29	3889	1	2407.6	2	5208	14	7421	10	2222	31	4950.3	26
10	EN39	43	7	58	17	58	20	53	17	5.0	29	9.0	33	4.8	18	6.3	31	90	23	122	13	154	19	122.2	21	2304	7	1316	15	889	35	1503.0	27	5452	7	6329	17	2222	32	4667.8	30
11	EN42	45	11	48	6	54	18	49	11	5.0	28	11.5	8	4.4	23	7.0	24	89	27	117	14	139	26	114.8	26	2291	9	1016	36	1444	19	1583.8	23	5349	10	8730	5	5444	23	6507.8	17
12	EN45	45	12	49	9	42	4	45	6	6.0	16	10.0	24	4.8	15	6.9	25	91	18	97	34	100	33	96.1	34	2323	4	1138	28	1667	16	1709.2	17	5427	8	8817	3	3889	29	6044.4	20
13	EN50	54	34	48	7	44	9	49	10	8.0	1	10.0	22	4.6	21	7.5	12	105	6	135	4	133	27	124.4	14	2414	1	1270	18	1556	17	1746.5	12	5693	1	8730	4	7778	14	7400.3	10
14	EN64	50	26	62	25	49	15	54	18	8.0	2	10.0	23	5.0	12	7.7	9	98	14	112	20	160	17	123.2	18	2263	11	1403	11	1278	23	1647.9	18	5331	11	7988	8	7222	17	6847.1	12
15	EN82	49	23	60	19	46	11	52	15	6.0	20	10.7	17	4.6	20	7.1	21	86	29	117	15	153	21	118.4	24	2193	15	1323	14	2778	6	2097.9	4	5162	16	4103	34	5556	22	4940.2	27
16	ER103	52	30	57	15	48	12	52	16	7.0	8	10.8	15	5.4	5	7.7	6	105	7	114	17	144	23	121.0	23	2330	3	1381	13	1667	12	1792.6	10	5522	4	8817	2	7222	16	7187.2	11
17	ER47	42	3	54	14	55	19	50	12	6.0	17	9.3	29	13.4	1	9.6	1	91	19	123	12	96	34	103.2	32	2017	23	1272	17	1500	18	1596.3	21	4748	24	8032	7	2083	35	4954.3	25
18	ER57	48	18	47	4	43	6	46	7	5.0	27	10.5	21	5.4	6	7.0	23	89	26	107	27	127	30	107.8	31	1986	27	1018	35	1778	9	1593.9	22	4661	25	6329	16	7222	19	6070.8	18
19	ER66	51	28	49	11	44	10	48	8	7.0	6	11.2	11	5.0	10	7.7	7	107	3	105	29	123	31	111.7	28	2214	12	1179	26	1111	26	1501.4	28	5263	13	4714	27	4444	27	4807.2	38
20	EUK08	48	19	41	2	41	2	43	2	5.0	26	10.0	25	5.6	4	6.9	27	92	17	103	31	92	35	95.5	35	1988	26	1046	34	556	36	1196.5	35	5612	2	3667	36	2194	34	3824.4	23
21	EUK14	49	24	40	1	36	1	42	1	6.0	15	11.2	12	5.6	3	7.6	11	90	24	101	32	91	36	94.0	36	1934	29	1151	27	3222	4	2102.4	3	4541	30	4059	35	4444	28	4348.3	32
22	IC0328708	44	9	62	22	96	32	67	28	4.0	33	11.3	10	3.0	35	6.1	33	86	30	108	26	174	11	122.3	20	1655	31	1196	24	1278	24	1376.3	32	3853	31	6600	14	7222	18	5891.7	22
23	IC0404844	55	35	57	16	100	36	71	33	6.0	25	12.2	5	2.8	36	7.0	22	110	1	96	35	191	7	132.6	9	2014	24	1238	20	2778	7	2009.9	6	4638	26	5186	26	13889	4	7904.2	7



S.No	Acc. No./ Line	Days to 50% flowering								Number of productive tillers								Plant height (cm)								Grain yield (kg/ha)								Fodder yield (kg/ha)							
		ATHI	Rank	VJJA	Rank	WAGH	Rank	INDIA (3)	Rank	ATHI	Rank	VJJA	Rank	WAGH	Rank	INDIA (3)	Rank	ATHI	Rank	VJJA	Rank	WAGH	Rank	INDIA (3)	Rank	ATHI	Rank	VJJA	Rank	WAGH	Rank	INDIA (3)	Rank	ATHI	Rank	VJJA	Rank	WAGH	Rank	INDIA (3)	Rank
24	IC0404846	51	29	49	12	96	31	65	25	6.0	23	10.7	18	5.0	11	7.2	18	92	16	138	2	170	12	133.5	6	2284	10	1218	23	1667	15	1722.9	16	5316	12	4540	30	8333	13	6063.0	19
25	IC0404849	45	13	49	10	91	25	62	22	6.0	21	9.3	31	4.8	17	6.7	30	91	21	108	25	202	2	133.5	7	2292	8	1218	22	1667	14	1725.6	15	5408	9	4636	28	18333	1	9459.0	1
26	IC0404985	48	20	71	34	93	28	71	31	6.0	24	12.3	4	3.6	34	7.3	15	89	25	104	30	197	3	130.0	10	2078	21	1485	8	1667	11	1743.2	13	4822	23	6129	20	12222	7	7724.3	8
27	IC0404997	50	27	69	33	94	29	71	34	4.0	35	10.7	19	3.8	30	6.2	32	83	31	95	36	194	5	123.9	16	1991	25	1895	1	2022	8	1969.4	8	4619	27	5500	23	10000	11	6706.3	14
28	IC0483101	52	31	67	31	96	33	72	35	8.0	4	9.3	28	4.4	26	7.2	17	109	2	128	6	170	14	135.5	4	2379	2	1681	7	1278	22	1779.3	11	5577	3	4278	31	13889	5	7914.5	6
29	IC0622048	43	8	69	32	95	30	69	29	4.0	34	7.0	36	3.8	32	4.9	36	79	33	110	23	180	10	123.0	19	1565	33	1892	2	2778	5	2078.3	5	3657	32	7421	11	13889	3	8322.1	5
30	IC0628931	42	4	46	3	43	5	44	3	4.0	30	11.5	9	5.0	9	6.8	28	76	34	124	11	102	32	100.3	33	1507	34	1074	33	3333	3	1971.4	7	3416	34	4627	29	1694	36	3245.8	36
31	IC0628937	47	15	62	23	93	26	67	27	7.0	11	11.7	7	4.8	14	7.8	5	102	10	133	5	203	1	145.8	1	2306	6	1253	19	1667	13	1741.9	14	5453	6	8381	6	11667	8	8500.2	3
32	IC0628941	48	21	71	35	74	22	64	23	6.0	22	11.0	14	4.4	24	7.1	20	99	13	127	8	192	6	139.4	2	2202	13	1727	5	1722	10	1883.7	9	5188	15	4103	33	10556	10	6615.6	16
33	SEJ64	40	1	67	29	93	27	67	26	4.0	32	15.0	1	5.2	7	8.1	3	73	36	135	3	169	15	125.8	12	1607	32	1799	3	1000	30	1468.7	29	3591	33	6207	19	4444	26	4747.5	29
34	BL6 (C)	45	10	60	18	49	13	51	13	6.0	18	11.9	6	4.3	28	7.4	13	91	20	116	16	170	13	125.7	13	2068	22	1439	9	1076	28	1527.8	26	4842	21	7290	12	5556	20	5895.6	21
35	CLMV1 (C)	47	16	66	28	62	21	58	21	6.8	14	13.3	2	4.4	27	8.1	2	96	15	111	21	166	16	124.3	15	2144	16	1391	12	1319	21	1618.3	19	4999	17	7835	9	7639	15	6824.4	13
36	OLM203 (C)	53	32	61	20	82	24	65	24	7.3	5	12.5	3	3.7	33	7.9	4	106	4	107	28	194	4	135.7	3	2083	20	1422	10	889	34	1464.9	30	4824	22	6210	18	8889	12	6641.1	15
	Mean	47.7		57.7		66.1		57.2		6.0		10.6		4.8		7.1		93.2		115.5		154.6		121.1		2054.0		1333.8		1684.8		1690.8		4830.4		6282		7489		6201	
	CD (5%)	1.32		2.98		7.53		3.32		0.43		0.47		0.53		0.26		3.31		3.98		10.58		4.12		89.0		81.6		271.5		97.0		227.5		529.7		1413		522	
	CD (1%)	1.73		3.91		9.90		4.36		0.57		0.62		0.69		0.34		4.35		5.23		13.91		5.41		116.9		107.2		356.8		127.5		299.0		696.1		1856		687	
	CV (%)	8.5		15.8		34.9		17.8		22.2		13.6		33.2		11.2		10.9		10.5		21.0		10.4		13.3		18.7		49.3		17.6		14.4		25.8		57.7		25.8	

Note: Trials at Kolhapur and Hagari centres failed due to weather vagaries. Data from Bengaluru and Dindori centres were not presented due to many missing values.

Table 28: Sorghum germplasm 23 acc. (115 acc.) evaluation and ranking for days to 50% flowering and ear head length

S.No	Acc.No	Days to 50% flowering												Ear head length (cm)											
		AKOL	Rank	COIM	Rank	UDAI	Rank	DHAR	Rank	INDO	Rank	INDIA (5)	Rank	AKOL	Rank	COIM	Rank	UDAI	Rank	DHAR	Rank	INDO	Rank	INDIA (5)	Rank
1	E1	84.0	15.0	58.0	12.0	80.0	18.0	78.5	14.0	73.0	14.0	74.7	14.0	18.0	20.0	12.0	22.0	16.0	20.0	18.5	16.0	20.0	19.0	16.9	19.0
2	E159	80.0	9.0	54.0	4.0	61.0	4.0	76.0	9.0	74.0	15.0	69.0	5.0	14.5	22.0	21.6	9.0	13.0	21.0	17.0	17.0	18.0	21.0	16.8	20.0
3	E163	70.0	3.0	59.0	13.0	67.0	11.0	76.0	10.0	82.0	23.0	70.8	8.0	8.5	24.0	12.6	21.0	9.5	24.0	9.5	24.0	12.0	23.0	10.4	23.0
4	E220	81.0	11.0	68.0	21.0	65.0	10.0	81.5	17.0	66.0	1.0	72.3	12.0	24.5	10.0	24.2	6.0	22.0	10.0	24.5	7.0	31.0	3.0	25.2	4.0
5	EB1	114.0	22.0	60.0	16.0	91.0	20.0	90.0	24.0	92.0	25.0	89.4	24.0	29.0	3.0	25.2	3.0	20.0	12.0	18.5	15.0	26.0	9.0	23.7	7.0
6	EB2	116.0	23.0	63.0	17.0	92.0	22.0	88.0	23.0	84.0	24.0	88.6	23.0	26.5	8.0	22.8	8.0	32.0	2.0	26.0	5.0	30.0	4.0	27.5	2.0
7	EG10	76.5	6.0	58.0	10.0	76.0	16.0	78.5	13.0	73.0	13.0	72.4	13.0	26.0	9.0	21.0	10.0	20.0	13.0	16.5	18.0	27.0	6.0	22.1	12.0
8	EG24	79.0	8.0	53.0	2.0	73.0	14.0	76.0	11.0	74.0	16.0	71.0	10.0	7.5	25.0	7.8	25.0	9.0	25.0	9.0	25.0	9.0	25.0	8.5	25.0
9	EJ42	83.0	13.0	56.0	7.0	73.0	15.0	69.5	6.0	73.0	12.0	70.9	9.0	18.5	18.0	15.4	16.0	20.0	14.0	19.0	13.0	20.0	18.0	18.6	16.0
10	EJN26	106.5	20.0	60.0	15.0	78.0	17.0	83.0	18.0	77.0	22.0	80.9	20.0	10.0	23.0	11.4	24.0	10.0	22.0	9.5	23.0	11.0	24.0	10.4	24.0
11	EJN36	123.5	25.0	66.0	18.0	65.0	9.0	83.5	19.0	71.0	8.0	81.8	21.0	24.5	11.0	24.4	4.0	17.0	17.0	22.5	10.0	27.0	5.0	23.1	10.0
12	EJN73	86.5	16.0	71.0	23.0	63.0	7.0	84.0	20.0	72.0	10.0	75.3	16.0	30.0	2.0	15.4	15.0	27.0	4.0	25.5	6.0	20.0	16.0	23.6	8.0
13	EUK28	111.0	21.0	67.0	19.0	89.0	19.0	76.5	12.0	72.0	9.0	83.1	22.0	34.5	1.0	30.6	1.0	44.0	1.0	40.5	1.0	46.0	1.0	39.1	1.0
14	GGUB39	75.5	4.0	50.0	1.0	96.0	24.0	61.0	3.0	75.0	19.0	71.5	11.0	26.5	7.0	15.8	14.0	16.0	19.0	26.5	4.0	21.0	14.0	21.2	14.0
15	GGUB50	119.0	24.0	73.0	24.0	103.0	25.0	90.5	25.0	74.0	17.0	91.9	25.0	23.0	13.0	14.0	18.0	9.5	23.0	10.0	22.0	24.0	12.0	16.1	22.0
16	GGUB51	91.0	18.0	55.0	6.0	93.0	23.0	79.5	15.0	70.0	6.0	77.7	18.0	21.0	16.0	24.0	7.0	19.5	15.0	19.0	14.0	24.0	11.0	21.5	13.0
17	GGUB54	76.0	5.0	54.0	3.0	58.0	2.0	75.5	8.0	69.0	4.0	66.5	3.0	19.5	17.0	13.4	19.0	19.0	16.0	16.0	20.0	21.0	15.0	17.8	18.0
18	GGUB55	66.5	2.0	58.0	9.0	62.0	5.0	57.5	2.0	73.0	11.0	63.4	2.0	18.0	19.0	11.6	23.0	24.0	7.0	19.5	12.0	20.0	17.0	18.6	15.0
19	GGUB57	82.5	12.0	60.0	14.0	70.0	13.0	88.0	22.0	75.0	20.0	75.1	15.0	22.5	15.0	18.8	11.0	29.0	3.0	28.0	2.0	31.0	2.0	25.9	3.0
20	IC0409424	80.0	10.0	55.0	5.0	64.0	8.0	81.0	16.0	69.0	5.0	69.8	7.0	16.0	21.0	15.4	17.0	16.5	18.0	15.5	21.0	19.0	20.0	16.5	21.0
21	IC0409485	83.0	14.0	58.0	11.0	62.0	6.0	64.5	4.0	68.0	2.0	67.1	4.0	27.5	4.0	24.2	5.0	24.5	5.0	20.5	11.0	23.0	13.0	23.9	6.0
22	IC0409487	77.5	7.0	68.0	20.0	60.0	3.0	74.5	7.0	69.0	3.0	69.8	6.0	26.5	6.0	13.0	20.0	23.5	8.0	27.0	3.0	26.0	7.0	23.2	9.0
23	IS6198	94.5	19.0	78.0	25.0	91.0	21.0	56.5	1.0	75.0	18.0	79.0	19.0	23.5	12.0	16.4	13.0	21.0	11.0	16.0	19.0	16.0	22.0	18.6	17.0
	CSV17	66.4	1.0	56.8	8.0	51.0	1.0	66.4	5.0	70.3	7.0	62.2	1.0	22.9	14.0	18.0	12.0	24.3	6.0	24.0	9.0	25.8	10.0	23.0	11.0
	CSV27	88.3	17.0	70.8	22.0	69.0	12.0	84.0	21.0	75.8	21.0	77.6	17.0	26.8	5.0	25.4	2.0	23.3	9.0	24.4	8.0	26.0	8.0	25.1	5.0
	Mean	88.4		61.2		74.1		76.8		73.8		74.9		21.8		18.2		20.4		20.1		23.0		20.7	
	StDev	16.4		7.0		13.8		9.4		5.4		7.6		6.6		5.7		7.7		7.0		7.4		6.2	



S.No	Acc.No	Days to 50% flowering												Ear head length (cm)											
		AKOL	Rank	COIM	Rank	UDAI	Rank	DHAR	Rank	INDO	Rank	INDIA (5)	Rank	AKOL	Rank	COIM	Rank	UDAI	Rank	DHAR	Rank	INDO	Rank	INDIA (5)	Rank
	Count	25.0		25.0		25.0		25.0		25.0		25.0		25.0		25.0		25.0		25.0		25.0		25.0	
	alpha	0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1	
	alpha	0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
	CD (5%)	6.4		2.8		5.4		3.7		2.1		3.0		2.6		2.2		3.0		2.7		2.9		2.4	
	CD (1%)	8.5		3.6		7.1		4.8		2.8		3.9		3.4		2.9		4.0		3.6		3.8		3.2	

Table 29: Sorghum germplasm 23 acc. (115 acc.) evaluation and ranking for plant height and grain yield

S.No	Acc.No	Plant height (cm)												Grain yield (kg/ha)											
		AKOL	Rank	COIM	Rank	UDAI	Rank	INDO	Rank	INDIA (5)	Rank	AKOL	Rank	COIM	Rank	UDAI	Rank	DHAR	Rank	INDO	Rank	INDIA (5)	Rank	AKOL	Rank
1	E1	328.0	5.0	135.0	21.0	360.0	5.0	290.0	5.0	278.3	5.0	1229.5	19.0	2100.0	17.0	995.8	19.0	4846.9	9.0	1903.6	25.0	2215.2	25.0		
2	E159	281.5	10.0	224.2	3.0	215.0	19.0	220.0	20.0	235.2	15.0	1425.0	16.0	4389.0	1.0	616.7	22.0	3098.0	16.0	3172.6	22.0	2540.3	21.0		
3	E163	236.0	19.0	145.6	20.0	230.0	18.0	250.0	12.0	215.4	19.0	1830.3	11.0	4050.0	5.0	925.0	20.0	3098.0	15.0	4441.6	18.0	2869.0	17.0		
4	E220	254.0	16.0	175.4	11.0	275.0	10.0	220.0	19.0	231.1	17.0	1559.0	14.0	3589.0	10.0	2670.8	6.0	5546.5	5.0	14276.7	1.0	5528.4	3.0		
5	EB1	342.0	4.0	196.4	7.0	460.0	1.0	310.0	2.0	327.1	2.0	1483.4	15.0	3522.0	11.0	404.2	24.0	3198.0	14.0	6345.2	9.0	2990.5	15.0		
6	EB2	377.0	1.0	207.8	6.0	425.0	2.0	330.0	1.0	335.0	1.0	1786.8	12.0	1555.5	21.0	1487.5	15.0	4996.9	8.0	5393.4	13.0	3044.0	12.0		
7	EG10	290.5	8.0	222.0	4.0	360.0	4.0	300.0	4.0	293.1	4.0	915.2	22.0	1166.7	25.0	2816.7	4.0	1798.9	25.0	5234.8	15.0	2386.4	22.0		
8	EG24	342.5	3.0	152.0	19.0	310.0	6.0	280.0	9.0	271.1	6.0	684.9	24.0	3111.1	13.0	1033.3	18.0	3897.5	12.0	2696.7	24.0	2284.7	24.0		
9	EJ42	355.0	2.0	152.4	18.0	370.0	3.0	307.0	3.0	296.1	3.0	1301.1	18.0	1555.5	22.0	1662.5	13.0	4097.4	10.0	4600.3	17.0	2643.4	20.0		
10	EJN26	236.5	18.0	170.2	12.0	270.0	11.0	290.0	7.0	241.7	10.0	557.6	25.0	4222.0	4.0	616.7	23.0	2648.3	22.0	7138.4	7.0	3036.6	13.0		
11	EJN36	285.5	9.0	234.0	1.0	240.0	15.0	290.0	8.0	262.4	8.0	2818.7	6.0	1944.4	19.0	654.2	21.0	2948.1	18.0	3331.2	20.0	2339.3	23.0		
12	EJN73	187.5	21.0	169.0	14.0	185.0	24.0	165.0	23.0	176.6	22.0	1734.4	13.0	4224.0	3.0	2237.5	7.0	5246.7	6.0	10311.0	3.0	4750.7	5.0		
13	EUK28	247.0	17.0	230.0	2.0	290.0	7.0	290.0	6.0	264.3	7.0	5689.8	3.0	3888.9	7.0	2708.3	5.0	8344.7	1.0	8090.1	6.0	5744.4	2.0		
14	GGUB39	163.5	22.0	115.2	23.0	200.0	20.0	230.0	16.0	177.2	21.0	2941.3	5.0	1166.7	24.0	1900.0	12.0	2698.3	21.0	6027.9	10.0	2946.8	16.0		
15	GGUB50	291.5	7.0	177.0	10.0	280.0	9.0	200.0	22.0	237.1	12.0	6750.0	2.0	1944.4	18.0	1183.3	16.0	2098.7	23.0	5234.8	14.0	3442.2	8.0		
16	GGUB51	318.0	6.0	168.4	15.0	255.0	13.0	208.0	21.0	237.4	11.0	817.1	23.0	3118.0	12.0	1050.0	17.0	2848.2	19.0	9041.9	5.0	3375.0	11.0		
17	GGUB54	276.5	11.0	157.2	17.0	190.0	22.0	230.0	17.0	213.4	20.0	1867.0	10.0	2318.0	14.0	1600.0	14.0	1898.8	24.0	9200.5	4.0	3376.9	10.0		
18	GGUB55	143.0	24.0	100.0	25.0	200.0	21.0	222.0	18.0	166.3	23.0	1141.5	20.0	2200.0	16.0	2129.2	8.0	8194.8	3.0	4758.9	16.0	3684.9	6.0		
19	GGUB57	257.0	15.0	161.0	16.0	270.0	12.0	255.0	10.0	235.8	13.0	2571.4	8.0	4277.7	2.0	2004.2	10.0	3397.9	13.0	2855.3	23.0	3021.3	14.0		
20	IC0409424	275.5	13.0	187.0	9.0	280.0	8.0	245.0	13.0	246.9	9.0	1027.0	21.0	3888.9	8.0	350.0	25.0	2798.2	20.0	5552.1	12.0	2723.2	19.0		
21	IC0409485	217.0	20.0	208.4	5.0	230.0	17.0	245.0	14.0	225.1	18.0	1987.2	9.0	1555.5	20.0	2979.2	2.0	4047.4	11.0	3172.6	21.0	2748.4	18.0		
22	IC0409487	276.0	12.0	170.0	13.0	240.0	16.0	255.0	11.0	235.3	14.0	7280.0	1.0	1166.7	23.0	1937.5	11.0	8344.7	2.0	5948.6	11.0	4935.5	4.0		
23	IS6198	150.5	23.0	130.2	22.0	190.0	23.0	140.0	25.0	152.7	24.0	3278.4	4.0	3944.0	6.0	2887.5	3.0	2998.1	17.0	3807.1	19.0	3383.0	9.0		
	CSV17	125.3	25.0	102.2	24.0	143.3	25.0	156.7	24.0	131.9	25.0	1346.7	17.0	2310.5	15.0	2031.3	9.0	5071.8	7.0	6609.6	8.0	3474.0	7.0		
	CSV27	258.5	14.0	187.2	8.0	254.0	14.0	238.3	15.0	234.5	16.0	2607.7	7.0	3677.5	9.0	6410.4	1.0	5683.9	4.0	10985.1	2.0	5872.9	1.0		
	Mean	260.6		171.1		268.9		246.7		236.8		2265.2		2835.4		1811.7		4153.9		6005.2		3414.3			
	StDev	66.2		37.1		75.6		48.5		49.1		1751.8		1122.8		1235.0		1879.7		2903.5		1067.0			
	Count	25.0		25.0		25.0		25.0		25.0		25.0		25.0		25.0		25.0		25.0		25.0			
	alpha	0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1			
	alpha	0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0			
	CD (5%)	26.0		14.5		29.6		19.0		19.3		686.7		440.1		484.1		736.8		1138.2		418.2			
	CD (1%)	34.1		19.1		38.9		25.0		25.3		902.4		578.4		636.2		968.4		1495.8		549.7			
	CV (%)	25.4		21.7		28.1		19.6		20.7		77.3		39.6		68.2		45.3		48.4		31.2			

Table 30: Sorghum germplasm 23 acc. (115 acc.) evaluation and ranking for fodder yield and 100-seed weight

S.No	Acc.No	Fodder yield (kg/ha)												100-seed weight											
		AKOL	Rank	COIM	Rank	UDAI	Rank	INDO	Rank	INDIA (5)	Rank	AKOL	Rank	COIM	Rank	UDAI	Rank	DHAR	Rank	INDO	Rank	INDIA (5)	Rank	AKOL	Rank
1	E1	160650.0	3.0	4100.0	20.0	10864.0	11.0	51237.5	7.0	56712.9	1.0	1.5	23.0	2.6	14.0	2.3	9.0	1.3	11.0	2.0	17.0	2.0	19.0		
2	E159	92520.0	12.0	7590.0	2.0	5189.3	22.0	31408.7	17.0	34177.0	15.0	2.3	4.0	3.6	2.0	1.8	21.0	1.2	21.0	1.6	23.0	2.1	12.0		
3	E163	54568.4	17.0	7010.0	4.0	12195.6	8.0	76142.4	2.0	37479.1	13.0	1.6	20.0	2.9	10.0	2.2	12.0	1.1	22.0	2.0	18.0	2.0	17.0		



S.No	Acc.No	Fodder yield (kg/ha)										100-seed weight											
		AKOL	Rank	COIM	Rank	UDAI	Rank	INDO	Rank	INDIA (5)	Rank	AKOL	Rank	COIM	Rank	UDAI	Rank	DHAR	Rank	INDO	Rank	INDIA (5)	Rank
4	E220	103368.2	10.0	6100.0	13.0	5607.5	21.0	47589.0	10.0	40666.2	9.0	1.8	11.0	3.2	4.0	2.2	14.0	1.4	8.0	2.4	11.0	2.2	8.0
5	EB1	114335.4	7.0	6800.0	6.0	15431.1	3.0	80901.3	1.0	54366.9	2.0	1.6	17.0	3.1	6.0	3.0	4.0	1.6	5.0	3.6	3.0	2.6	2.0
6	EB2	80407.5	14.0	3100.0	23.0	8978.7	12.0	67259.1	3.0	39936.3	10.0	1.3	24.0	2.4	18.0	3.3	2.0	1.5	6.0	3.1	4.0	2.3	4.0
7	EG10	53602.1	18.0	4200.0	18.0	11187.6	9.0	39974.8	15.0	27241.1	19.0	1.7	13.0	1.8	23.0	2.0	19.0	1.0	24.0	1.8	20.0	1.7	22.0
8	EG24	168480.0	2.0	6100.0	11.0	12606.2	7.0	28553.4	19.0	53934.9	3.0	1.7	12.0	3.6	3.0	1.8	22.0	1.3	14.0	1.4	25.0	2.0	18.0
9	EJ42	84810.9	13.0	3080.0	24.0	6580.0	20.0	29505.2	18.0	30994.0	16.0	1.6	16.0	3.1	5.0	2.2	15.0	1.2	18.0	2.3	14.0	2.1	14.0
10	EJN26	47520.0	19.0	6350.0	10.0	15928.9	2.0	52347.9	6.0	30536.7	17.0	1.6	15.0	2.2	21.0	1.7	23.0	1.3	16.0	1.5	24.0	1.7	23.0
11	EJN36	80241.7	15.0	4150.0	19.0	18274.7	1.0	53141.1	5.0	38951.9	11.0	1.0	25.0	3.0	8.0	2.2	11.0	1.4	9.0	2.5	9.0	2.0	15.0
12	EJN73	34560.0	23.0	6860.0	5.0	11150.2	10.0	41243.8	14.0	23453.5	21.0	2.0	6.0	2.6	13.0	2.3	10.0	1.3	12.0	2.7	7.0	2.2	11.0
13	EUK28	111305.9	8.0	6700.0	7.0	8317.9	13.0	50127.1	8.0	44112.7	8.0	1.6	19.0	2.4	17.0	2.7	6.0	1.6	2.0	2.2	16.0	2.1	13.0
14	GGUB39	14890.2	25.0	2800.0	25.0	7404.4	15.0	47589.0	9.0	18170.9	24.0	1.9	10.0	2.2	20.0	2.0	18.0	1.2	20.0	2.4	12.0	1.9	20.0
15	GGUB50	149760.0	4.0	3850.0	22.0	12962.1	6.0	42195.6	13.0	52191.9	5.0	2.0	7.0	2.4	15.0	3.1	3.0	1.2	19.0	3.6	2.0	2.4	3.0
16	GGUB51	149381.1	5.0	6100.0	12.0	7093.3	18.0	28236.1	20.0	47702.6	6.0	2.4	2.0	3.6	1.0	2.5	7.0	1.1	23.0	3.9	1.0	2.7	1.0
17	GGUB54	98622.4	11.0	4500.0	16.0	7000.0	19.0	27125.7	21.0	34312.0	14.0	1.9	9.0	2.9	9.0	2.3	8.0	1.3	13.0	2.4	10.0	2.2	10.0
18	GGUB55	34665.4	22.0	4350.0	17.0	7304.9	17.0	36802.2	16.0	20780.6	22.0	2.7	1.0	2.1	22.0	1.9	20.0	1.4	10.0	1.9	19.0	2.0	16.0
19	GGUB57	171642.9	1.0	7100.0	3.0	13066.7	5.0	22525.5	25.0	53583.7	4.0	2.3	3.0	2.2	19.0	3.5	1.0	1.2	17.0	2.3	13.0	2.3	5.0
20	IC0409424	57167.7	16.0	6700.0	8.0	3464.5	25.0	46002.7	12.0	28333.7	18.0	1.6	18.0	2.4	16.0	1.5	24.0	1.0	25.0	1.7	21.0	1.6	24.0
21	IC0409485	44002.3	20.0	4080.0	21.0	3942.4	24.0	46002.7	11.0	24506.8	20.0	1.5	22.0	1.6	24.0	1.5	25.0	1.6	4.0	1.6	22.0	1.6	25.0
22	IC0409487	115812.8	6.0	4540.0	15.0	7924.0	14.0	23794.5	24.0	38017.8	12.0	1.5	21.0	1.2	25.0	2.2	13.0	1.6	3.0	2.3	15.0	1.7	21.0
23	IS6198	38076.6	21.0	7710.0	1.0	7401.3	16.0	24587.7	22.0	19443.9	23.0	2.1	5.0	3.0	7.0	2.1	17.0	1.3	15.0	2.6	8.0	2.2	7.0
	CSV17	32356.6	24.0	4714.3	14.0	4595.3	23.0	24138.2	23.0	16451.1	25.0	1.7	14.0	2.6	12.0	2.1	16.0	1.8	1.0	2.7	5.0	2.2	9.0
	CSV27	107244.4	9.0	6692.0	9.0	13151.9	4.0	56234.3	4.0	45830.7	7.0	1.9	8.0	2.6	11.0	2.7	5.0	1.5	7.0	2.7	6.0	2.3	6.0
	Mean	87999.7		5411.0		9504.9		42986.6		36475.6		1.8		2.6		2.3		1.3		2.4		2.1	
	StDev	45900.4		1503.6		3895.3		15744.0		12161.0		0.4		0.6		0.5		0.2		0.6		0.3	
	Count	25.0		25.0		25.0		25.0		25.0		25.0		25.0		25.0		25.0		25.0		25.0	
	alpha	0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.1	
	alpha	0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	
	CD (5%)	17992.6		589.4		1526.9		6171.6		4767.0		0.1		0.2		0.2		0.1		0.3		0.1	
	CD (1%)	23646.3		774.6		2006.7		8110.8		6264.9		0.2		0.3		0.3		0.1		0.3		0.1	
	CV (%)	52.2		27.8		41.0		36.6		33.3		20.4		22.8		22.2		15.1		27.3		13.6	

Table 31: Sorghum germplasm 23 acc. (115 acc.) evaluation and ranking for days to maturity

S.No	Acc.No	Days to maturity (days)											
		AKOL	Rank	COIM	Rank	UDAI	Rank	DHAR	Rank	INDO	Rank	INDIA (5)	Rank
1	E1	120.0	11.0	94.0	8.0	125.0	18.0	129.5	14.0	110.0	12.0	115.7	14.0
2	E159	122.0	12.0	93.0	6.0	106.0	4.0	125.0	8.0	112.0	16.0	111.6	7.0
3	E163	106.5	3.0	97.0	13.0	112.0	11.0	124.0	7.0	120.0	23.0	111.9	8.0
4	E220	119.0	10.0	107.0	22.0	110.0	10.0	137.5	24.0	105.0	2.0	115.7	13.0
5	EB1	152.0	22.0	97.0	14.0	136.0	20.0	137.5	25.0	130.0	25.0	130.5	24.0
6	EB2	156.0	23.0	98.0	15.0	137.0	22.0	135.0	23.0	120.0	24.0	129.2	23.0
7	EG10	112.5	4.0	99.0	16.0	121.0	16.0	127.5	12.0	110.0	10.0	114.0	10.0
8	EG24	117.0	7.0	90.0	2.0	118.0	14.0	130.0	15.0	112.0	17.0	113.4	9.0
9	EJ42	122.0	13.0	96.0	12.0	118.0	15.0	128.0	13.0	110.0	11.0	114.8	12.0
10	EJN26	146.0	20.0	94.0	9.0	123.0	17.0	134.0	20.0	115.0	22.0	122.4	20.0
11	EJN36	164.5	25.0	103.0	18.0	110.0	9.0	130.5	16.0	108.0	8.0	123.2	21.0
12	EJN73	128.0	18.0	108.0	23.0	108.0	7.0	134.5	21.0	110.0	13.0	117.7	16.0
13	EUK28	150.5	21.0	106.0	21.0	134.0	19.0	127.0	10.0	110.0	9.0	125.5	22.0
14	GGUB39	116.5	6.0	95.0	11.0	141.0	24.0	107.0	4.0	112.0	15.0	114.3	11.0
15	GGUB50	160.5	24.0	110.0	24.0	148.0	25.0	133.5	19.0	112.0	18.0	132.8	25.0
16	GGUB51	127.5	17.0	90.0	3.0	138.0	23.0	127.0	11.0	108.0	7.0	118.1	18.0



S.No	Acc.No	Days to maturity (days)											
		AKOL	Rank	COIM	Rank	UDAI	Rank	DHAR	Rank	INDO	Rank	INDIA (5)	Rank
17	GGUB54	115.5	5.0	90.0	1.0	103.0	2.0	126.0	9.0	107.0	6.0	108.3	4.0
18	GGUB55	105.0	2.0	93.0	5.0	107.0	5.0	105.0	2.0	112.0	14.0	104.4	3.0
19	GGUB57	125.5	15.0	100.0	17.0	115.0	13.0	135.0	22.0	112.0	19.0	117.5	15.0
20	IC0409424	118.0	8.0	92.0	4.0	109.0	8.0	131.0	17.0	106.0	5.0	111.2	5.0
21	IC0409485	122.0	14.0	93.0	7.0	107.0	6.0	67.0	1.0	106.0	3.0	99.0	1.0
22	IC0409487	118.5	9.0	105.0	19.0	105.0	3.0	123.0	6.0	106.0	4.0	111.5	6.0
23	IS6198	131.5	19.0	115.0	25.0	136.0	21.0	105.0	3.0	114.0	21.0	120.3	19.0
	CSV17	104.6	1.0	94.2	10.0	96.0	1.0	113.6	5.0	90.5	1.0	99.8	2.0
	CSV27	125.8	16.0	105.5	20.0	114.0	12.0	132.0	18.0	112.8	20.0	118.0	17.0
	Mean	127.5		98.6		119.1		124.2		110.8		116.0	
	StDev	17.0		6.8		13.8		14.9		6.7		8.3	
	Count	25.0		25.0		25.0		25.0		25.0		25.0	
	alpha	0.1		0.1		0.1		0.1		0.1		0.1	
	alpha	0.0		0.0		0.0		0.0		0.0		0.0	
	CD (5%)	6.7		2.7		5.4		5.8		2.6		3.3	
	CD (1%)	8.8		3.5		7.1		7.7		3.5		4.3	
	CV (%)	13.3		6.9		11.6		12.0		6.1		7.2	

Screening of millets germplasm for pest and diseases

Table 32: Screening of Finger millet germplasm 74 acc (200 acc.) for blast resistant accessions

Name of the disease	Bengaluru	Mandya	Vijayanagaram	Waghai	India
Leaf Blast (<3 score)	EN107; EN117; ER37; ER41; ER53; ER61; ER64; ER67; ER73; ER75; ER76; ER81; IC0007953; IC0007954; IC00618651; IC00618684; IC00622036; IC00622041; IC00622046; IC00622057; IC00622063; IC00622066; IC00622068; IC00622069; IC00622073; IC00622078; IC00622089; IC00622112; IC0066140; IC0473882; IC0474816; IC0475125; IC0475386; IC0475407; IC0476095; IC0476587; IC0476623; IC0478181; IC0478382; IC0478442; IC0478543; IC0478571; IC0478640; IC0478686; IC0478693; IC0478710; IC0478746; IC0478766; IC0478792; IC0478819; IC0478832; IC0478883; IC0478935; IC0624939; IC0624940; IC0624941; IC0627127; IC0627178; IC0627179; IC0627180; SEA11; SEA23; GPU48 (C); GPU67 (C); VL376 (C)	ER41; IC00622073; IC0478442; IC0624939; IC0624941; IC-0627127; SEA11; ER53; IC00622046; IC00622047; IC00622112; IC-0627123; SEA23; SEA7; GPU48 (C)	IC00622073; IC0478442; IC00622041; IC0473882; IC0475125	EN107; EN96; EN99; ER61; ER64; IC00622057; IC00622063; IC00622069; IC00622078; IC00622089; IC0066140; IC0473882; IC0475125; IC0478319; IC0478382; IC0478444; IC0478640; IC0478656; IC0478792; IC0478819; IC0478821; IC0478832; IC0478862; IC0478935; IC0624941; IC0627180	Four centers: IC00622069 Three centers IC00622057; IC00622073; IC0473882; IC0475125; IC0478442; IC0624939
Finger Blast (<2 score)	E326; EN107; ER53; ER61; ER62; ER67; ER73; IC0007954; IC00618651; IC00618669; IC00622041; IC00622046; IC00622047; IC00622063; IC00622112; IC0066140; IC0474816; IC0478693; IC0478832; IC0478883; IC0478935; IC0624940; IC0624941; IC0627123; IC0627127; IC0627180; SEA11; SEA23	IC00622036; IC00622053; IC0624941	ER53; IC00622041; IC0475125; IC0476623; IC0627175; IC0627178	Nil	Four centers: Nil Three centers: Nil Two centers: ER53; IC00622041; IC0624941
Neck Blast (<10% blasted florets)	E326; ER53; ER55; ER61; ER62; IC0007954; IC00618651; IC00618669; IC00618684; IC00622047; IC00622066; IC00622069; IC00622078; IC00622112; IC0473882; IC0474816; IC0475125; IC0475386; IC0478382; IC0478693; IC0478766; IC0478883; IC0478935; IC0624941; IC0627127; SEA23; VL376 (C)	E326; EN107; EN117; EN96; EN98; EN99; ER37; ER41; ER53; ER55; ER61; ER62; ER64; ER67; ER73; ER75; ER76; ER81; ER83; IC0007954; IC00618651; IC00618669; IC00618684; IC00622036; IC00622041; IC00622046; IC00622047; IC00622053; IC00622057; IC00622063; IC00622066; IC00622069; IC00622073; IC00622078; IC00622089; IC00622112; IC0066140; IC0473882; IC0475125; IC0478319; IC0478382; IC0478442; IC0478444; IC0478543; IC0478571; IC0478640; IC0478656; IC0478686; IC0478693; IC0478710; IC0478746; IC0478766; IC0478792; IC0478819; IC0478821; IC0478832; IC0478862; IC0478883; IC0478935; IC0624939; IC0624940; IC0624941; IC0627123; IC0627127; IC0627175; IC0627178; IC0627179; IC0627180; SEA11; SEA23; SEA7; GPU48 (C); GPU67 (C)	E326; EN107; EN117; ER37; ER53; ER55; IC00622041; IC00622069; IC00622073; IC0475125; IC0475386; IC0478442; IC0627127; IC0627175; IC0627178	IC00622089	Four centers: Nil Three centers: E326; ER53; ER55; IC00622069; IC0475125; IC0627127
All blast	ER53; ER61; IC0007954; IC00618651; IC00622112; IC0474816; IC0478693; IC0478883; IC0478935; IC0624941; IC0627127; SEA23	IC00622036; IC00622053; IC0624941	IC00622041; IC0475125	Nil	Four centers: Nil Three centers: Nil Two centers: IC0624941

Table 33: Screening of Finger millet germplasm 74 acc (200 acc.) for Pink borer, Aphids and Foot rot

Acc. No	Waghai		Acc. No.	Mand
	Pink borer	Aphids		
1. E257	0.00	0.00	1. E257	4.35
2. E258	0.00	0.00	2. E258	10.84
3. E264	0.00	0.00	3. E264	5.93
4. E265	0.00	0.00	4. E265	7.59
5. E318	0.00	0.00	5. E298	11.84
6. E326	0.00	0.00	6. E299	6.12
7. EN107	0.00	0.00	7. E326	21.57
8. EN112	0.00	0.00	8. EN107	9.18
9. EN117	0.00	0.00	9. EN109	33.33
10. EN18	0.00	0.00	10. EN110	9.52
11. EN22	0.00	0.00	11. EN117	12.12
12. EN30	0.00	0.00	12. EN18	6.52
13. EN38	0.00	0.00	13. EN22	6.90
14. EN46	0.00	0.00	14. EN30	8.25
15. EN49	0.00	0.00	15. EN38	19.05
16. EN52	0.00	0.00	16. EN46	9.09
17. EN70	0.00	0.00	17. EN49	8.60
18. EN8	0.00	0.00	18. EN52	11.54
19. EN91	0.00	0.00	19. EN70	27.63
20. EN95	0.00	0.00	20. EN79	25.00
21. EN96	0.00	0.00	21. EN8	6.15
22. EN98	0.00	0.00	22. EN96	6.17
23. EN99	0.00	0.00	23. EN98	6.96
24. ER37	0.00	0.00	24. EN99	10.00
25. ER41	0.00	0.00	25. ER104	17.95
26. ER53	0.00	0.00	26. ER37	13.04
27. ER55	0.00	0.00	27. ER41	26.14
28. ER56	0.00	0.00	28. ER53	11.11
29. ER61	0.00	0.00	29. ER55	4.55
30. ER62	0.00	0.00	30. ER56	6.80
31. ER64	0.00	0.00	31. ER61	7.02
32. ER67	0.00	0.00	32. ER62	5.36
33. ER73	0.00	0.00	33. ER64	3.74
34. ER75	0.00	0.00	34. ER67	3.77
35. ER76	0.00	0.00	35. ER73	12.24
36. ER81	0.00	1.66	36. ER75	5.32
37. ER83	0.00	0.00	37. ER76	6.06
38. ER99	0.00	1.13	38. ER81	6.67
39. IC0007953	0.00	0.00	39. ER83	10.62
40. IC0007954	0.00	0.00	40. IC0007953	4.46
41. IC00618620	0.00	2.40	41. IC0007954	7.27
42. IC00618624	0.00	0.00	42. IC00618620	23.08
43. IC00618626	0.00	0.00	43. IC00618624	17.72
44. IC00618651	0.00	1.66	44. IC00618626	48.28
45. IC00618665	0.00	0.00	45. IC00618651	28.13
46. IC00618684	0.00	0.00	46. IC00618669	14.81
47. IC00621996	0.00	0.00	47. IC00618684	45.61
48. IC00621997	0.00	0.00	48. IC00621990	7.59
49. IC00622007	0.00	0.00	49. IC00621993	8.33

Acc. No	Waghai		Acc. No.	Mand
	Pink borer	Aphids		
50. IC00622010	0.00	0.00	50. IC00621997	9.41
51. IC00622030	0.00	1.40	51. IC00622001	9.38
52. IC00622031	0.00	0.00	52. IC00622004	13.73
53. IC00622033	0.00	0.00	53. IC00622007	6.67
54. IC00622036	0.00	0.00	54. IC00622010	1.74
55. IC00622041	0.00	0.00	55. IC00622013	6.90
56. IC00622046	0.00	0.00	56. IC00622029	2.56
57. IC00622047	0.00	0.00	57. IC00622033	4.71
58. IC00622053	0.00	0.00	58. IC00622036	4.60
59. IC00622057	0.00	0.00	59. IC00622041	7.29
60. IC00622063	0.00	0.00	60. IC00622046	8.16
61. IC00622066	0.00	0.00	61. IC00622047	5.31
62. IC00622068	0.00	0.00	62. IC00622053	0.89
63. IC00622069	0.00	0.00	63. IC00622057	15.79
64. IC00622073	0.00	3.36	64. IC00622063	14.29
65. IC00622078	0.00	0.00	65. IC00622066	11.76
66. IC00622084	0.00	0.00	66. IC00622068	16.67
67. IC00622089	0.00	0.00	67. IC00622069	17.39
68. IC00622112	0.00	0.00	68. IC00622073	7.69
69. IC00622139	0.00	2.66	69. IC00622078	8.33
70. IC0066140	0.00	3.56	70. IC00622089	7.27
71. IC0473882	0.00	0.00	71. IC00622099	8.04
72. IC0474816	0.00	0.00	72. IC00622112	13.33
73. IC0475125	0.00	2.40	73. IC00622139	16.28
74. IC0475386	0.00	0.00	74. IC00622140	5.69
75. IC0475407	0.00	0.00	75. IC0066140	7.89
76. IC0476095	0.00	0.00	76. IC0473882	5.10
77. IC0476587	0.00	0.00	77. IC0474816	3.61
78. IC0476623	0.00	1.33	78. IC0475125	5.68
79. IC0478181	0.00	0.00	79. IC0475386	8.60
80. IC0478319	0.00	0.00	80. IC0475407	6.00
81. IC0478382	0.00	0.00	81. IC0476095	9.26
82. IC0478442	0.00	0.00	82. IC0476587	7.06
83. IC0478444	0.00	0.00	83. IC0476623	4.17
84. IC0478543	0.00	0.00	84. IC0478181	6.90
85. IC0478571	0.00	0.00	85. IC0478319	5.13
86. IC0478640	0.00	0.00	86. IC0478382	11.90
87. IC0478656	0.00	0.00	87. IC0478442	13.79
88. IC0478686	0.00	0.00	88. IC0478444	6.67
89. IC0478693	0.00	1.33	89. IC0478543	8.93
90. IC0478710	0.00	0.00	90. IC0478571	9.26
91. IC0478746	0.00	0.00	91. IC0478640	7.14
92. IC0478766	0.00	0.00	92. IC0478656	8.26
93. IC0478792	0.00	0.00	93. IC0478686	7.06
94. IC0478819	0.00	0.00	94. IC0478693	16.33
95. IC0478821	0.00	0.00	95. IC0478710	9.82
96. IC0478832	0.00	1.66	96. IC0478746	4.17
97. IC0478862	0.00	0.00	97. IC0478766	10.00
98. IC0478883	0.00	0.00	98. IC0478792	8.70

Acc. No	Waghai		Acc. No.	Mand
	Pink borer	Aphids		
99. IC0478935	0.00	0.00	99. IC0478819	9.09
100. IC062493	0.00	1.33	100. IC0478821	18.99
101. IC062494	0.00	0.00	101. IC0478832	8.04
102. IC062494	0.00	0.00	102. IC0478862	4.60
103. IC062496	0.00	0.00	103. IC0478883	9.20
104. IC062499	0.00	0.00	104. IC0478935	6.96
105. IC062712	0.00	0.00	105. IC0624939	12.50
106. IC062712	0.00	1.23	106. IC0624940	8.16
107. IC062713	0.00	0.00	107. IC0624941	7.27
108. IC062714	0.00	0.00	108. IC0624942	5.83
109. IC062717	0.00	0.00	109. IC0624951	4.04
110. IC062717	0.00	0.00	110. IC0624974	8.33
111. IC062717	0.00	0.00	111. IC0624997	8.85
112. IC062718	0.00	0.00	112. IC0627123	12.24
113. IC062891	0.00	0.00	113. IC0627127	5.22
114. IC062893	0.00	0.00	114. IC0627139	8.16
115. IC062894	0.00	0.00	115. IC0627147	8.82
116. IC062894	0.00	0.00	116. IC0627175	7.62
117. IC062895	0.00	0.00	117. IC0627178	14.74
118. IC062895	0.00	1.66	118. IC0627179	5.00
119. IC062898	0.00	0.00	119. IC0627180	3.85
120. SEA11	0.00	1.13	120. IC0628917	7.14
121. SEA137	0.00	0.00	121. IC0628919	5.00
122. SEA23	0.00	0.00	122. IC0628925	4.30
123. SEA38	0.00	0.00	123. IC0628940	2.61
124. SEA7	0.00	2.33	124. IC0628942	8.33
125. SEA72	0.00	0.00	125. IC0628945	4.60
126. SEJ137	0.00	0.00	126. IC0628956	5.26
127. GPU48 (I	0.00	0.33	127. IC0628958	2.53
128. GPU67 (I	0.00	0.42	128. IC0628967	4.76
129. VL376 (C	0.00	0.00	129. IC0628977	7.14
			130. IC0628985	6.67
			131. IC0628989	7.35
			132. SEA11	8.33
			133. SEA137	5.13
			134. SEA23	13.73
			135. SEA7	9.09
			136. SEA72	7.62
			137. GPU48	11.57
			138. GPU67	7.17
			139. PR202	7.57
			140. VL376	10.61

Pink borer and Aphids data were received from Waghai center only; Foot rot data was received from Mandya center only

Table 34: Screening of foxtail millet germplasm 71 acc (100 acc.) for brown spot, rust and leaf blast

Name of the disease	Athiyandal	Bengaluru	Vijayanagaram	India
Brown spot (<3 score)	EC0529794; IC0022179; IC0022180; IC0078225; IC0097186; IC0120213; IC0120235; IC0257888; IC0257896; IC0283715; IC0283925; IC0283926; IC0308946; IC0324333; IC0326988; IC0345123; IC0345124; IC0345126; IC0345141; IC0369744; IC0403440; IC0403470; IC0403487; IC0403564; IC0403738; IC0403742; IC0403787; IC0403816; IC0403859; IC0403860; IC0403862; IC0403863; IC0403869; IC0403871; IC0403900; IC0403950; IC0403951; IC0403952; IC0403956; IC0404094; IC0404137; IC0404216; IC0413273; IC0427920; IC0479306; IC0479349; IC0479445; IC0479507; IC0479598; IC0479605; IC0479623; IC0479633; IC0479635; IC0479644; IC0479647; IC0479660; IC0479711; IC0479719; IC0479804; IC0479860; IC0479977; IC0480408; IC0480653; IC0480820; IC0480861; IC0480946; IC0480959; IC0519825; IC0610450; IC0610533; IC0610536; DHF1109-3 (C); SiA3222 (C); SiA326 (C); Suryanandi (C) Number: 75	EC0529794; IC0022179; IC0022180; IC0078225; IC0097186; IC0120213; IC0120235; IC0257888; IC0257896; IC0283715; IC0283925; IC0283926; IC0308946; IC0324333; IC0326988; IC0345123; IC0345124; IC0345126; IC0345141; IC0369744; IC0403440; IC0403470; IC0403487; IC0403564; IC0403738; IC0403742; IC0403787; IC0403816; IC0403859; IC0403860; IC0403862; IC0403863; IC0403869; IC0403871; IC0403900; IC0403950; IC0403951; IC0403952; IC0403956; IC0404094; IC0404137; IC0404216; IC0413273; IC0427920; IC0479306; IC0479349; IC0479445; IC0479507; IC0479598; IC0479605; IC0479623; IC0479633; IC0479635; IC0479644; IC0479647; IC0479660; IC0479711; IC0479719; IC0479804; IC0479860; IC0479977; IC0480408; IC0480653; IC0480820; IC0480861; IC0480946; IC0480959; IC0519825; IC0610450; IC0610533; IC0610536; DHF1109-3 (C); SiA3222 (C); SiA326 (C); Suryanandi (C) Number: 75	IC0403487; IC0610536 Number: 2	IC0403487; IC0610536 Number: 2
Rust (<3 score)	EC0529794; IC0022179; IC0022180; IC0078225; IC0097186; IC0120213; IC0120235; IC0257888; IC0257896; IC0283715; IC0283925; IC0283926; IC0308946; IC0324333; IC0326988; IC0345123; IC0345124; IC0345126; IC0345141; IC0369744; IC0403440; IC0403470; IC0403487; IC0403564; IC0403738; IC0403742; IC0403787; IC0403816; IC0403859; IC0403860; IC0403862; IC0403863; IC0403869; IC0403871; IC0403900; IC0403950; IC0403951; IC0403952; IC0403956; IC0404094; IC0404137; IC0404216; IC0413273; IC0427920; IC0479306; IC0479349; IC0479445; IC0479507; IC0479598; IC0479605; IC0479623; IC0479633; IC0479635; IC0479644; IC0479647; IC0479660; IC0479711; IC0479719; IC0479804; IC0479860; IC0479977; IC0480408; IC0480653; IC0480820; IC0480861; IC0480946; IC0480959; IC0519825; IC0610450; IC0610533; IC0610536; DHF1109-3 (C); SiA3222 (C); SiA326 (C); Suryanandi (C) Number: 75	IC0022180; IC0257888; IC0324333; IC0345124; IC0403956; IC0479605; IC0479644; IC0479647; IC0480408; IC0610450; Number: 10	IC0403487; IC0403863; IC0479711; IC0610536; SiA326 (C) Number: 5	Three centers: Nil Two centers: 10 IC0022180; IC0257888; IC0324333; IC0345124; IC0403956; IC0479605; IC0479644; IC0479647; IC0480408; IC0610450;
Leaf Blast (<3 score)	EC0529794; IC0078225; IC0283715; IC0308946; IC0324333; IC0326988; IC0345123; IC0345124; IC0345126; IC0345141; IC0369744; IC0403440; IC0403470; IC0403487; IC0403564; IC0403738; IC0403742; IC0403787; IC0403816; IC0403859; IC0403862; IC0403863; IC0403869; IC0403900; IC0404094; IC0413273; IC0479306; IC0479349; IC0479445; IC0479507; IC0479598; IC0479605; IC0479623; IC0479633; IC0479635; IC0479644; IC0479647; IC0479719; IC0479804; IC0479860; IC0480408; IC0480653; IC0480861; IC0480946; IC0480959; IC0519825; IC0610536; DHF1109-3 (C); SiA3222 (C); SiA326 (C); Suryanandi (C) Number: 51	EC0529794; IC0022179; IC0022180; IC0078225; IC0120235; IC0257888; IC0257896; IC0283715; IC0283925; IC0283926; IC0308946; IC0324333; IC0326988; IC0345123; IC0345124; IC0345126; IC0345141; IC0369744; IC0403440; IC0403470; IC0403487; IC0403564; IC0403738; IC0403742; IC0403787; IC0403816; IC0403860; IC0403862; IC0403863; IC0403869; IC0403871; IC0403900; IC0403950; IC0403951; IC0403952; IC0403956; IC0404094; IC0404137; IC0404216; IC0413273; IC0427920; IC0479306; IC0479349; IC0479445; IC0479598; IC0479605; IC0479623; IC0479635; IC0479644; IC0479647; IC0479711; IC0479719; IC0479804; IC0479860; IC0479977; IC0480408; IC0480653; IC0480946; IC0480959; IC0519825; IC0610450; IC0610536; DHF1109-3 (C); SiA3222 (C); SiA326 (C); Suryanandi (C) Number: 68	IC0479445; IC0479711 Number: 2	Three centers: 1 IC0479445 Two centers: 47 EC0529794; IC0078225; IC0283715; IC0308946; IC0324333; IC0326988; IC0345123; IC0345124; IC0345126; IC0345141; IC0369744; IC0403440; IC0403470; IC0403487; IC0403564; IC0403738; IC0403742; IC0403787; IC0403816; IC0403860; IC0403862; IC0403863; IC0403869; IC0403900; IC0404094; IC0413273; IC0479306; IC0479349; IC0479445; IC0479598; IC0479605; IC0479623; IC0479635; IC0479644; IC0479647; IC0479719; IC0479804; IC0479860; IC0480408; IC0480653; IC0480946; IC0480959; IC0519825; IC0610536; DHF1109-3 (C); SiA3222 (C); SiA326 (C); Suryanandi (C)
All disease	EC0529794; IC0078225; IC0283715; IC0308946; IC0324333; IC0326988; IC0345123; IC0345124; IC0345126; IC0345141; IC0369744; IC0403440; IC0403470; IC0403487; IC0403564; IC0403738; IC0403742; IC0403787; IC0403816; IC0403859; IC0403862; IC0403863; IC0403869; IC0403900; IC0404094; IC0413273; IC0479306; IC0479349; IC0479445; IC0479507; IC0479598; IC0479605; IC0479623; IC0479633; IC0479635; IC0479644; IC0479647; IC0479719; IC0479804; IC0479860; IC0480408; IC0480653; IC0480861; IC0480946; IC0480959; IC0519825; IC0610536; DHF1109-3 (C); SiA3222 (C); SiA326 (C); Suryanandi (C) Number: 51	IC0022180; IC0257888; IC0324333; IC0345124; IC0403956; IC0479605; IC0479644; IC0479647; IC0480408; IC0610450; Number: 10	Three diseases: Nil Two diseases: IC0403487; IC0610536	Nil

**Table 35: Screening of foxtail millet germplasm 100 acc. for shootfly resistance**

Acc. No.	Shoot fly DH (%)				
1. EC0529794	18.6	37. IC0403860	22.9	74. IC0480820	25.0
2. IC0022179	21.0	38. IC0403862	23.8	75. IC0480861	25.2
3. IC0022180	23.8	39. IC0403863	26.3	76. IC0480891	27.4
4. IC0077829	22.3	40. IC0403869	26.2	77. IC0480946	19.7
5. IC0078128	27.5	41. IC0403871	31.6	78. IC0480959	28.5
6. IC0078225	15.1	42. IC0403900	15.5	79. IC0519825	28.9
7. IC0097186	25.0	43. IC0403950	25.6	80. IC0547316	20.8
8. IC0120213	20.9	44. IC0403951	26.2	81. IC0596783	25.0
9. IC0120235	25.6	45. IC0403952	17.0	82. IC0597281	23.6
10. IC0257888	20.2	46. IC0403956	31.0	83. IC0599488	23.9
11. IC0257896	20.2	47. IC0404094	25.6	84. IC0610450	21.0
12. IC0283715	20.9	48. IC0404137	29.9	85. IC0610527	24.8
13. IC0283925	19.5	49. IC0404216	32.0	86. IC0610531	15.8
14. IC0283926	25.9	50. IC0413273	27.0	87. IC0610533	26.0
15. IC0308946	26.7	51. IC0426714	17.8	88. IC0610536	26.6
16. IC0321168	22.6	52. IC0426728	20.1	89. IC0610543	21.3
17. IC0324333	18.4	53. IC0427920	24.6	90. IC0613573	27.7
18. IC0326988	19.6	54. IC0436955	25.0	91. IC0618660	18.1
19. IC0345123	29.5	55. IC0479306	24.0	92. IC0620367	25.6
20. IC0345124	22.2	56. IC0479349	24.4	93. IC0622109	23.4
21. IC0345126	30.1	57. IC0479445	29.1	94. IC0622117	21.5
22. IC0345141	20.4	58. IC0479507	23.2	95. IC0624886	25.9
23. IC0363761	18.8	59. IC0479598	27.9	96. IC0627117	24.3
24. IC0369744	26.3	60. IC0479605	22.9	97. IC0627150	26.3
25. IC0403440	13.2	61. IC0479623	24.1	98. IC0627164	20.2
26. IC0403470	19.2	62. IC0479633	24.2	99. IC0627215	25.4
27. IC0403487	31.5	63. IC0479635	21.8	100. IC0627222	25.8
28. IC0403505	19.3	64. IC0479644	20.2	101. Suryanandi	27.1
29. IC0403564	31.4	65. IC0479647	23.2	102. DHF1109-3	18.8
30. IC0403612	19.7	66. IC0479660	31.8	103. SIA3156	18.3
31. IC0403738	23.0	67. IC0479711	32.3	104. SIA3222	26.2
32. IC0403742	30.8	68. IC0479719	19.5	105. SIA326	22.9
33. IC0403765	25.9	69. IC0479804	24.3		
34. IC0403787	26.2	70. IC0479860	24.4		
35. IC0403816	26.3	71. IC0479977	25.4		
36. IC0403859	23.3	72. IC0480408	17.6		
		73. IC0480653	22.2		

Table 43: The list of millets genetic resources distributed during 2021-2022

S. No	MTA No	No. of acc.	Name of the crop	Division	Date	Purpose	Received by	Category
1	957	96	Sorghum	Dept of Genetic and Plant Breeding, Annamalai University	15 April 2021	Kharif sorghum landraces for MSc (Agri) work	Miss Pugazhendi	University
2	958	100	Sorghum	Dept of Genetic and Plant Breeding, Punjab Agricultural University-Ludhiana	29 April 2021	Kharif sorghum landraces for PhD work	Dr RS Sohu	AICRP on Sorghum
3	959	100	Sorghum	Dept of Genetic and Plant Breeding, RSKVV-Indore	3 May 2021	Kharif sorghum germplasm from adjoining districts of Madhya Pradesh	Dr Usha Saxena	SAU
4	960	57	Finger millet	AICRP on Small millets - Vizianagaram	27 May 2021	Multi-whorled finger millet germplasm	Dr N Anuradha	AICRP on Small millet
5	961	57	Finger millet	AICRP on Small millets - Waghai	27 May 2021	Multi-whorled finger millet germplasm	Dr HE Patil	AICRP on Small millet
6	962	57	Finger millet	AICRP on Small millets - Bengaluru	27 May 2021	Multi-whorled finger millet germplasm	Dr TE Nagaraj	AICRP on Small millet
7	963	57	Finger millet	AICRP on Small millets - Mandya	27 May 2021	Multi-whorled finger millet germplasm	Dr CA Deepak	AICRP on Small millet



S. No	MTA No	No. of acc.	Name of the crop	Division	Date	Purpose	Recived by	Category
8	964	57	Finger millet	AICRP on Small millets - Athiyandal	27 May 2021	Multi-whorled finger millet germplasm	Dr A Nirmalakumari	AICRP on Small millet
9	965	200	Finger millet	AICRP on Small millets - Vizianagaram	27 May 2021	Indigenous and high grain yielding finger millet germplasm	Dr TSSK Patro	AICRP on Small millet
10	966	200	Finger millet	AICRP on Small millets - Waghai	27 May 2021	Indigenous and high grain yielding finger millet germplasm	Dr HE Patil	AICRP on Small millet
11	967	200	Finger millet	AICRP on Small millets - Bengaluru	27 May 2021	Indigenous and high grain yielding finger millet germplasm	Dr TE Nagaraj	AICRP on Small millet
12	968	200	Finger millet	AICRP on Small millets - Mandya	27 May 2021	Indigenous and high grain yielding finger millet germplasm	Dr CA Deepak	AICRP on Small millet
13	969	200	Finger millet	AICRP on Small millets - Athiyandal	27 May 2021	Indigenous and high grain yielding finger millet germplasm	Dr A Nirmalakumari	AICRP on Small millet
14	970	200	Finger millet	AICRP on Small millets - Kolhapur	27 May 2021	Indigenous and high grain yielding finger millet germplasm	Dr Yogeesh Ben	AICRP on Small millet
15	971	200	Finger millet	AICRP on Small millets - Hageri	27 May 2021	Indigenous and high grain yielding finger millet germplasm	Dr LN Yogesh	AICRP on Small millet
16	972	200	Finger millet	AICRP on Small millets - Perumalleapalle	27 May 2021	Indigenous and high grain yielding finger millet germplasm	Dr L Madhavilatha	AICRP on Small millet
17	973	40	Pearl millet	AICRP on Forage Crops - Vellayani	28 May 2021	Indigenous pearl millet germplasm	Dr G Gayathri	AICRP on Forage crops
18	974	40	Finger millet	Dept of Genetic and Plant Breeding, SHUATS, Naini, Prayagraj	31 May 2021	Indigenous finger millet germplasm collected from Uttar Pradesh	Miss Madhusri	SAU
19	975	100	Foxtail millet	AICRP on Small millets - Bengaluru	1 June 2021	High grain yielding indigenous foxtail millet germplasm	Dr TE Nagaraj	AICRP on Small millet
20	976	100	Foxtail millet	AICRP on Small millets - Vizianagaram	1 June 2021	High grain yielding indigenous foxtail millet germplasm	Dr TSSK Patro	AICRP on Small millet
21	977	100	Foxtail millet	AICRP on Small millets - Nandyal	1 June 2021	High grain yielding indigenous foxtail millet germplasm	Dr CV Chandramohan Reddy	AICRP on Small millet
22	978	100	Foxtail millet	ICAR-IIMR-CRS - Solapur	1 June 2021	High grain yielding indigenous foxtail millet germplasm	Dr Parashuram Patroti	AICRP on Small millet
23	979	100	Foxtail millet	AICRP on Small millets - Mandya	1 June 2021	High grain yielding indigenous foxtail millet germplasm	Dr CA Deepak	AICRP on Small millet
24	980	100	Foxtail millet	AICRP on Small millets - Dholi	1 June 2021	High grain yielding indigenous foxtail millet germplasm	Dr SK Singh	AICRP on Small millet
25	981	100	Foxtail millet	AICRP on Small millets - Athiyandal	1 June 2021	High grain yielding indigenous foxtail millet germplasm	Dr A Nirmalakumari	AICRP on Small millet
26	982	100	Foxtail millet	AICRP on Small millets - Hageri	1 June 2021	High grain yielding indigenous foxtail millet germplasm	Dr LN Yogesh	AICRP on Small millet
27	983	100	Foxtail millet	AICRP on Small millets - Vizianagaram	1 June 2021	High grain yielding indigenous foxtail millet germplasm - screening for biotic stress	Dr TSSK Patro	AICRP on Small millet
28	984	100	Foxtail millet	AICRP on Small millets - Bengaluru	1 June 2021	High grain yielding indigenous foxtail millet germplasm - screening for biotic stress	Dr KB Palanna	AICRP on Small millet
29	985	100	Foxtail millet	AICRP on Small millets - Nandyal	1 June 2021	High grain yielding indigenous foxtail millet germplasm - screening for biotic stress	Dr TSSK Patro	AICRP on Small millet
30	986	100	Foxtail millet	AICRP on Small millets - Athiyandal	1 June 2021	High grain yielding indigenous foxtail millet germplasm - screening for biotic stress	Dr A Nirmalakumari	AICRP on Small millet
31	987	1	Foxtail millet	Plant Breeding, ICAR-IIMR-Hyderabad	4 June 2021	ISe719	Dr K Hariprasanna	IIMR
32	988	4	Foxtail millet	AICRP on Small millets - Bengaluru	5 June 2021	SIA 326, SIA 3282, SIA 3179 and SIA 907	Dr TE Nagaraj	AICRP on Small millet
33	989	4	Foxtail millet	AICRP on Small millets - Vizianagaram	5 June 2021	SIA 326, SIA 3282, SIA 3179 and SIA 907	Dr TSSK Patro	AICRP on Small millet
34	990	4	Foxtail millet	AICRP on Small millets - Nandyal	5 June 2021	SIA 326, SIA 3282, SIA 3179 and SIA 907	Dr CV Chandramohan Reddy	AICRP on Small millet
35	991	4	Foxtail millet	AICRP on Small millets - Athiyandal	5 June 2021	SIA 326, SIA 3282, SIA 3179 and SIA 907	Dr A Nirmalakumari	AICRP on Small millet
36	992	196	Little millet	AICRP on Small millets - Bengaluru	5 June 2021	Indigenous and high grain yielding little millet germplasm	Dr TE Nagaraj	AICRP on Small millet
37	993	196	Little millet	AICRP on Small millets - Vizianagaram	5 June 2021	Indigenous and high grain yielding little millet germplasm	Dr TSSK Patro	AICRP on Small millet
38	994	196	Little millet	AICRP on Small millets - Hageri	5 June 2021	Indigenous and high grain yielding little millet germplasm	Dr LN Yogesh	AICRP on Small millet
39	995	196	Little millet	AICRP on Small millets - Athiyandal	5 June 2021	Indigenous and high grain yielding little millet germplasm	Dr A Nirmalakumari	AICRP on Small millet
40	996	196	Little millet	AICRP on Small millets - Waghai	5 June 2021	Indigenous and high grain yielding little millet germplasm	Dr HE Patil	AICRP on Small millet
41	997	196	Little millet	AICRP on Small millets - Kolhapur	5 June 2021	Indigenous and high grain yielding little millet germplasm	Dr Yogeesh Ben	AICRP on Small millet
42	998	196	Little millet	AICRP on Small millets - Dindori	5 June 2021	Indigenous and high grain yielding little millet germplasm	Dr OP Dubey	AICRP on Small millet
43	999	31	Sorghum	Agronomy, ICAR-IIMR-Hyderabad	5 June 2021	Parental lines and Varieties of drought experiment by Dr SS Rao	Dr Gangaiah	IIMR
44	1000	115	Sorghum	AICRP on Sorghum - Akola	8 June 2021	Kharif sorghum landraces for evaluation of breeding traits	Dr RB Ghorade	AICRP on Sorghum
45	1001	115	Sorghum	AICRP on Sorghum - Dharwad	8 June 2021	Kharif sorghum landraces for evaluation of breeding traits	Dr NG Hanumaratti	AICRP on Sorghum
46	1002	115	Sorghum	AICRP on Sorghum - Coimbatore	8 June 2021	Kharif sorghum landraces for evaluation of breeding traits	Dr B Selvi	AICRP on Sorghum
47	1003	115	Sorghum	AICRP on Sorghum - Indore	8 June 2021	Kharif sorghum landraces for evaluation of breeding traits	Dr Usha Saxena	AICRP on Sorghum
48	1004	115	Sorghum	AICRP on Sorghum - Parbhani	8 June 2021	Kharif sorghum landraces for evaluation of breeding traits	Dr KR Kamble	AICRP on Sorghum
49	1005	115	Sorghum	AICRP on Sorghum - Udaipur	8 June 2021	Kharif sorghum landraces for evaluation of breeding traits	Dr Dadya Swamy	AICRP on Sorghum
50	1006	115	Sorghum	AICRP on Sorghum - Pantnagar	8 June 2021	Kharif sorghum landraces for screening for diseases	Dr PK Pandey	AICRP on Sorghum
51	1007	115	Sorghum	AICRP on Sorghum - Akola	8 June 2021	Kharif sorghum landraces for screening for diseases	Dr RB Ghorade	AICRP on Sorghum
52	1008	115	Sorghum	AICRP on Sorghum - Parbhani	8 June 2021	Kharif sorghum landraces for screening for pests	Dr KR Kamble	AICRP on Sorghum



S. No	MTA No	No. of acc.	Name of the crop	Division	Date	Purpose	Recived by	Category
53	1009	115	Sorghum	AICRP on Sorghum - Dharwad	8 June 2021	Kharif sorghum landraces for screening for pests	Dr NG Hanumaratti	AICRP on Sorghum
54	1010	196	Little millet	AICRP on Small millets - Athiyandal	10 June 2021	Indigenous and high grain yielding little millet germplasm	Dr A Nirmalakumari	AICRP on Small millet
55	1011	196	Little millet	AICRP on Small millets - Vizianagaram	10 June 2021	Indigenous and high grain yielding little millet germplasm	Dr TSSK Patro	AICRP on Small millet
56	1012	196	Little millet	AICRP on Small millets - Waghai	10 June 2021	Indigenous and high grain yielding little millet germplasm	Dr HE Patil	AICRP on Small millet
57	1013	196	Little millet	AICRP on Small millets - Bengaluru	10 June 2021	Indigenous and high grain yielding little millet germplasm	Dr TE Nagaraj	AICRP on Small millet
58	1014	206	Finger millet	AICRP on Small millets - Bengaluru	8 June 2021	Indigenous and high grain yielding finger millet germplasm - screening for biotic stress	Dr TE Nagaraj	AICRP on Small millet
59	1015	206	Finger millet	AICRP on Small millets - Mandya	8 June 2021	Indigenous and high grain yielding finger millet germplasm - screening for biotic stress	Dr CA Deepak	AICRP on Small millet
60	1016	206	Finger millet	AICRP on Small millets - Waghai	8 June 2021	Indigenous and high grain yielding finger millet germplasm - screening for biotic stress	Dr HE Patil	AICRP on Small millet
61	1017	206	Finger millet	AICRP on Small millets - Vizianagaram	8 June 2021	Indigenous and high grain yielding finger millet germplasm - screening for biotic stress	Dr TSSK Patro	AICRP on Small millet
62	1018	120	Sorghum	AICRP on Sorghum - Dharwad	10 June 2021	Indigenous kharif sorghum germplasm for screening for pests	Dr NG Hanumaratti	AICRP on Sorghum
63	1019	120	Sorghum	AICRP on Sorghum - Palem	10 June 2021	Indigenous kharif sorghum germplasm for screening for pests	Dr Maheshwaramma	AICRP on Sorghum
64	1020	120	Sorghum	AICRP on Sorghum - Parbhani	10 June 2021	Indigenous kharif sorghum germplasm for screening for pests	Dr KR Kamble	AICRP on Sorghum
65	1021	120	Sorghum	AICRP on Sorghum - Rahuri	10 June 2021	Indigenous kharif sorghum germplasm for screening for pests	Dr AS Jadav	AICRP on Sorghum
66	1022	30	Sorghum	AICRP on Sorghum - Dharwad	10 June 2021	Kharif landraces for screening for pests	Dr NG Hanumaratti	AICRP on Sorghum
67	1023	30	Sorghum	AICRP on Sorghum - Palem	10 June 2021	Kharif landraces for screening for pests	Dr Maheshwaramma	AICRP on Sorghum
68	1024	30	Sorghum	AICRP on Sorghum - Parbhani	10 June 2021	Kharif landraces for screening for pests	Dr KR Kamble	AICRP on Sorghum
69	1025	30	Sorghum	AICRP on Sorghum - Rahuri	10 June 2021	Kharif landraces for screening for pests	Dr AS Jadav	AICRP on Sorghum
70	1026	4	Sorghum	AICRP on Sorghum - Parbhani	15 June 2021	Wild relatives of sorghum	Dr KR Kamble	AICRP on Sorghum
71	1027	4	Sorghum	AICRP on Sorghum - Dharwad	15 June 2021	Wild relatives of sorghum	Dr NG Hanumaratti	AICRP on Sorghum
72	1028	4	Sorghum	AICRP on Sorghum - Akola	15 June 2021	Wild relatives of sorghum	Dr RB Ghorade	AICRP on Sorghum
73	1029	200	Foxtail millet	Plant Pathology - IIMR - Hyderabad	23 June 2021	High yielding and early flowering germplasm	Dr IK Das	IIMR
74	1030	2500	Finger millet	AICRP on Small millets - Vizianagaram	24 June 2021	Finger millet germplasm under CRP-AB-SM	Dr TSSK Patro	AICRP on Small millet
75	1031	2500	Finger millet	AICRP on Small millets - Mandya	24 June 2021	Finger millet germplasm under CRP-AB-SM	Dr CA Deepak	AICRP on Small millet
76	1032	2500	Finger millet	ICAR-VPKAS, Almora	24 June 2021	Finger millet germplasm under CRP-AB-SM	Dr Dinesh Chandra Joshi	ICAR
77	1033	81	Finger millet	Applied Bptany and Biotechnology, University of Mysore	25 June 2021	Finger millet wild relatives	Dr Chandra Nayak	University
78	1033	39	Foxtail millet	Applied Bptany and Biotechnology, University of Mysore	25 June 2021	Foxtail millet wild relatives	Dr Chandra Nayak	University
79	1033	27	Sorghum	Applied Bptany and Biotechnology, University of Mysore	25 June 2021	Sorghum wild relatives	Dr Chandra Nayak	University
80	1033	4	Pearl millet	Applied Bptany and Biotechnology, University of Mysore	25 June 2021	Pearl millet wild relative	Dr Chandra Nayak	University
81	1034	23	Foxtail millet	AICRP on Sorghum - Hisar	25 June 2021	Indigenous foxtail millet germplasm	Dr Pummy Kumari	AICRP on Sorghum
82	1035	100	Sorghum	AICRP on Sorghum - Hisar	25 June 2021	Forage sorghum germplasm	Dr Pummy Kumari	AICRP on Sorghum
83	1036	200	Sorghum	Agri Entomology - IIMR - Hyderabad	25 June 2021	Indigenous sorghum landraces New	Dr PG Padmaja	IIMR
84	1036	75	Finger millet	Agri Entomology - IIMR - Hyderabad	25 June 2021	Finger millet wild relatives	Dr Chandra Nayak	University
85	1036	34	Foxtail millet	Agri Entomology - IIMR - Hyderabad	25 June 2021	Foxtail millet wild relatives	Dr Chandra Nayak	University
86	1036	22	Sorghum	Agri Entomology - IIMR - Hyderabad	25 June 2021	Sorghum wild relatives	Dr Chandra Nayak	University
87	1036	1	Pearl millet	Agri Entomology - IIMR - Hyderabad	25 June 2021	Pearl millet wild relative	Dr Chandra Nayak	University
88	1037	25	Finger millet	Genetic and Plant Breeding, RLBCAU, Jhansi	30 June 2021	Finger millet minicore collections	Dr Vishnu Kumar	CAU
89	1037	25	Foxtail millet	Genetic and Plant Breeding, RLBCAU, Jhansi	30 June 2021	Foxtail millet minicore collections	Dr Vishnu Kumar	CAU
90	1037	25	Barnyard millet	Genetic and Plant Breeding, RLBCAU, Jhansi	30 June 2021	Barnyard millet minicore collections	Dr Vishnu Kumar	CAU
91	1037	25	Proso millet	Genetic and Plant Breeding, RLBCAU, Jhansi	30 June 2021	Proso millet minicore collections	Dr Vishnu Kumar	CAU
92	1037	25	Kodo millet	Genetic and Plant Breeding, RLBCAU, Jhansi	30 June 2021	Kodo millet minicore collections	Dr Vishnu Kumar	CAU
93	1037	25	Little millet	Genetic and Plant Breeding, RLBCAU, Jhansi	30 June 2021	Little millet minicore collections	Dr Vishnu Kumar	CAU
94	1038	100	Sorghum	Genetic and Plant Breeding, SAST, Shirpur	30 June 2021	Sorghum kharif landraes	Dr Rajendragouda	University
95	1039	40	Foxtail millet	Dept of Botany, Archarya Nagarjuna University, Guntur	30 June 2021	Varieties and indigenous germplasm	Dr Rama Rao	University



S. No	MTA No	No. of acc.	Name of the crop	Division	Date	Purpose	Recived by	Category
96	1040	70	Sorghum	The Director, ICAR-IGFRI-Jhansi	2 July 2021	Single and Multi-cut forage indigenous sorghum germplasm		ICAR
97	1041	10	Sorghum	Forage, Millets and Nutrition Section, Punjab Agricultural University-Ludhiana	3 July 2021	Pop sorghum germplasm	Dr Harpreet Kaur	AICRP on Sorghum
98	1042	50	Sorghum	Dept of Genetic nad Plant Breeding, ACRI-Virinchipuram	5 July 2021	Photo insensitive sorghum germplasm (early flowering)	Dr Nanthakumar	University
99	1043	40	Finger millet	Sahaja Samrudha, Timmapur, Bommanahalli	8 July 2021	Finger millet germplasm from Karnataka	Dr Anandateertha Pyati	NGO
100	1044	1	Foxtail millet	Biotechnology - ICAR-IIMR-Hyderabad	8 July 2021	Foxtail millet germplasm ISe 719/FOX 4422	Dr P Rajendrakumar	IIMR
101	1045	100	Foxtail millet	AICRP on Small millets - Bengaluru	16 July 2021	High grain yielding indigenous foxtail millet germplasm - screening for biotic stress	Dr KB Palanna	AICRP on Small millet
102	1046	196	Little millet	AICRP on Small millets - Bengaluru	16 July 2021	Indigenous and high grain yielding little millet germplasm screening for biotic stress	Dr KB Palanna	AICRP on Small millet
103	1047	50	Finger millet	Dept of Genetics and Plant Breeding, Sam Higginbotham University, Naini	20 July 2021	Finger millet germplasm from Uttar Pradesh	Dr Hema Yadav	University
104	1048	60	Sorghum	Dept of Genetic nad Plant Breeding, ACRI-Virinchipuram	30 July 2021	Indigenous photo insensitive sorghum germplasm (flowers in both kharif and rabi)	Dr Nanthakumar	University
105	1049	7	Proso millet	Plant Breeding, ICAR-IIMR-Hyderabad	3 August 2021	Anthocyanin pigmented proso millet germplasm	Dr KN Ganapathy	IIMR
106	1050	4	Sorghum	AICRP on Sorghum - Akola	5 August 2021	Wild relatives of sorghum	Dr RB Ghorade	AICRP on Sorghum
107	1051	1	Sorghum	Dept of Virology, Venkateshwara University, Tripathi	11 August 2021	IS 9606 (Rio)	Dr M Hema	University
108	1052	33	Barnyard millet	Dept of Genetic and Plant Breeding, Annamalai University	11 August 2021	Indigenous Barnyard millet landraces	Dr R Narayanan	University
109	1053	15	Sorghum	Plant Breeding, ICAR-IIMR-Hyderabad	11 August 2021	Sudan grass sorghum germplasm	Dr B. Venkatesh Bhat	IIMR
110	1054	5	Barnyard millet	Plant Breeding, ICAR-IIMR-Hyderabad	12 August 2021	ELB 45, ELB 104, ELB 110, ELB 114 and ELB 116 - Indigenous collections	Dr B Amasiddha	IIMR
111	1055	33	Sorghum	AICRP on Sorghum - Surat	24 August 2021	High seed weight rabi sorghum landraces including wild an indigenous acc.	Dr Bharath Kumar Davda	AICRP on Sorghum
112	1056	26	Sorghum	AICRP on Sorghum - Vijayapura	25 September 2021	More seed weight rabi sorghum landraces	Dr Gowri Sajjanar	AICRP on Sorghum
113	1057	26	Sorghum	AICRP on Sorghum - Dharwad	25 September 2021	More seed weight rabi sorghum landraces	Dr NG Hanumaratti	AICRP on Sorghum
114	1058	26	Sorghum	AICRP on Sorghum - Parbhani	25 September 2021	More seed weight rabi sorghum landraces	Dr KR Kamble	AICRP on Sorghum
115	1059	26	Sorghum	AICRP on Sorghum - Rahuri	25 September 2021	More seed weight rabi sorghum landraces	Dr AS Jadav	AICRP on Sorghum
116	1060	26	Sorghum	Plant Breeding, ICAR-IIMR-Hyderabad	25 September 2021	More seed weight rabi sorghum landraces	Dr R. Madhusudhana	AICRP on Sorghum
117	1061	16	Sorghum	AICRP on Sorghum - Hageri (Volunteer centre)	25 September 2021	More seed weight rabi sorghum landraces	Dr G Girish	AICRP on Sorghum
118	1062	16	Sorghum	AICRP on Sorghum - Chamarajnagar	25 September 2021	More seed weight rabi sorghum landraces	Dr Somu G	AICRP on Sorghum
119	1063	16	Sorghum	AICRP on Sorghum - Nandyal	25 September 2021	More seed weight rabi sorghum landraces	Dr SK Sameera	AICRP on Sorghum
120	1064	16	Sorghum	AICRP on Sorghum - Tandur	25 September 2021	More seed weight rabi sorghum landraces	Dr Sudharani	AICRP on Sorghum
121	1065	16	Sorghum	AICRP on Sorghum - Solapur	25 September 2021	More seed weight rabi sorghum landraces	Dr Parashuram Patroti	IIMR
122	1066	2	Foxtail millet	Plant Breeding, ICAR-IIMR-Hyderabad	4 October 2021	Molecular studies	Miss Usha Satija	IIMR
123	1067	2	Sorghum	AICRP on Sorghum - Tandur	20 October 2021		Dr K Sujatha	AICRP on Sorghum
124	1068	2	Finger millet	AICRP on Small millets - Bengaluru	2 November 2021	Varieties	Dr KB Palanna	AICRP on Small millet
125	1069	1	Finger millet	Dept of Botany, MD University, Rohtak	3 November 2021	Variety	Dr Gaurav Chaudhary	University
126	1070	1	Barnyard millet	Dept of Botany, MD University, Rohtak	3 November 2021	Variety	Dr Gaurav Chaudhary	University
127	1071	6	Sorghum	Forage, Millets and Nutrition Section, Punjab Agricultural University-Ludhiana	12 November 2021	Pop sorghum germplasm	Dr Harpreet Kaur	University
128	1072	41	Sorghum	Dept of Botany, UAS-Bengaluru	16 November 2021	Sweet sorghum germplasm	Dr Harnikumar	University
129	1073	40	Foxtail millet	Dept of Crop Physiologist, Assam Agricultural University, Jorhat	18 November 2021	Indigenous foxtail millet germplasm	Dr Ranjan Das	University
130	1074	23	Sorghum	Plant Biotechnology, ICAR-IIMR-Hyderabad	25 November 2021	Parental lines of sorghum	Dr D Balakrishna	IIMR
131	1075	6	Sorghum	AICRP on Sorghum - Dharwad	25 November 2021	Wild species of sorghum	Dr NG Hanumaratti	AICRP on Sorghum
132	1076	31	Barnyard millet	Plant Breeding - ICAR-IIMR-Hyderabad	30 November 2021	Selections from K2021 characterization	Dr B Amasiddha	IIMR
133	1077	5	Finger millet	Agronomy, ICAR-IIMR-Hyderabad	2 December 2021	Core collections of finger millet germplasm	Dr Swarna Ronanki	IIMR
134	1078	6	Sorghum	Dept of Genetics and Plant Breeding, College of Agri, Raichur	3 December 2021	Scented sorghum for aroma analysis	Dr Suvarna	University
135	1079	83	Sorghum	AICRP on Sorghum - Surat	3 December 2021	Resistant sources, early, high yielding, high biomass and	Dr Bharath Kumar Davda	AICRP on Sorghum



S. No	MTA No	No. of acc.	Name of the crop	Division	Date	Purpose	Recived by	Category
						bold seeds for kharif and rabi		
136	1080	5	Finger millet	Dept. of Botany, University of Calicut	10 December 2021	Finger millet varieties	Dr Yusuf	University
137	1081	100	Foxtail millet	Dept of Genetic and Plant Breeding, Nagaland University, Medziphema	15 December 2021	Indigenous foxtail millet germplasm	Mr Purushotama Rao	University
138	1082	304	Finger millet	Plant Breeding - ICAR-IIMR-Hyderabad	21 December 2021	Reference set of finger millet germplasm	Dr KN Ganapathy	IIMR
139	1083	9	Barnyard millet	Plant Breeding - ICAR-IIMR-Hyderabad	22 December 2021	Indigenous Barnyard millet landraces	Dr B Amasiddha	IIMR
140	1086	7	Foxtail millet	Plant Breeding, ICAR-IIMR-Hyderabad	29 December 2021	For molecular work	Miss Usha Satija	IIMR
141	1087	226	Sorghum	ICAR - IIMR - Hyderabad	3 January 2022	IS Numbers collected from high altitude	Dr D Sooganna	IIMR
142	1088	3	Sorghum	Dept of Botany, Padmabani Arts & Science College for Women, Salem	12 January 2022	Millet for demonstration	Dr K Anbarasan	College
143	1088	3	Pearl millet	Dept of Botany, Padmabani Arts & Science College for Women, Salem	12 January 2022	Millet for demonstration	Dr K Anbarasan	College
144	1088	3	Finger millet	Dept of Botany, Padmabani Arts & Science College for Women, Salem	12 January 2022	Millet for demonstration	Dr K Anbarasan	College
145	1088	3	Foxtail millet	Dept of Botany, Padmabani Arts & Science College for Women, Salem	12 January 2022	Millet for demonstration	Dr K Anbarasan	College
146	1088	3	Barnyard millet	Dept of Botany, Padmabani Arts & Science College for Women, Salem	12 January 2022	Millet for demonstration	Dr K Anbarasan	College
147	1088	3	Kodo millet	Dept of Botany, Padmabani Arts & Science College for Women, Salem	12 January 2022	Millet for demonstration	Dr K Anbarasan	College
148	1088	3	Proso millet	Dept of Botany, Padmabani Arts & Science College for Women, Salem	12 January 2022	Millet for demonstration	Dr K Anbarasan	College
149	1088	3	Little millet	Dept of Botany, Padmabani Arts & Science College for Women, Salem	12 January 2022	Millet for demonstration	Dr K Anbarasan	College
150	1089	8	Sorghum	AICRP on Sorghum - Surat	12 January 2022	Resistant sources	Dr Bharath Kumar Davda	AICRP on Sorghum
151	1090	8	Sorghum	Division of Germplasm Conservation, ICAR-NBPGR-New Delhi	27 January 2022	Millet genetic stocks for registration	Dr Eveena Gupta	ICAR
152	1090	1	Finger millet	Division of Germplasm Conservation, ICAR-NBPGR-New Delhi	27 January 2022	Millet genetic stocks for registration	Dr Eveena Gupta	ICAR
153	1090	1	Foxtail millet	Division of Germplasm Conservation, ICAR-NBPGR-New Delhi	27 January 2022	Millet genetic stocks for registration	Dr Eveena Gupta	ICAR
154	1090	1	Little millet	Division of Germplasm Conservation, ICAR-NBPGR-New Delhi	27 January 2022	Millet genetic stocks for registration	Dr Eveena Gupta	ICAR
155	1090	1	Barnyard millet	Division of Germplasm Conservation, ICAR-NBPGR-New Delhi	27 January 2022	Millet genetic stocks for registration	Dr Eveena Gupta	ICAR
156	1091	56	Finger millet	ICAR - IIMR - Hyderabad	27 January 2022	Sahaja material and local landraces	Dr KN Ganapathy	IIMR
157	1092	4	Sorghum	Dept of Botany, KM Govt Institute for PG Rsearch, Pondicherry	19 February 2022	Check varieties of sorghum	Dr Vikranth	College
158	1093	1	Finger millet	AICRP on Small millets - Bengaluru	19 February 2022	Resistant source	Dr KB Palanna	AICRP on Small millet
159	1094	1	Sorghum	Biotechnology Department, Jaypee Institute of IT, Noida	19 February 2022	Resistant source	Ms Archana Kumari	College
160	1095	6	Proso millet	ICAR - IIMR - Hyderabad	19 February 2022	Leaf sheath pigmented germplasm	Dr KN Ganapathy	IIMR
161	1096	112	Sorghum	Crop Improvement Division, ICAR-IGFRI-Jhansi	23 February 2022	Forage sorghum germplasm	Ms Indu	ICAR
162	1097	20	Sorghum	Department of Physiology, TNAU-Coimbatore	1 March 2022	Drought tolerant sorghm germplasm	Dr MK Kalarani	SAU
163	1098	25	Browntop millet	School of Agriculture, Food Technology Nutrition, Lovely University, Jalandhar	1 March 2022	Browntop germplasm	Dr Sawinder Kaur	University
164	1099	5	Browntop millet	School of Agriculture, Food Technology Nutrition, Lovely University, Jalandhar	14 March 2022	Browntop germplasm	Dr Sawinder Kaur	University
165	1100	500	Finger millet	PI UPICAR, Millets Project, BUAT, Banda	16 March 2022	Indigenous finger millet germplasm	Dr Kamaluddin	SAU
166	1101	60	Finger millet	Dept. of Genetics and Plant Breeding, Agricultural College, ANGRAU, Bapatla	24 March 2022	Indigenous finger millet germplasm	Ms. G Bharathi	SAU
		19466	Total					

**Table 44: IC Nos allotted to millets germplasm collection from Tamil Nadu**

National Bureau of Plant Genetic Resources (ARIS Cell) Pusa Campus, New Delhi-110012; Mission Code: E20180046Z02; AKMU-7043 IC: 642428 to 642461

Collaborator(s): Dr. M Elangovan NBPGR Regional Station-HYDERABAD Hyderabad Telangana, Prof. Nirmala Kumari Centre of Excellence in Millets (AICRP) Thiruvannamalai Tamil Nadu, Dr. M. Rajesh Asso. Professor Centre of Excellence in Millets (AICRP) Thiruvannamalai Tamil Nadu, Dr. Usha Saxena Research Scientist AICRP on Sorghum College of Agriculture-RVSKVV-Indore Old C.O Road, Lalaram Nagar Indore Madhya Pradesh, Dr. V. P. Kataria Professor AICRP on Sorghum College of Agriculture-RVSKVV-Indore Old C.O Road, Lalaram Nagar Indore Madhya Pradesh

Total 34 Record(s).

S.No.	Accession Material Type	Coll-No Other-Id	Crop Species	Cultivar Name Bio-Status Variety	Sample Method Sample Type	Collection Date Village/District/State	Source Frequency Habitat	Pedigree Donor	Imp TraitsRemark
1	IC-0642428	ER 37	Finger Millet	Vellai suruttai	BULK	27 Jun 2018	FARM	-	-
	SEEDS	-	<i>Eleusine coracana</i>	LANDRACE	POPULATION	Melnimiyampattu	STORE	Farmer: Ramu	-
				-		/Vellore /Tamil Nadu	FREQUENT		
							CULTIVATED		
2	IC-0642429	ER 41	Finger Millet	Vellai suruttai	BULK	27 Jun 2018	FARM	-	-
	SEEDS	-	<i>Eleusine coracana</i>	LANDRACE	POPULATION	Narasingapuram	STORE	Farmer:	-
				-		/Vellore /Tamil Nadu	ABUNDANT	Govindaraj	
							CULTIVATED		
3	IC-0642430	ER 43	Pennisetum	Cumbu	BULK	27 Jun 2018	FARM	-	-
	SEEDS	-	<i>Pennisetum typhoides</i>	LANDRACE	POPULATION	Narasingapuram	STORE	Farmer: Kavitha	-
				-		/Vellore /Tamil Nadu	FREQUENT		
							CULTIVATED		
4	IC-0642431	ER 55	Finger Millet	Kezvaragu	BULK	28 Jun 2018	FARM	-	-
	SEEDS	-	<i>Eleusine coracana</i>	LANDRACE	POPULATION	Kallarapatti /Vellore	STORE	Farmer:	-
				-		/Tamil Nadu	ABUNDANT	Kakiyannan	
							CULTIVATED		
5	IC-0642432	ER 58	Pennisetum	IR 8	BULK	28 Jun 2018	FARM	-	-
	SEEDS	-	<i>Pennisetum typhoides</i>	LANDRACE	POPULATION	RMS Puthur /Vellore	STORE	Farmer:	-
				-		/Tamil Nadu	FREQUENT	Swaminathan	
							CULTIVATED		
6	IC-0642433	ER 62	Finger Millet	Kezvaragu	BULK	28 Jun 2018	FARM	-	-
	SEEDS	-	<i>Eleusine coracana</i>	LANDRACE	POPULATION	Malairreddiyur /Vellore	STORE	Farmer:	-
				-		/Tamil Nadu	FREQUENT	Pandian	
							CULTIVATED		
7	IC-0642434	ER 66	Little Millet	Siru samai	BULK	28 Jun 2018	FARM	-	-
	SEEDS	-	<i>Panicum sumatrense</i>	LANDRACE	POPULATION	Puttur	STORE	Farmer:	-
				-		/Thiruvannamalai	FREQUENT	Sathyavani	
						/Tamil Nadu	CULTIVATED		
8	IC-0642435	ER 72	Pennisetum	Nattu cumbu	BULK	29 Jun 2018	FARM	-	-
	SEEDS	-	<i>Pennisetum typhoides</i>	LANDRACE	POPULATION	Kil sirupakkam	STORE	Farmer:	-
				-		/Thiruvannamalai	ABUNDANT	Thiruvannamalai	
						/Tamil Nadu	CULTIVATED		
9	IC-0642436	ER 75	Finger Millet	Co 13	BULK	29 Jun 2018	FARM	-	-
	SEEDS	-	<i>Eleusine coracana</i>	BREEDING/ADV. BREEDING LINE	POPULATION	Se Gudalur	STORE	Farmer:	-
				-		/Thiruvannamalai	FREQUENT	Mayavan	



S.No.	Accession Material Type	Coll-No Other-Id	Crop Species	Cultivar Name Bio-Status Variety	Sample Method Sample Type	Collection Date Village/District/State	Source Frequency Habitat	Pedigree Donor	Imp TraitsRemark
						/Tamil Nadu	CULTIVATED		
10	IC-0642437	ER 76	Finger Millet	Nattu kezvaragu	BULK	29 Jun 2018	FARM	-	-
	SEEDS	-	<i>Eleusine coracana</i>	LANDRACE	POPULATION	Se Gudalur	STORE	Farmer:	-
				-		/Thiruvannamalai	FREQUENT	Manimaran	
						/Tamil Nadu	CULTIVATED		
11	IC-0642438	ER 78	Pennisetum	Thevana cumbu	BULK	29 Jun 2018	FARM	-	-
	SEEDS	-	<i>Pennisetum typhoides</i>	LANDRACE	POPULATION	Se Gudalur	STORE	Farmer:	-
				-		/Thiruvannamalai	FREQUENT	Kalaiselvi	
						/Tamil Nadu	CULTIVATED		
12	IC-0642439	ER 81	Finger Millet	Kezvaragu	BULK	29 Jun 2018	FARM	-	-
	SEEDS	-	<i>Eleusine coracana</i>	LANDRACE	POPULATION	Thanipadi	STORE	Farmer: Kannan	-
				-		/Thiruvannamalai	FREQUENT		
						/Tamil Nadu	CULTIVATED		
13	IC-0642440	ER 83	Finger Millet	Vellai ragi	BULK	29 Jun 2018	FARM	-	-
	SEEDS	-	<i>Eleusine coracana</i>	LANDRACE	POPULATION	T Velur	STORE	Farmer: R	-
				-		/Thiruvannamalai	FREQUENT	Manikandan	
						/Tamil Nadu	CULTIVATED		
14	IC-0642441	ER 90	Pennisetum	Nattu cumbu	BULK	29 Jun 2018	FARM	-	-
	SEEDS	-	<i>Pennisetum typhoides</i>	LANDRACE	POPULATION	Chinniyampatti	STORE	Farmer:	-
				-		/Thiruvannamalai	FREQUENT	Mottaiyan	
						/Tamil Nadu	CULTIVATED		
15	IC-0642442	ER 92	Pennisetum	Nattu cumbu	BULK	29 Jun 2018	FARM	-	-
	SEEDS	-	<i>Pennisetum typhoides</i>	LANDRACE	POPULATION	Chinniyampatti	STORE	Farmer:	-
				-		/Thiruvannamalai	FREQUENT	Mottaiyan	
						/Tamil Nadu	CULTIVATED		
16	IC-0642443	ER 99	Finger Millet	Kezvaragu	BULK	29 Jun 2018	FARM	-	-
	SEEDS	-	<i>Eleusine coracana</i>	LANDRACE	POPULATION	Mangalam /Vellore	STORE	Farmer: Kutti	-
				-		/Tamil Nadu	ABUNDANT		
							CULTIVATED		
17	IC-0642444	ER 101	Foxtail Millet	Co TE7	BULK	29 Jun 2018	FARM	-	-
	SEEDS	-	<i>Setaria italica</i>	BREEDING/ADV. BREEDING LINE	POPULATION	Mangalam /Vellore	STORE	Farmer: Kutti	-
				-		/Tamil Nadu	ABUNDANT		
							CULTIVATED		
18	IC-0642445	E 305	Finger Millet	-	SELECTIVE	27 Oct 2018	FARMERS	-	-
	INFLORESCENCE	-	<i>Eleusine coracana</i>	PRIMITIVE CULTIVAR	INDIVIDUAL PLANT	Bhavadi /Dong	FIELD	-	-
				-		/Gujarat	FREQUENT		
							CULTIVATED		
19	IC-0642446	E 306	Finger Millet	Nagli	SELECTIVE	27 Oct 2018	FARMERS	-	-
	INFLORESCENCE	-	<i>Eleusine coracana</i>	PRIMITIVE CULTIVAR	INDIVIDUAL PLANT	Pimbri /Dong /Gujarat	FIELD	-	-
				-			FREQUENT		
							CULTIVATED		
20	IC-0642447	E 309	Little Millet	Vari	SELECTIVE	27 Oct 2018	FARMERS	-	-
	INFLORESCENCE	-	<i>Panicum sumatrense</i>	PRIMITIVE CULTIVAR	INDIVIDUAL PLANT	Hanvant chond	FIELD	Farmer: Nanoj	-
				-		/Dong /Gujarat	FREQUENT	bhai jadav	



S.No.	Accession Material Type	Coll-No Other-Id	Crop Species	Cultivar Name Bio-Status Variety	Sample Method Sample Type	Collection Date Village/District/State	Source Frequency Habitat	Pedigree Donor	Imp TraitsRemark
							CULTIVATED		
21	IC-0642448	E 310	Finger Millet	Nagli	SELECTIVE	27 Oct 2018	FARMERS	-	Papadi
	INFLORESCENCE	-	Eleusine coracana	PRIMITIVE CULTIVAR	INDIVIDUAL PLANT	Phalkhet /Dong	FIELD	Farmer: Bhudya	and
				-		/Gujarat	FREQUENT	bhai	biscuit
							CULTIVATED		-
22	IC-0642449	E 315	Finger Millet	-	SELECTIVE	27 Oct 2018	FARMERS	-	-
	INFLORESCENCE	-	Eleusine coracana	PRIMITIVE CULTIVAR	INDIVIDUAL PLANT	Dong /Gujarat	FIELD	-	-
				-			FREQUENT		
							CULTIVATED		
23	IC-0642450	E 317	Finger Millet	-	SELECTIVE	27 Oct 2018	FARMERS	-	Long
	INFLORESCENCE	-	Eleusine coracana	PRIMITIVE CULTIVAR	INDIVIDUAL PLANT	Kadmal /Dong	FIELD	-	fingers
				-		/Gujarat	FREQUENT		and10
							CULTIVATED		fingers
									-
24	IC-0642451	E 318	Finger Millet	Nagli	BULK	27 Oct 2018	FARM	-	-
	SEEDS	-	Eleusine coracana	PRIMITIVE CULTIVAR	POPULATION	Subir /Dong /Gujarat	STORE	Farmer: Soma	-
				-			FREQUENT	bhai	
							CULTIVATED		
25	IC-0642452	E 321	Little Millet	varai	SELECTIVE	28 Oct 2018	FARMERS	-	long
	INFLORESCENCE	-	Panicum sumatrense	PRIMITIVE CULTIVAR	INDIVIDUAL PLANT	Borpada /Dong	FIELD	-	panicle
				-		/Gujarat	FREQUENT		-
							CULTIVATED		
26	IC-0642453	E 322	Finger Millet	-	SELECTIVE	28 Oct 2018	FARMERS	-	9 fingers
	INFLORESCENCE	-	Eleusine coracana	PRIMITIVE CULTIVAR	INDIVIDUAL PLANT	Borpada /Dong	FIELD	Farmer:	-
				-		/Gujarat	FREQUENT	Sandeep bhai	
							CULTIVATED		
27	IC-0642454	E 325	Finger Millet	Nagli	BULK	28 Oct 2018	FARM	-	White
	SEEDS	-	Eleusine coracana	PRIMITIVE CULTIVAR	POPULATION	Dagdi Amba /Dong	STORE	Farmer: Satish	finger
				-		/Gujarat	FREQUENT	Kasiram	millet,
							CULTIVATED		Roti,
									papad
									making
									-
28	IC-0642455	E 326	Finger Millet	Nagli	BULK	28 Oct 2018	FARM	-	Red finger
	SEEDS	-	Eleusine coracana	PRIMITIVE CULTIVAR	POPULATION	Dagdi Amba /Dong	STORE	Farmer: Sivdas	millet
				-		/Gujarat	FREQUENT		-
							CULTIVATED		
29	IC-0642456	E 328	Finger Millet	-	SELECTIVE	28 Oct 2018	FARMERS	-	compact
	INFLORESCENCE	-	Eleusine coracana	PRIMITIVE CULTIVAR	INDIVIDUAL PLANT	Dagdi Amba /Dong	FIELD	-	and long
				-		/Gujarat	FREQUENT		panicle
							CULTIVATED		-
30	IC-0642457	E 332	Little Millet	varai	SELECTIVE	28 Oct 2018	FARMERS	-	Purple
	INFLORESCENCE	-	Panicum sumatrense	PRIMITIVE CULTIVAR	INDIVIDUAL PLANT	Bendmal /Dong	FIELD	-	glume,
				-		/Gujarat	FREQUENT		Small
							CULTIVATED		grain
									white
									-
31	IC-0642458	E 333	Little Millet	-	SELECTIVE	28 Oct 2018	FARMERS	-	Semi
	INFLORESCENCE	-	Panicum sumatrense	PRIMITIVE CULTIVAR	INDIVIDUAL PLANT	Bendmal /Dong	FIELD	-	loose



S.No.	Accession Material Type	Coll-No Other-Id	Crop Species	Cultivar Name Bio-Status Variety	Sample Method Sample Type	Collection Date Village/District/State	Source Frequency Habitat	Pedigree Donor	Imp TraitsRemark
				-		/Gujarat	FREQUENT CULTIVATED		panicle, bold, round and white seed -
32	IC-0642459	E 335	Little Millet	varai	SELECTIVE	28 Oct 2018	FARMERS	-	Compact,
	INFLORESCENCE	-	Panicum sumatrense	PRIMITIVE CULTIVAR	INDIVIDUAL PLANT	Manmodi /Dong	FIELD	Farmer: Sanjay	long
				-		/Gujarat	FREQUENT CULTIVATED	bhai patil	panicle -
33	IC-0642460	E 337	Finger Millet	Nagli	SELECTIVE	28 Oct 2018	FARMERS	-	Open
	INFLORESCENCE	-	Eleusine coracana	PRIMITIVE CULTIVAR	INDIVIDUAL PLANT	Kotiyamal /Dong	FIELD	Farmer:	panicle, 7-
				-		/Gujarat	FREQUENT CULTIVATED	Jayaram bhai	8 fingers -
34	IC-0642461	E 340	Little Millet	varai	SELECTIVE	28 Oct 2018	FARMERS	-	purple
	INFLORESCENCE	-	Panicum sumatrense	PRIMITIVE CULTIVAR	INDIVIDUAL PLANT	Humbabada /Dong	FIELD	Farmer:	glume,
				-		/Gujarat	FREQUENT	Satharam bhai	round
							CULTIVATED		seed -

Table 45: The list of millets genetic stocks registered with ICAR-NBPGR during 1998-2022

Sr. No.	Crop name	National identity	Donor identity	INGR No.	Year	Pedigree	Developer	Developing institute	Novel unique features
1	Sorghum	EC434430	IS 41762	INGR02022	2002	U- Thong - (EC434430) sel	B Sarath Babu, HC Sharma, RDVJ Prasada Rao and KS Varaprasad	ICAR-National Bureau of Plant Genetic Resources (NBPGR), Regional Station, Rajendra Nagar, Hyderabad, Andhra Pradesh	Immune to yellow sugarcane aphid Melanapsis sacchari
2	Sorghum	(IC432861 432862)	140 A & B	INGR04094	2004	104B x ICSB36209	BN Narkhede, JV Patil, SB Chaudhary, BK Katule, SB Wandhekar, VM Kulkarni and BB Thombare	Mahatma Phule Krishi Vidyapeeth (MPKV), Rahuri, Ahmednagar, Maharashtra	CMS, thermoinsensitive with high yield and long panicle (28cm)
3	Sorghum	IC471842	S 437-1	INGR05016	2005	Sel from S 153/V 60-1 x Sorghum roxburghii P-1-3-7-1-1	SK Pahuja, RPS Grewal, Rajesh Yadav, Yogesh Jindal, SR Pundir, YP Luthra, AS Rathi and SP Singh	Forage section, CCS Haryana Agricultural University (CCS HAU), Hisar, Haryana	Low HCN (Hydrocyanic acid), IVDMD) & multiple resistance
4	Sorghum	IC549901	CRS-1	INGR07026	2007	Selection from Hegari landrace from Hegari village Hegari village, Bijapur	Prabhakar, SS Rao, IK Das and MS Raut	Centre on Rabi Sorghum, ICAR-Indian Institute of Millets Research (IIMR) N.H. 9, Bypass Road, Shelgi, Solapur, Maharashtra	Better drought tolerant mechanism
5	Sorghum	IC560414	MS463B	INGR08080	2008	463B-SPV463 x 2219B	S Audilakshmi, C Aruna, RV Vidya Bhushanam and N Seetharama	ICAR-Indian Institute of Millets Research Rajendranagar, Hyderabad, Telangana	Converted male & female parents of dual purpose sorghum hybrid, SPH 1148 with high yield
6	Sorghum	IC561243	NR 486R	INGR08081	2008	NR486-IS23521 x SPV475	S Audilakshmi, C Aruna, RV Vidya Bhushanam and N Seetharama	ICAR-Indian Institute of Millets Research Rajendranagar, Hyderabad, Telangana	Converted male & female parents of dual purpose sorghum hybrid, SPH 1148 with high yield
7	Sorghum	IC345715	EC-13	INGR08082	2008	EC-13	M Elangovan, PG Padmaja and Prabhakar	ICAR-Indian Institute of Millets Research Rajendranagar, Hyderabad, Telangana	Shoot fly resistance and high grain yield
8	Sorghum	IC565017	SPV 1742	INGR09017	2009	Selection from EC515837	M Elangovan, UD Chavan, VR Bhagwat, TG Nageswararao, B Venkatesh Bhatt and CV Ratnavathi	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telangana	Good roti and dough making qualities
9	Sorghum	IC567687 & IC567688	MS line 126 A & B	INGR09018	2009	2219B x SPV 126	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telangana	Male sterility, with sweet stalk and greyed yellow grain colour
10	Sorghum	IC567689 & IC567690	MS line 91 A & B	INGR09019	2009	2219B x SPV 221	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telangana	Male sterility, with yellow grain colour
11	Sorghum	IC567691 & IC567692	MS line 356A & B	INGR09020	2009	2219B x IS3691 x M 35-1	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telangana	Male sterility, with high cane yield
12	Sorghum	IC567693 & IC567694	MS line 288A & B	INGR09021	2009	422B x 310B	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telangana	Male sterility, with sweet bold grain
13	Sorghum	IC567695 &	MS line 45A & B	INGR09022	2009	296B x M 35-1	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR),	Male sterility, with sweet bold grain



Sr. No.	Crop name	National identity	Donor identity	INGR No.	Year	Pedigree	Developer	Developing institute	Novel unique features
		IC567696						Rajendranagar, Hyderabad, Telengana	
14	Sorghum	IC569675	NRCDFR-06-1	INGR09088	2009	NRCSFR 06-1-SPV-15-18 x IS 2122	C Aruna, PG Padmaja, Vittal Sharma, T Hussain, VR Bhagwat, S Audilakshmi and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Shoot fly tolerance with multiple resistance to leaf diseases and also agronomic superiority and yield
15	Sorghum	IC392140	PEC 17	INGR09089	2009	PEC 17	M Elangovan, SS Rao, Prabhakar, Vilas A Tonapi, D Chandra and Sekara Reddy	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	High grain yield and high biomass under rabi conditions and shallow soil
16	Sorghum	IC570245	PDSR-GM-25	INGR09090	2009	Recombinant inbred line from cross 296 B x B 58586	S Audilakshmi, IK Das, N Seetharama, RB Ghorade, PN Mane, MY Kamtar and YD Narayana	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Grain mould resistance and round grain
17	Sorghum	IC570246	PDSR-GM-83	INGR09091	2009	RIL from cross 296 B x B 58586	S Audilakshmi, IK Das, N Seetharama, RB Ghorade, PN Mane, MY Kamtar and YD Narayana	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Grain mould resistance with greyed yellow grain
18	Sorghum	IC570247	PDSR-GM-92	INGR09092	2009	RIL from cross 296 B x B 58586	S Audilakshmi, IK Das, N Seetharama, RB Ghorade, PN Mane, MY Kamtar and YD Narayana	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Grain mould resistance with tall plant type
19	Sorghum	IC570248	PDSR-GM-98	INGR09093	2009	RIL from cross 296 B x B 58586	S Audilakshmi, IK Das, N Seetharama, RB Ghorade, PN Mane, MY Kamtar and YD Narayana	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Grain mould resistance with yellow white grain
20	Sorghum	IC570249	PDSR-GM-124	INGR09094	2009	RIL from cross 296 B x B 58586	S Audilakshmi, IK Das, N Seetharama, RB Ghorade, PN Mane, MY Kamtar and YD Narayana	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Grain mould resistance with tall plant type and long panicles
21	Sorghum	IC570250	09037; IC570250	INGR09095	2009	RIL from cross 296 B x B 58586	S Audilakshmi, IK Das, N Seetharama, RB Ghorade, PN Mane, MY Kamtar and YD Narayana	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Late duration grain mould resistance
22	Sorghum	IC570251	PDSR-GM-170	INGR09096	2009	RIL from cross 296 B x B 58586	S Audilakshmi, IK Das, N Seetharama, RB Ghorade, PN Mane, MY Kamtar and YD Narayana	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Grain mould resistance with long primary branches
23	Sorghum	IC570252	PDSR-GM-203	INGR09097	2009	RIL from cross 296 B x B 58586	S Audilakshmi, IK Das, N Seetharama, RB Ghorade, PN Mane, MY Kamtar and YD Narayana	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Early duration grain mould resistance
24	Sorghum	IC572930	MS 3042 A & B	INGR09098	2009	AKMS 14B x CSV 8R	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Dwarf MS line with high crude protein
25	Sorghum	IC572931	MS 3151 A & B	INGR09099	2009	227 B x 45 B	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Medium early duration male sterile line with high stalk protein
26	Sorghum	IC572932	MS 3062 A & B	INGR09100	2009	27 B x IS 19305	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Medium tall male sterile line with good quality of stalk
27	Sorghum	IC572933	MS 3009 A & B	INGR09101	2009	(IS 3677 x IS 1054) x SPV 775	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Medium duration MS line with superior stover quality
28	Sorghum	IC572934	MS 3182A & B	INGR09102	2009	191 B x IS 3922 x karad local	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Medium dwarf MS line with high ash (9.6%) in stalk
29	Sorghum	IC345703	EC-1	INGR09103	2009	EC-1	M Elangovan, TG Nageshwara Rao and N Sivaraj	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Resistance to multiple foliar diseases-rust, anthracnose, zonate leaf spot, sooty stripe and downy mildew
30	Sorghum	IC345733	EC-31	INGR09104	2009	EC-31	M Elangovan, TG Nageshwara Rao and N Sivaraj	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Resistance to multiple foliar diseases - rust, zonate leaf spot, sooty stripe and ergot
31	Sorghum	IC345734	EC-32	INGR09105	2009	EC-32	M Elangovan, TG Nageshwara Rao and N Sivaraj	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Resistance to multiple foliar diseases - rust, zonate leaf spot, sooty stripe, downy mildew and ergot
32	Sorghum	IC345772	SEVS-6	INGR09106	2009	SEVS-6	M Elangovan, TG Nageshwara Rao and N Sivaraj	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Resistance to multiple foliar diseases - rust, zonate leaf spot, sooty stripe, downy mildew and ergot
33	Sorghum	IC0585920	SbABM	INGR10131	2010	Somaclonal Mutant of A1 variety.	MS Maralappanavar, GM Sajjanar, VV Kulkarni, SS Patil and MS Kuruvinashetti	Agricultural Research Station, UAS, Dharwad, Karnataka	An axillary branched somaclonal mutant derived from A1 variety of rabi sorghum, productive ear heads are branched with grain size on par with main ear head.
34	Sorghum	IC0585921	Sakkari Mukkari Jola	INGR10132	2010	Collection from farmers fields of North Karnataka.	BD Biradar, GM Sajjanar, PB Patil and SB Devarnavadagi	Regional Agricultural Research Station (RARS), Bijapur, Karnataka	Source of very sweet and soft hurda grains.
35	Sorghum	IC0584056	Atharga Kempu Jola	INGR10003	2010	Selection from farmer(s) field in Atharga village	BD Biradar, Gowri M Sajjanar, Hemalatha S, Prema B Patil and SB Devarnavadagi	University of Agricultural Sciences (UAS), Dharwad, RARS, Bijapur, Karnataka	Good flaking quality
36	Sorghum	IC0584513	DSR-GMN-41	INGR10004	2010	I 12 x IS 25017-43	SS Ambekar, MY Kamtar, K Ganesamurthy, RB Ghorade, Usha Saxena, Pooranchand, JD Jadav, S Audilakshmi, IK Das, TG Nageshwar Rao and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Early duration grain mould resistance
37	Sorghum	IC0584514	DSR-GMN-42	INGR10005	2010	I 12 x IS 25017-44	SS Ambekar, MY Kamtar, K Ganesamurthy, RB Ghorade, Usha Saxena, Pooranchand, JD Jadav, S	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Grain mould resistance with greyed yellow grain



Sr. No.	Crop name	National identity	Donor identity	INGR No.	Year	Pedigree	Developer	Developing institute	Novel unique features
							Audilakshmi, IK Das, TG Nageshwar Rao and N Seetharama		
38	Sorghum	IC0584515	DSR-GMN-46	INGR10006	2010	I 12 IS 25017-58	SS Ambekar, MY Kamtar, K Ganesamurthy, RB Ghorade, Usha Saxena, Pooranchand, JD Jadav, S Audilakshmi, IK Das, TG Nageshwar Rao and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Tall grain mould resistant line
39	Sorghum	IC0584516	DSR-GMN-52	INGR10007	2010	I 12IS 25017-70	SS Ambekar, MY Kamtar, K Ganesamurthy, RB Ghorade, Usha Saxena, Pooranchand, JD Jadav, S Audilakshmi, IK Das, TG Nageshwar Rao and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Grain mould resistance with yellow white grain
40	Sorghum	IC0584517	DSR-GMN-58	INGR10008	2010	SRT 26B x IS 25017-280	SS Ambekar, MY Kamtar, K Ganesamurthy, RB Ghorade, Usha Saxena, Pooranchand, JD Jadav, S Audilakshmi, IK Das, TG Nageshwar Rao and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Tall grain mould resistant line with long panicle
41	Sorghum	IC0584518	DSR-GMN-59	INGR10009	2010	GMRP 9 x IS 25017-282	SS Ambekar, MY Kamtar, K Ganesamurthy, RB Ghorade, Usha Saxena, Pooranchand, JD Jadav, S Audilakshmi, IK Das, TG Nageshwar Rao and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Grain mould resistance with circular grain
42	Sorghum	IC0584519 & IC0584520	MS3054 A & B	INGR10010	2010	27B x GM 97433	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Tall MS line with high grain yield
43	Sorghum	IC0584521 & IC0584522	MS3060 A & B	INGR10011	2010	27B x N 99	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	High grain yielding MS line with long panicle and medium dwarf plant height
44	Sorghum	IC0584523 & IC0584524	MS3061 A & B	INGR10012	2010	27B x IS 19305	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	MS line of early duration and with high grain yield
45	Sorghum	IC0584525 & 0584526	MS3095 A & B	INGR10013	2010	422B x IS 25017	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Very tall MS line with high grain yield, long panicle and grey yellow grain
46	Sorghum	IC0584527 & 0584528	MS3143 A & B	INGR10014	2010	463B x SPV 475	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	MS line with high grain yield and medium plant height
47	Sorghum	IC0584529 & IC0584530	MS3146 A & B	INGR10015	2010	463B x SPV 475	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Late duration MS line with high grain yield
48	Sorghum	IC0584531 & 0584532	MSS3183 A & B	INGR10016	2010	AKMS 14B x IS 25017	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	MS line with medium height, short pedicel and high grain yield
49	Sorghum	IC0584533 & IC0584534	NS3216 A & B	INGR10017	2010	SPGM 94009 x SPV 1231	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	Medium duration, tall MS line with high grain yield
50	Sorghum	IC0584535 & IC0584536	NS3228 A & B	INGR10018	2010	2219B x (SPV 462 x IS 18475)	S Audilakshmi, C Aruna and N Seetharama	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	High yielding MS line in with grain
51	Sorghum	IC0594687	BRJ 62	INGR13005	2013	A1 X SPV 488	BD Biradar, SK Pattanashetti and Gowri M Sajjanar	Regional Agricultural Research Station, Bijapur, Karnataka	Restorer on Maldandi source of male sterility in Rabi Sorghum.
52	Sorghum	IC0595529	PYPS-2	INGR13006	2013	Local landrace	Regional Agricultural Research Station, Palem, Mahabubnagar and Andhra Pradesh	Regional Agricultural Research Station, Palem, Mahabubnagar, Andhra Pradesh	Distinct yellow grain, good roti making quality.
53	Sorghum	IC0597771	SSG 226	INGR13055	2013	Mutant derivatives of the forage sorghum variety SSG 59-3	SK Pahuja, C Aruna, PK Shrotria, BR Ranwah and JV Patil	ICAR-Indian Institute of Rice Research (IIRR), Rajendranagar, Hyderabad, Telengana	Low hydrocyanic acid (HCN) (66.6 ppm), high digestibility and high leaf-stem ratio.
54	Sorghum	IC0611700	NRCSFR-07-5	INGR15006	2015	NRCSFR-07-5-27B x IS 2122	C Aruna, PG Padmaja, VR Bhagwat and JV Patil	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	For shoot fly resistant.
55	Sorghum	IC0612063	SPV 2018	INGR15027	2015	SPV 2018 = (SPV 462 X IS 21891)-3-1-1-1	AV Umakanth and JV Patil	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	High digestibility (IVOMD %), low lignin content; brown midrib (bmr)
56	Sorghum	IC0612149 & IC0612150	MS SLA 9 & SLB 9	INGR15063	2015	104B x SPV 1538	Prabhakar, M Elangovan and IK Das	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	MS line with bold seed and panicle
57	Sorghum	IC0612157 & IC0612158	MS SLA 29 & SLB 29	INGR15064	2015	104B x IS 3420	Prabhakar, M Elangovan and IK Das	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telengana	MS line with compact head
58	Sorghum	IC0621690	SGS 389	INGR17016	2017	Selection from Mauranipur, Jhansi, Uttar Pradesh	Dinesh Chandra Joshi, RV Kumar, Sultan Singh and Manjunatha N	ICAR-Indian Grassland and Fodder Research Institute (IGFRI) Jhansi, Uttar Pradesh	Six stamens and two gynoecea against the normal sorghum genotype bearing three stamens and one gynoeceum. It produces twin seeds but the spikelet



Sr. No.	Crop name	National identity	Donor identity	INGR No.	Year	Pedigree	Developer	Developing institute	Novel unique features
59	Sorghum	IC621475	NRCSFR 09-3	INGR17071	2017	NRCSFR 09-3-?(296B x IS 2122) x (296B x IS 18551)?	C Aruna, PG Padmaja, VR Bhagwat and V A Tonapi	ICAR-Indian Institute of Millets Research (IIMR), Rajendranagar, Hyderabad, Telangana	bears six stamens and two gynoceia. Improved shoot fly resistance over the elite parent, 296B. Better level of resistance to grain moulds compared to 296B. Derivative to biparental mating involving two shoot fly resistant sources.
60	Sorghum	IC568489	IC 568489	INGR18022	2018	Selection from IC 568489	Elangovan Maruthamuthu and Vilas A Tonapi	ICAR-Indian Institute of Millets Research, Rajendranagar, Hyderabad, Telangana	Scented sorghum.
61	Sorghum	IC632083	S 614-13/SPV2263	INGR19060	2019	HJ 513 x IS 2389-1 p29-1-3-4 selfed up to F6 generation	Pummy Kumari, Surender Kumar Pahuja, Satyawar Arya, UN Joshi, Aruna C and Vilas A Tonapi	CCS Haryana Agricultural University, Hisar, Haryana	IVDMD 56%. Resistant to anthracnose.
62	Sorghum	IC632070	SM2254-8	INGR19064	2019	sorghum parent (126A) pollinated with maize line (CM208)	KBRS Visrada, P Sanjana Reddy, R Venkateswarlu, Aruna C and Vilas A Tonapi	ICAR-Indian Institute of Millets Research, Rajendranagar, Hyderabad, Telangana	Sorghum forage line derived from Intergeneric, sorghum x maize cross. Low HCN. High IVDMD.
63	Sorghum	IC343586	EP 87 (IC0343586)	INGR20084	2020	Selection from EP 87	M Elangovan, MY Samdur, HS Talwar and Praphakar	ICAR-Indian Institute of Millets Research, Hyderabad, Telangana	Drought tolerant
64	Sorghum	IC485033	SPV 2389/IIMR-SC-1542	INGR20085	2020	NSSV 13 x CSV 15	Ganapathy KN, Aruna C Reddy, Sujay Rakshit, Elangovan M, Umakanth AV and Vilas A Tonapi	ICAR-Indian Institute of Millets Research, Rajendranagar, Hyderabad, Telangana	Low HCN content. High protein yield. High seed yielding single-cut forage genotype (Dual-purpose type).
65	Sorghum	IC635700	SPV 2315	INGR20086	2020	(CSV 20 x Pant Chari 5) x (CSV 20 x PVK 809) -4-2-2-2-1-2; Pant Chari 5 = CS 3541 x IS 6935 (IS 6935 = EC0484727); CSV 20 = SPV 946 x Kh 89-246 (SPV 946 = SPV 475 x SPV 462, SPV 475 = IC0546895, SPV 462=IC0121564); PVK 809 = PVK 809 x SPV881 (SPV 881 = IC0144832)	Ganapathy KN, B Venkatesh Bhat, Sujay Rakshit, M Elangovan, IK Das , Amasiddha B and Vilas A Tonapi	ICAR-Indian Institute of Millets Research, Hyderabad, Telangana	Resistant to foliar diseases (Anthracnose, Zonate leaf spot, Leaf blight and Grey leaf spot). High per day productivity for green fodder.High seed yield.
66	Sorghum	IC635025	SPV-2296 (DSR 1145)	INGR20087	2020	(RS 29 x NR 486) x NR 486	K Hariprasanna, C Aruna, AV Umakanth, Vilas A Tonapi and M Elangovan	ICAR-Indian Institute of Millets Research, Hyderabad, Telangana	Tolerance to shoot fly. Tolerance to downy mildew. High protein content (12.2%) and High grain yield with higher nutrient-use efficiency.
67	Sorghum	IC637580	SPV 2438 (PSV 316)	INGR21037	2021	SPV-504 x ICSR103	S Maheshwaramma, MV Nagesh Kumar, CV Sameer Kumar and M Elangovan	Regional Agricultural Research Station, Palem, PJTSAU, Telangana	Advanced genetic material. High protein content (11.73%).
68	Sorghum	IC635028	GMN 16-5	INGR21038	2021	296B and B 58586	C Aruna, IK Das, C Deepika, DM Bahadure, Vilas A Tonapi and M Elangovan	ICAR-Indian Institute of Millets Research, Hyderabad, Telangana	Grain mold resistance (3.8).
69	Sorghum	IC338975	SPV 2481	INGR21039	2021	Selection from E 10	M Elangovan, RB Ghorade, VV Kalpande and B Amasiddha	ICAR-Indian Institute of Millets Research, Hyderabad, Telangana	More seed weight (3.54 g) and high dry-fodder yield (9798 kg/ha)
70	Sorghum	IC415833	SPV 2412	INGR21040	2021	Selection from E 142	M Elangovan, RB Ghorade, VV Kalpande and B Amasiddha	ICAR-Indian Institute of Millets Research, Hyderabad, Telangana	More seed weight (3.61 g) and high dry-fodder yield of 9720 kg/ha
71	Sorghum	EC	SPV 2612 (IIMR Red)	INGR21041	2021	SPV 2612= CSV 15 x IS 23514; CSV 15 = SPV 475 x SPV462; SPV 475 = (IS12622 x 555) x (IS3612 x E35-1-52); SPV 462 = (IS 2947 x SPV 232) x1022	C Aruna, C Deepika, CV Ratnavathi, R Venkateswarlu, M Elangovan, Vilas A Tonapi and DM Bahadure	ICAR-Indian Institute of Millets Research, Hyderabad, Telangana	Red grain with High tannin content of 4.51mg CE/g. Adaptability to both kharif and rabi. High grain yield- on par with high yielding whiten sorghum variety
72	Sorghum	IC585181	EJN 11 (IC0585181)	INGR21042	2021	Selection from EJN 11 (IC0585181)	M Elangovan, SK Jain, Nattu Bhai Patel and Vilas A Tonapi	ICAR-Indian Institute of Millets Research, Hyderabad, Telangana	Early flowering (<56 days).
73	Sorghum	IC637581	AKGMR 117	INGR21043	2021	Selection from (AKR 436 x RS 673-5)	Ghorade RB, Gulhane AR, Kalpande VV , Thawari SB , Das IK , Aruna C, Sonalkar VU , Thakre GV , Bhuyar AR and Kamble PS	Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra	Grain mold resistance kharif sorghum genotype with field grade grain mold score of 3.10 and threshed grade grain mold score of 3.53.
74	Pearl Millet	IC296716	H90/4-5	INGR98035	1998	Synthetic HS-1	RL Kapoor, Sain Dass, IS Khairwal, HP Yadav, Prem Sagar, CR Bainiwal, DC Nijhawan, MS Narwal,DP Thakur and MS Panwar	Bajra Section, Dept of Plant Breeding, CCS Haryana Agricultural University (CCSHAU), Hisar, Haryana	Fertility restorer line, resistant to drought and tolerant to high temperature stress
75	Pearl Millet	IC296717	H77/833-2	INGR98036	1998	Landrace From Haryana	RL Kapoor, Sain Dass, IS Khairwal, HP Yadav, Prem Sagar, CR Bainiwal, DC Nijhawan, MS Narwal,DP Thakur and MS Panwar	Bajra Section, Dept of Plant Breeding, CCS Haryana Agricultural University (CCSHAU), Hisar, Haryana	Fertility restorer line, excellent combiner for productivity, produces early / extra early hybrids



Sr. No.	Crop name	National identity	Donor identity	INGR No.	Year	Pedigree	Developer	Developing institute	Novel unique features
76	Pearl Millet	IC296718 & IC471852	HMS 1A & 1B	INGR98037	1998	DSA 134x H-90/4-5	Prem Sagar, DC Nijhawan, RL Kapoor, CR Bainiwal, IS Khairwal, HP Yadav and DP Thakur	Bajra Section, Dept of Plant Breeding, CCS Haryana Agricultural University (CCSHAU), Hisar, Haryana	MS line converted in to different back ground
77	Pearl Millet	IC296719 & IC471853	HMS 2A & 2B	INGR98038	1998	H 77/833-2	Prem Sagar, DC Nijhawan, RL Kapoor, CR Bainiwal, IS Khairwal, HP Yadav and DP Thakur	Bajra Section, Dept of Plant Breeding, CCS Haryana Agricultural University (CCSHAU), Hisar, Haryana	MS line converted into H77/833-2
78	Pearl Millet	IC296720 & IC471854	HMS 3A & 3B	INGR98039	1998	DSA134 xhc 715-1	Prem Sagar, DC Nijhawan, RL Kapoor, CR Bainiwal, IS Khairwal, HP Yadav and DP Thakur	Bajra Section, Dept of Plant Breeding, CCS Haryana Agricultural University (CCSHAU), Hisar, Haryana	MS line with high tillering (4.2)
79	Pearl Millet	IC296721 & IC471855	HMS 4A & 4B	INGR98040	1998	DSA 134 x hc 715-2	Prem Sagar, DC Nijhawan, RL Kapoor, CR Bainiwal, IS Khairwal, HP Yadav and DP Thakur	Bajra Section, Dept of Plant Breeding, CCS Haryana Agricultural University (CCSHAU), Hisar, Haryana	MS with good tillering and early 50%flowering (46 days)
80	Pearl Millet	IC296722 & IC471857	HMS 7A & 7B	INGR98041	1998	S1 A x 35	DC Nijhawan, RL Kapoor, HP Yadav, CR Bainiwal, Prem Sagar, MS Narwal and MS Panwar	Bajra Section, Dept of Plant Breeding, CCS Haryana Agricultural University (CCSHAU), Hisar, Haryana	MS line with high grain (1740kg/ha) and dry fodder (3.7 t/ha) yield
81	Pearl Millet	IC296723 & IC471858	HMS 8A & 8B	INGR98042	1998	81 A x 52-37-1	DC Nijhawan, RL Kapoor, HP Yadav, CR Bainiwal, Prem Sagar, MS Narwal and MS Panwar	Bajra Section, Dept of Plant Breeding, CCS Haryana Agricultural University (CCSHAU), Hisar, Haryana	MS line with high combining ability in different genetic background
82	Pearl Millet	IC296724 & IC471859	HMS 9A & 9B	INGR98043	1998	843A x 44-10	DC Nijhawan, RL Kapoor, HP Yadav, CR Bainiwal, Prem Sagar, MS Narwal and MS Panwar	Bajra Section, Dept of Plant Breeding, CCS Haryana Agricultural University (CCSHAU), Hisar, Haryana	MS line with high combining ability in different genetic background
83	Pearl Millet	IC296730 & IC471856	HMS 6A & 6B	INGR99006	1998	841 A x 54	DC Nijhawan, RL Kapoor, HP Yadav, CR Bainiwal, Prem Sagar, MS Narwal and MS Panwar	Dept of Plant Breeding, CCS Haryana Agricultural University (CCSHAU), Hisar, Haryana	CMS line in different genetic background
84	Pearl Millet	IC296734	CZMS 44 A	INGR99010	1999	(3383A x Acc 3072) x Acc 3072	VM Manga, MBL Saxena and OP Yadav	ICAR-Central Arid Zone Research Institute (CAZRI), Jodhpur, Rajasthan	Drought tolerant good tillering MS line
85	Pearl Millet	IC0593641	P. sq H1; IG 8/1/1937	INGR13036	2013	P. glaucum (IG 99-748, 2n-4x=28) x P. squamulatum (IG 98-360, 2n=8x=56)	AK Roy, P Kaushal and DR Malaviya	ICAR-Indian Grassland and Fodder Research Institute (IGFRI), Jhansi, Uttar Pradesh	Interspecific hybrid between pearl millet (Pennisetum glaucum) and P. squamulatum (novel cytotype, 2n=56). Obligate sexual in reproduction. Chromosome number, 2n=42 (14G+28S), (genomic status GGSSSS).
86	Pearl Millet	IC0593642	P. sq H2; IG 8/1/1938	INGR13037	2013	P. glaucum (IG 99-748, 2n-4x=28) x P. squamulatum (IG 98-360, 2n=8x=56)	DR Malaviya, P Kaushal and AK Roy	ICAR-Indian Grassland and Fodder Research Institute (IGFRI), Jhansi, Uttar Pradesh	Interspecific hybrid Between pearl millet (Pennisetum glaucum) and P. squamulatum (novel cytotype, 2n=56). Obligate apomictic in reproduction, chromosome number, 2n=42 (14G+28S), (genomic status GGSSSS).
87	Pearl Millet	IC0593643	F1GO; IG 8/1/1941	INGR13038	2013	P. glaucum (2n=2x=14) x P. orientale (2n=2x=18)	P Kaushal, SN Zadoo, DR Malaviya and AK Roy	ICAR-Indian Grassland and Fodder Research Institute (IGFRI), Jhansi, Uttar Pradesh	Diploid apomeiotic Interspecific hybrid between P. laucum and P. orientale. Induced apospory (apomixes component). Chromosomes 2n=16 (7G+90, genome GS).
88	Pearl Millet	IC0593644	BC1GO; IG 8/1/1939	INGR13039	2013	P. glaucum (2n=14) x FIGO (2n=16)	P Kaushal, SN Zadoo, DR Malaviya and AK Roy	ICAR-Indian Grassland and Fodder Research Institute (IGFRI), Jhansi, Uttar Pradesh	BC1 interspecific hybrid derived from P. glaucum and P. orientale cross (a BII hybrid of F1 with P. glaucum). Exhibited inheritable partitioned apomixes components. Chromosomes 2n=23 (14G+90, genomes GGO).
89	Pearl Millet	IC0593645	GOSH8; IG 8/1/1940	INGR13040	2013	BC1GO x GSH2	P Kaushal, Aarti Khare, DR Malaviya and AK Roy	ICAR-Indian Grassland and Fodder Research Institute (IGFRI), Jhansi, Uttar Pradesh	First tri-specific hybrid between Pennisetum glaucum, P. orientale and P. squamulatum. Chromosomes 2n=44 (21G+14S+90, genomes GGGSSO).
90	Pearl Millet	IC567684	TetraA4; IG 08-03	INGR09046	2009	Colchicine induced tetraploid from 81A4	Pankaj Kaushal, AK Roy and DR Malaviya	ICAR-Indian Grassland and Fodder Research Institute (IGFRI), Near Pahuj Dam, Gwalior Road, Jhansi, Uttar Pradesh	Tetraploid male sterile line with A4 cytotype
91	Pearl Millet	IC568548	TetraA1; IG 99-748	INGR09047	2009	Colchicine induced tetraploid from 81 B	Pankaj Kaushal, AK Roy and DR Malaviya	ICAR-Indian Grassland and Fodder Research Institute (IGFRI), Near Pahuj Dam, Gwalior Road, Jhansi, Uttar Pradesh	Maintainer of Tetra A4 MS line
92	Pearl Millet	IC0283734	NSS-7809	INGR13056	2013	Selection	Jyoti Kumai, Sushil Pandey, SK Jha, S Chauhan, GK Jha, C Tara Satyavathi, NK Gautam and M Dutta	ICAR-National Bureau of Plant Genetic Resources (NBPGR), Pusa Campus, New Delhi	Popping trait
93	Pearl Millet	IC0617290	PPMI 904	INGR16004	2016	Recombinant inbred line (RIL) of the cross PPMI 683 x PPMI 627 (crossed in kharif, 2009)	C Tara Satyavathi, Sumer Pal Singh, S Mukesh Sankar, KV Prabhu and HS Gupta	Division of Genetics, ICAR-India Agricultural Research Institute (IARI), Pusa Campus, New Delhi	High iron content of 91 mg/kg. High Zinc content of 78 mg/kg.
94	Finger Millet	IC0598201	PS-1	INGR14015	2014	Mutant of GPU 28	MV Channabyre Gowda, Pushpalatha N, Sachin Sitram Jadhav, Satish RG, MB Boronayaka, Sujay V,	Project Coordinating Unit (PC Unit), Gandhi Krishi Vigyan Kendra (Small Millets), Bengaluru, Karnataka	Partial sterility, useful in hybridization, easy maintenance.



Sr. No.	Crop name	National identity	Donor identity	INGR No.	Year	Pedigree	Developer	Developing institute	Novel unique features
							Pramila CK, Manasa KG, Jarame Gowda, P Ravishankar, M Krishnappa and DN Narasi Mhamurthy		
95	Finger Millet	IC0614156	GPHCB 45	INGR16014	2016	Local collection	Anil Kumar, Vijay K Yadav, Arun Gupta, Salej Sood, PK Pandey and PK Agrawal	G.B. Pant University of Agriculture & Technology (GBPUA&T), Pantnagar, Uttarakhand	High calcium content 452.8mg/100g.
96	Finger Millet	IC635027	VR 1081	INGR20022	2020	GPU 28 x GE 4931	TSSK Patro, N Anuradha and M Elangovan	Agricultural Research Station, Gajularega, Vizianagaram, Andhra Pradesh	Finger Blast Resistance.
97	Finger Millet	IC635026	VR 1062	INGR21044	2021	GE 3076 x VR 855	TSSK Patro, N Anuradha and M Elangovan	Agricultural Research Station, Vizianagaram, Andhra Pradesh.	VR 1062 ranked first among all the 3000 entries tested for neck blast resistance (2.5% Pooled data) and also showed resistance to finger blast (3.0% Pooled data). VR 1062 has recorded -37.5% & -97.41 % (less incidence) of neck blast over resistant check Sri Chaitanya (VR 847) & susceptible check, Champavathi (VR 708) respectively.
98	Finger Millet	IC0403065	FMV1155	INGR21045	2021	IE 4671-1	Ganapathy KN, Das IK, Shyam Prasad G, Elangovan G, Sunil S Gomashe and Vilas A Tonapi	ICAR-Indian Institute of Millets Research, Hyderabad, Telangana	The genotype FMV 1155 is Early flowering with 65 days as compared to the similar early maturing check VL376 which recorded 69 days. It is also early maturing with 105 days as compared to the early maturing check VL376 which recorded 112 days. The Proposed entry also recorded higher grain yield of 2188 kg/ha as against the similar maturity check VL 376 which recorded 2155 kg/ha
99	Finger Millet	IC637583	VL 384	INGR21046	2021	OUAT 2 (late maturing white grain genotype/GE 4415 (early maturing brown grain genotype)	Salej Sood, Arun Gupta, RK Khulbe, Chandrashekara C and DC Joshi	ICAR-Central Potato Research Institute, Shimla, Himachal Pradesh	White grain. Blast resistant. Medium maturity, high grain yield
100	Finger Millet	IC473958	IE-2871	INGR21047	2021	Selection from IE2871	IK Das, KB Palanna, TSSK Patro, KN Ganapathy and Vilas A Tonapi	ICAR-Indian Institute of Millets Research, Hyderabad, Telangana	Resistant to Neck Blast (3.71 score in 1-9 scale).
101	Finger Millet	IC0473970	IE-2883	INGR21048	2021	Selection from IE2883	IK Das, KB Palanna, TSSK Patro, KN Ganapathy and Vilas A Tonapi	ICAR-Indian Institute of Millets Research, Hyderabad, Telangana	Resistant to Finger Blast (2.9 score in 1-9 scale)
102	Foxtail Millet	IC296900	GS 1953 (SIC 24)	INGR02010	2002	SIC24	A Seetharam, BTS Gowda, VRS Sahshidhar, BM Ramnakrishna , M Krishnappa and KR Vasanth	All India Co-ordinated Small Millet Improvement Project (AICSMIP), University of Agricultural Sciences (UAS), Bangalore	Genic dwarf
103	Foxtail Millet	IC479823	IIMR FxM-5 (FXV 632)	INGR21050	2021	Selection from GS 957	Hariprasanna K, Prabhakar, P Rajendra Kumar, Parashuram Patroli and Vilas A Tonapi	ICAR-Indian Institute of Millets Research, Hyderabad, Telangana	Early flowering (44 days). Early duration (76 days) with desirable grain yield.
104	Barnyard Millet	IC568707	Kagazi Madira (B 29)	INGR09023	2009	B 29	Arun Gupta, Vinay Mahajan, HS Gupta, KP Singh and GS Bisht	ICAR-Vivekanand Parvatiya Krishi Anusandhan Sansthan (VPKAS), Almora, Uttarakhand	Easy de-hulling type
105	Barnyard Millet	IC637584	VB 19-16	INGR21049	2021	PRJ1/PRB 903	Dinesh C Joshi, Salej Sood and RK Khulbe	ICAR-Vivekananda Parvatiya Krishi Anusandhan Sansthan, Almora, Uttarakhand	Awnless panicle in the genetic background of Japanese barnyard millet species (E. esculenta). semi dwarf. Green glumes
106	Sorghum	IC640695	AKGMR 118	INGR21130	2021	Selection from (STR 293 x AKR 426)- 20	RB Ghorade, AR Gulhane, VV Kalpande, SB Thawari, IK Das, C Aruna, VU Sonalkar, GV Thakare, AR Bhuyar and PS Kamble	Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra	Approved: Grain mold field grade (1-9 scale) of AKGMR 118 is in the resistant category and also the resistant check B 58586 is also in the resistant category. Grain Mold thresh grade (1-9 scale) of AKGMR 118 is in the resistant category while the resistant check B 58586 is in highly resistant category
107	Sorghum	IC640645	SPV2591	INGR21134	2021	SGL87 x HJ513-15-10-11-4 selfed upto F6 generation	Pummy Kumari, DS Phogat, SK Pahuja, Satyawar Arya, Neeraj Kharor, Venkatesh Bhatt and Vilas A Tonapi	CCS Haryana Agricultural University, Hisar, Haryana	Approved: Total soluble sugar (9.14% TSS).
108	Sorghum	IC640646	SPV2671	INGR21135	2021	SGL87 x S 241-1-7-4-3 selfed upto F6 generation	Pummy Kumari, DS Phogat, SK Pahuja, Satyawar Arya, Dalvinder Pal Singh, Venkatesh Bhatt and Vilas A Tonapi	CCS Haryana Agricultural University, Hisar, Haryana	Approved: Resistant to anthracnose.
109	Barnyard Millet	IC640691	PRB 903	INGR21127	2021	Selection from PRB 401 (IEC 530 FROM ICRISAT) Please see Annexure III	Laxmi Rawat, Dinesh C Joshi, Vijay Kumar Yadav, Bijendra Kumar, IK Das, Prabhakar Bhatt , M Elangovan, Amol Vasisth and AK Karnatak	AICRP on Small Millets, Ranichauri Centre, VCSG Uttarakhand University of Horticulture & Forestry, Bharsar, Uttarakhand	Approved: Highly Resistant to Grain Smut Disease.



Sr. No.	Crop name	National identity	Donor identity	INGR No.	Year	Pedigree	Developer	Developing institute	Novel unique features
110	Finger Millet	IC640692	VL 386	INGR21128	2021	GE440/VL Ragi 149	Salej Sood, Arun Gupta, RK Khulbe, DC Joshi and Chandrashekhara C	ICAR-Vivekananda Parvatiya Krishi Anusandhan Sansthan, Almora, Uttarakhand	Approved: Resistant to foot rot. Resistant to leaf blast, neck blast and finger blast. High harvest index and high grain yield.
111	Finger Millet	IC640693	VL 399	INGR21129	2021	GPU 28/VL Mandua 324	Arun Gupta, Salej Sood, RK Khulbe, Dinesh C Joshi and Rajashekhara H	ICAR-Vivekananda Parvatiya Krishi Anusandhan Sansthan, Almora, Uttarakhand	Approved: Broad Resistance to finger blast. Broad Resistance to neck blast.
112	Finger Millet	IC640697	VR 1070	INGR21132	2021	Pure line selection of IE 2043	TSSK Patro, N Anuradha, M Elangovan, KB Palanna and IK Das	Agricultural Research Station, Vizianagaram, Andhra Pradesh	Approved: Neck Blast Resistance. Finger Blast Resistance.
113	Finger Millet	IC640698	VR 1087	INGR21133	2021	pedigree method from VL 330 x GE 532	TSSK Patro, N Anuradha, M Elangovan, KB Palanna and IK Das	Agricultural Research Station, Vizianagaram, Andhra Pradesh	Approved: Neck Blast Resistance. Finger Blast Resistance.
114	Little Millet	IC640696	VS 25	INGR21131	2021	Pure line selection of GMPLSM 9	TSSK Patro, N Anuradha, M Elangovan and KB Palanna	Agricultural Research Station, Vizianagaram, Andhra Pradesh	Approved: Early flowering (47 days), Early maturity (71 days).
115	Finger Millet	IC0624599	WN 585	INGR21211	2021	Pure line selection from WN 585 germplasm	Harshal Eknath Patil, M Elangovan, BK Patel, GD Vadodariya	Hill Millet Research Station, Navsari Agricultural University, Waghai, Gujarat	Early Flowering & Early Maturity. Red Grain & High Yielding
116	Finger millet		VR 1141		2022	VR 708 x GPU 48	Drs. TSSK Patro, N Anuradha, M Elangovan, KB Palanna, IK Das.	Agricultural Research Station, Vizianagaram, Andhra Pradesh	Banded blight resistant
117	Finger millet		VR 1122		2022	VR 708 x GPU 48	Drs. TSSK Patro, N Anuradha, M Elangovan, KB Palanna, IK Das.	Agricultural Research Station, Vizianagaram, Andhra Pradesh	Finger Blast Resistance.
118	Sorghum		SPV 2804		2022	Selection from IC0288432	Drs RB Ghorade, M Elangovan, Venkatesh Bhat, B Amasiddha, KN Ganapathy and Vilas A Tonapi	Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra	More number of leaves, More leaf : stem ratio and Low HCN
119	Sorghum		SPV 2805		2022	Selection from IS 40921	Drs RB Ghorade, M Elangovan, Venkatesh Bhat, B Amasiddha, KN Ganapathy and Vilas A Tonapi	Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra	Taller plant height, Longer leaves and More number of leaves per plant
120	Sorghum		SPV 2596 (SM-2288-3)		2022	SPV 2596: SM-2288-3 (MR750 Sorghum x CM208 Maize)	Drs KBRS Visarada, Kanti Meena, AV Umakanth, M Elangovan and P Snajana Reddy	ICAR-Indian Institute of Millets Research Rajendranagar, Hyderabad, Telangana	High fresh stalk yield and High biomass
121	Sorghum		IS 1212-4-1-1		2022	Selection from IS 1212	Drs. Sujay Rakshit, Aruna C, Praduman Yadav, Parashuram Patroti, G Girish, KN Ganapathy, CV Ratnavathi, PG Padmaja, M Elangovan and DM Bahadure	ICAR-Indian Institute of Millets Research Rajendranagar, Hyderabad, Telangana	High oil content and Hard seed with bigger germ size
122	Sorghum		IS 31714-2-1-1		2022	Selection from IS 31714	Drs. Sujay Rakshit, Aruna C, Praduman Yadav, Parashuram Patroti, G Girish, KN Ganapathy, CV Ratnavathi, PG Padmaja, M Elangovan and DM Bahadure	ICAR-Indian Institute of Millets Research Rajendranagar, Hyderabad, Telangana	High oil content and Very bold seed with medium hardness and small germ size
123	Sorghum		SPV 2017		2022	SPV 2017 = (CSV 15 X IS 21891)-1-1-1-1	Drs. Umakanth, M Elangovan, B Amasiddha, VA Tonapi	ICAR-Indian Institute of Millets Research Rajendranagar, Hyderabad, Telangana	High in-vitro True Digestibility of Dry Matter (TDDM), Organic Dry Matter (ODM), and Metabolisable Energy (ME), Low Acid Detergent Fibre (ADF) and Acid Detergent Lignin content (ADL)
124	Finger millet		VR 1128		2022	Uduru malligae x GPU 48	Drs. TSSK Patro, N Anuradha, M Elangovan, KB Palanna, IK Das.	Agricultural Research Station, Vizianagaram, Andhra Pradesh	Neck Blast Resistance.
125	Sorghum		SPV 2595 (SM-2144-8)		2022	SPV 2595 (SM-2144-8) 27A Sorghum x CM211 Maize	Drs KBRS Visarada, Kanti Meena, AV Umakanth, M Elangovan and P Snajana Reddy	ICAR-Indian Institute of Millets Research Rajendranagar, Hyderabad, Telangana	Early flowering, Early maturing and Higher brix and total sugars
126	Finger millet		WWN 55		2022	Collection from Village Dagdiambha, Tal. Waghai, Dist. Dangs	Drs. Harshal Eknath Patil, M Elangovan, BK Patel, and GD Vadodariya	Hill Millet Research Station, Navsari Agricultural University, Waghai, Gujarat	White color, bold grains, Multi finger, long fingers, High grain yielding
127	Finger millet		GPU28-2081		2022	Induced gamma mutant of GPU 28 variety (GPU28-2081)	Drs Ganapathy KN, IK Das, M Elangovan, B Amasiddha, TE Nagaraja, TSSK Patro, KB Palanna, N Anuradha, VA Tonapi	ICAR-Indian Institute of Millets Research Rajendranagar, Hyderabad, Telangana	Long finger length
128	Barnyard millet		Glumeless mutant DHBM93-3		2022	Mutant line identified in M5 generation (DHBM 93-3-8-3-32-43) = VL 13 x IEc 566 (18-6)	Drs B Amasiddha, M Elangovan, KN Ganapathy, C Deepika, R Swarna, VA Tonapi	ICAR-Indian Institute of Millets Research Rajendranagar, Hyderabad, Telangana	Glumeless mutant line
129	Pearl millet		170-SB-19 (J-2642)		2022	(J-2532 X J-2571)-23-1-1-B-B	Dr. KD Mungra, P et.al.,	MRS, JAU, Jamnagar, Gujarat	High Fe content (84 ppm). High Zn content (50 ppm)