



Monitoring team report- Kharif 2016 and Rabi 2016-17



Kharif 2016

Monitoring Teams-Kharif

Clusters	Locations	Plant Breeding	Crop protection	Crop production	Team Leader
Cluster-I	Gulbarga, Solapur, Phaltan, Rahuri, Parbhani, AKola	Sujay Rakshit Aruna	ShyamPrasad I K Das	S S Rao Ravi Kumar Chapke	Sujay Rakshit
Cluster-II	Dharwad, Chamarajnagar, Coimbatore, Kovilpatti	Sujay Rakshit Aruna	Shyam Prasad I K Das	S S Rao Ravi Kumar	S S Rao
Cluster-III	Indore, Udaipur, Diggi Tonk, Deesa, Surat	Venkatesh Bhat Umakanth	T G N Rao Kalaishekhar	H S Talwar	Venkatesh Bhat
Cluster-IV	Pantnagar, Ludhiana, Hisar	Venkatesh Bhat Umakanth	T G N Rao Kalaishekhar	H S Talwar	Umakanth
Palem		Aruna	T G N Rao Shyam Prasad	Ravi Kumar	Shyam Prasad
Bapatla		Umakanth	Subbarayudu	H S Talwar Ravi Kumar	Ravi Kumar



Recommendations



- **SOLAPUR**
- Efforts are to be made to collect *Sangola Hundi* and *Katar Khatav* to be used as local check in forage trial, not M 35-1 as being done this season.
- **GULBARGA**
- **The center should take utmost care to take appropriate plant protection measures.** Plant population and other parameters are to be recorded at the right time.



Recommendations

- **LUDHIANA**
- The sweet sorghum trials should be protected from shoot pests for drawing meaningful conclusions.
- **HISAR**
- Data collected on shoot fly damage did not match with the plant stand in the field. Therefore, data on shoot fly is completely unreliable.
- There is extreme stem borer pressure but the data collected on damage percent was highly inadequate.



Recommendations

PALEM

- There was severe shoot fly infestation in all the breeding experiments resulting in poor plant stand which could have been avoided by taking up timely plant protection measures. **Henceforth all breeding trials should be protected from pest and diseases to attain good plant stand for proper yield data.** It was suggested to send data on plant stand at harvest.
- In Hybrid trials, fertility restoration in hybrids should be necessarily checked.
- The early entries may be harvested as and when they attain physiological maturity not waiting for complete field to be harvested.



Recommendations



COIMBATORE

- The **rainfall situation at Coimbatore is different from rest of the dryland locations in kharif** as it receives more rainfall during northeast season than south west. Since all the trials were raised with 5 to 6 supplemental irrigations, **the trial data need to be interpreted on location specific basis** in comparison to other dryland locations.
- In most of the trials **thinning was not done at correct stage**. Hence, in future there is a need to thin the initial plant population to single culm at about 15-20 DAS.
- There was severe shoot fly, stem borer in all the breeding experiments resulting in poor yield due to chaffy panicles and bird damage which could have been avoided by taking up timely plant protection measures. **Henceforth all breeding trials should be protected from pest and diseases to attain good yield data**. Plant protection measures for midge should be taken up from time of anthesis.
- The entomology and breeding trials were planted on the same date of sowing i.e., June 22, 2016. **The team suggested that planting of all the entomology trials should be done 15 days after breeding trials as per standard protocols devised by AICSIP Entomology program**.
- In all Agronomy trials, **NPK status of soil prior to sowing and at harvest should be done for estimating nutrient uptake and use efficiency**.
- **The pathology trials were sown late and suffered severe damage from shoot fly, stem borer and shoot bug**. Panicle emergence is yet to take place and crop is in pathetic state. It should have been protected by taking plant protection measures.



Recommendations



AKOLA

- Overall in all the breeding trials there was damage of hairy caterpillars, hence plant protection measures were advised.
- The crop need to be protected from bird damage.
- In mutant trials some entries recorded low shoot fly incidence. It was advised to self them so that material can be utilized for further evaluation.
- **Akola center should record the pokkah boeng incidence in various trials. This will give an indication of trends of this disease (Action: Pathologist of the center)**
- **In all Agronomy trials, NPK status of soil prior to sowing and at harvest should be done for estimating nutrient uptake and use efficiency.**
- The **seed purity of parental lines** (AKMS14B & AKR150) of CSH14 need to be maintained since very low germination was observed at all locations.



Recommendations



RAHURI

- **There was severe shoot fly incidence in all the breeding experiments resulting in poor plant stand** in most of the breeding trials. Further there was moderate incidence of stem borer.
- In mutant trials some entries recorded low shoot fly incidence. It was advised to self them so that material can be utilized for further evaluation.

PARBHANI

- In early generation, selection pressure may be little lesser, while in advanced generation selection must be quite stringent.
- **There was severe shoot fly incidence in all the breeding experiments. The crop need to be protected from bird damage.**
- To get good contrast it is advised to record shoot fly observations thrice at 14, 21 and 28 DAE or else spray trials with cypermethrin once susceptible check records 70 % DH and then go for recording observations.
- In mutant trials some entries recorded low shoot fly incidence. It was advised to self them so that material can be utilized for further evaluation.
- **Parbhani center should record the pokkah boeng incidence in various trials. This will give an indication of trends of this disease**



Recommendations



- *DHARWAD*

- **Basic parameter on soil physical and chemical parameters should be reported** along with trial data where ever feasible.
- In hybrid nursery trials, some of the entries are looking like B-lines not looking like hybrids in terms of vigour, plant height and biomass production. Hence, care should be taken that they should be evaluated at the station trials first before entered in AICSIP trials.
- The Agronomist at UAS Dharwad was advised to monitor the nitrogen/phosphorus fixing bacterial count so as to provide supporting data for the yield response that is anticipated as a result of Azospirillum and PSB liquid seed treatment

- *DIGGI*

- There was a wide spread **damage of stem borer seen in the trials**. It was reported that the **shoot fly attack was also considerably high** during the seedling stage of the trials. **Entomology trials may also be conducted in future.**



Recommendations



CHAMARAJNAGAR

- Scientists working at Chamarajanagar should be trained on breeding and crop management aspects for better conduct of trials. There should be close monitoring from IIMR for efficient trial conduct being a new centre.
- **The team suggested planting of sorghum at Chamarajanagar to be between mid-April and mid-May due to the adequate rainfall occurrence at that time at this location.** Hence the all trials need to send by last week of March for planting in April.
- Basic parameter on soil physical and chemical parameters should be reported along with trial data where ever feasible.
- In hybrid nursery trials, some of the entries are looking like B-lines not looking like hybrids in terms of vigour, plant height and biomass production. Hence, care should be taken that they should be evaluated at the station trials first before entered in AICSIP trials.



Rabi 2016-17

Monitoring Teams-Rabi

Clusters	Locations	Plant Breeding	Crop protection	Crop production	Team Leader
Cluster-I	Solapur, Bijapur	C Aruna, Parasuram Patroti	ShyamPrasad, Dr K K Sharma	H S Talwar Chapke	H S Talwar
Cluster-II	Phaltan, Rahuri	Umakanth, K N Ganapthy	Dr K K Sharma	Ravi Kumar	Dr K K Sharma
Cluster-III	Dharwad, Gulbarga	Venkatesh Bhat, Amasiddha	I K Das, Kalaisekhar	S S Rao	Venkatesh Bhat
Cluster-IV	Parbhani	Hari Prasanna, Parasuram Patroti	T G N Rao, B Subba Rayudu	Ravi Kumar	Hari Prasanna
Cluster-V	Tandur	Samdur	Dr K K Sharma	Ravi Kumar S S Rao	S S Rao
Cluster-VI	Kovilpatti		Shyam Prasad		Shyam Prasad



Recommendations

● *RAHURI*

- The Agronomist at MPKV Rahuri was advised to summarize the Rabi Agronomy Trial 5R that was being conducted for the past three years
- **Best recommendations in terms of seed priming and foliar spraying may be identified from the analyzed field data.**
- In the entomology trials, some promising entries in all the six trials had shoot fly (DH%) incidence even more than 50%. As far as possible, **only entries with lower incidence of DH% (<30.0%) should be identified** as promising/resistant to shoot fly.
- **The coordinated trials should be laid out as per AICRP guidelines.** Plot size of trials should have been 2row x 2m instead of 1 row x 4m to ensure uniformity among the trials of different Centres.
- **Care should be taken that experiments are sown during the recommended period of sowing** (15th September to 15th October) so that plants' vigor is not affected in late sown crop as it happened during this year.



Recommendations



- *PHALTAN*
- Soil application of carbofuran 3G (20Kg/ha)/carbaryl 50WP (0.2%)/chlorpyriphs (0.2%) in furrows can be effective in cutworm management.
- Since **the incidence of aphids was very high in both the trials, precautions should be taken to minimize their incidence** by spraying the crop with insecticides like dimethoate (0.1%)/methyldemeton (0.1%).



Recommendations



- **SOLAPUR**
- **Entomology trials should be conducted by providing adequate irrigation** for better plant growth and also for build-up of insect-pest population for better screening purpose.
- For screening entries against charcoal rot, plants should be inoculated artificially with charcoal rot pathogen if sufficient inoculum is not available in the soil.
- Stringent measures should be taken to protect the crop from bird damage by employing more daily paid workers.
- **Keeping quality fodder needs in view, an emphasis may be given on quality fodder in sorghum improvement programme like local land races Dagadi and Lakadi which fodder likes more by animals.**
- Since, the national released varieties viz., CSV 29R and CSV 26R are performing well on deep to medium soils, emphasis may be given for their wide adoption.
- The farmers were happy with the FLD performances, **a field day or farmers day involving non-trial farmers** should be organized for wide publicity.



Recommendations



● *BIJAPUR*

- In shallow soil conditions, the panicle emergence of the genotypes may be scored on a 1-9 scale
- **Facilities should be developed to irrigate the experiments at least once to ensure proper germination** and establishment of plants in absence of rains.
- Insect-pest terminal infestation should also be recorded to generate all possible information on susceptible/resistant reaction of the germplasm.
- Entries revealing combined resistance to aphids and shoot bugs should also be included separately under aphid and shoot bug resistant groups.
- **Concerned pathologist should remain available at the time of monitoring to explain the treatments with respect to prevalence of important diseases including charcoal rot.**
- If possible, based on initial observations on foliar diseases and charcoal rot, promising entries may be identified and explained to the monitoring team.
- **Keeping quality fodder needs in view, an emphasis may be given on quality fodder in sorghum improvement programme like locally popular variety; maldandi which fodder likes more by animals**

● *GULBARGA*

- Kalaburagi center **should provide good soil to sorghum group** for experimentation.

● *TANDUR*

- The Agronomist at Tandur was advised to summarize the Rabi Agronomy Trial 5R that was being conducted for the past three years
- **Best recommendations** in terms of seed priming and foliar spraying may be identified from the analyzed field data.

●

Rejection of data

S No	Centre	Discipline	Trial	Remarks
1	Diggi	Breeding	AVT, IVT and IHT	The data from trials may not be considered for analysis as the damage from shoot pests has affected the plant population and uniformity of entries
2	Gulbarga	Breeding	IAVHT-SS	Considering plant population and trial management the committee recommends rejection of the trial data
3	Rahuri	Breeding	IAVHT-SS	Sweet sorghum trial data may be rejected as plant population is very poor in all the trials due to severe shoot fly incidence.

Rejection of data

S No	Centre	Discipline	Trial	Remarks
4	Hisar	Entomology	All trials	Data collected on shoot fly damage did not match with the plant stand in the field. Therefore, data on shoot fly is completely unreliable. There is extreme stem borer pressure but the data collected on damage percent was highly inadequate. The data on both shoot fly and stem borer need to be rejected
5	Indore	Entomology	AHT (GS+DP), IHT (GS+DP)	Due to extremely poor plant stand, the trials viz., AHT (GS+DP), IHT (GS+DP) and screening for shoot fly and stem borer resistance in advance sorghum lines need to be dropped and data from this trials may be rejected
6	Surat	Entomology	IHT	There was a heavy rain during the initial stages of crop. The plant stand was very poor in IHT and therefore, the trial IHT may be rejected



Common recommendations

- All trials where plant protection measures are required must be followed
- Genetic purity of the material must be ensured
- Non-tan entries should not be contributed into kharif grain sorghum trials
- Sterility in hybrids should be recorded and reported
- Early constitution of trials for early kharif situations
- Main centre needs to take care of data uploading by its voluntary centres
- Timely reporting of data