

FRONTLINE DEMONSTRATIONS ON KHARIF SORGHUM

RR Chapke coordinating with AICRP's scientists

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Executive summary

During *kharif* 2016, 242 frontline demonstrations (FLDs) on grain and forage sorghum were organized in 14 districts across the five different sorghum growing states viz., Maharashtra, Madhya Pradesh, Rajasthan, Harayana and Uttarkhand. Latest 20 sorghum cultivars namely, CSH 16, SPH 1635, CSV 20, CSV 27, Raj Vijay Jowar 1862, CSV 25, CSV 15, JJ 1041, CSV 23, PVK 801, and forage cultivars; HC 136, HC 171, HC 260, HC 308, HJ 513, HJ 541, SSG 59-3, COFS 29, Pant Chari 5 and Pant Chari 6 were undertaken along with local cultivar used as a check to evaluate and demonstrate their performance in farmers' fields at different locations.

Results indicated that the demonstrated sorghum cultivars gave 44% to 100% more grain yield and 24% to 103% stover yield over the local check across the locations. The highest green fodder yield increase was observed in Uttarkhand Sate (21%) followed by in Hissar State (10%). On an average, the demonstrated cultivars gave net returns of Rs.25,244/- on the cost of Rs. 15,036/- per ha, which is doubled than the local check.

Introduction

Sorghum (*Sorghum bicolor* L. Moench) is the fourth largest crop after wheat, rice and maize which is being cultivated by poor and small farmers in semi-arid regions of the country. The efforts made by the Indian Institute of Millets Research (IIMR), All India Coordinated Research Project on Sorghum (AICRP) and State Agricultural

Universities (SAU's) since its inception, has led to technologies for enhancing production and productivity to meet requirement of food, fodder, feed and fuel.

In spite of its multiple uses, the area under grain sorghum in India has declined from 10.25 m. ha in 1999-00 to 5.82 m. ha in 2014-15. However, because of significant improvements made in research and development, its productivity has increased from 847 kg/ha to 907 kg/ha. There is wide gap between national productivity and yield potential of the improved sorghum technologies developed from the research institutes.

The Ministry of Agriculture, Government of India, is attempting to build up linkages between research and farmers by launching programmes on technologies transfer such as, frontline demonstrations (FLDs) project since 1995-96. The project aimed to involve the scientists who developed the technologies, for its demonstration to the farmers (user of the technologies) and to have first hand feedback on its performance and problems for its further refinement.

Thus, FLD is one of the important programmes to evaluate and demonstrate the production potential of the recently released sorghum cultivars in the farmers' fields. Besides, systematically implementation of the programme enable to build up confidence of the farmers to adopt the latest technologies and modify the research programme based-on the farmers' experience by providing valuable feedback. Now-a-day the farmers' preference is generally for dual purpose sorghum cultivars than the grains alone due to meet primary requirement of fodder and food, which is also varies locations to locations. Keeping these in view, FLDs on grain and forage sorghum was organized with different latest sorghum cultivars during *kharif* 2016-17 at different locations.

Material and methods

In total, 242 FLDs on sorghum were organized in farmers' fields on 90 ha in five different sorghum growing states with the help of AICRP centres during *kharif* 2016-17. The progressive and cooperative farmers were selected from villages of the each site. Latest 20 sorghum cultivars viz., CSH 16, SPH 1635, CSV 20, CSV 27, Raj Vijay Jowar 1862, CSV 25, CSV 15, JJ 1041, CSV 23, PVK 801, and forage cultivars; HC 136, HC 171, HC 260, HC 308, HJ 513, HJ 541, SSG 59-3, COFS 29, Pant Chari 5 and Pant Chari 6 were undertaken along with local cultivar used by the farmers as a check. The detailed technical programme of FLD's on sorghum for the *kharif* 2016-17 is given in Table 1.

Table 1: Details of frontline demonstrations organized during *Kharif* 2016-17

Sl. No.	FLD Centres	Location	Cultivars	No. of FLDs	Area (ha)
1	AICRP-Sorghum, Akola (Maharashtra)	Chikali, Nandura and Balapur taluk in Buldhana and Akola district	SPH 1635	30	12
2	AICRP-Sorghum, Indore (Madhya Pradesh)	Nagda, Palnagar, Baganda (Guradiya), Hirapur, and Pipalia in Indore district	CSH 16, CSV 20, CSV 27, Raj Vijay Jowar 1862, CSV 25, CSV 15 and JJ 1041	50	20
3	AICRP-Sorghum, Udaipur (Rajasthan)	Kalyan puri, Mavali, Chouki ka kuwa, Kham ki Madri and Chittorgarh in district Udaipur	CSV 23	56	20
4	AICRP Sorghum, MAU, Parbhani (Maharashtra)	Manwat, Gangakhed in parbhani, Kandhar in Nanded, Kej in Beed and Borgaonkale in Latur	PVK 801	46	18.4
Forage FLDs 2016-17					
6	AICRP-Sorghum, Hissar (Harayana)	Khedla, in Nuh district, Hissar I, in Hissar district, Pilani, in Kaithal district, Damla, in Yamunanagar district and Kurukshetra	HC 136, HC 171, HC 260, HC 308, HJ 513, HJ 541, SSG 59-3 and COFS 29	25	10
7	AICRP-Sorghum, Pantnagar (Uttarkhand)	Gadarpur and Sitarganj, in Udham Singh Nagar district,	Pant Chari 5 and Pant Chari 6	35	10

Results

Grain, stover yields and economics of sorghum cultivation

- Among the demonstrated sorghum cultivars, SPH 1635 yielded higher grain and fodder as well than the others local cultivars in in *Vidharbha* region of Maharashtra State. The additional net return of Rs. 44699/- per ha was obtained from the demonstrated cultivars, which was 69% higher than the local check (Table 2 &3).
- Under FLDs, the improved sorghum cultivars viz., CSH 16, CSV 20, CSV 27, Raj Vijay Jowar 1862, CSV 25, CSV 15 and JJ 1041 were gave double grains and stover yield than the others in *Malava* regions of Madhya Pradesh. Performance of the FLD cultivars resulted to achieve double net returns (Rs. 23940/- per ha) than the local check (Rs.11,507/- per ha) (Table 2 &3).
- In *Mewad* region of Rajsthan, CSV 23 performed better by yielding 97% more grains and 24% stover than the local check. It was resulted to gain double net returns (Rs. 10469/- per ha) than the local check (Rs. 4932/- per ha) (Table 2 &3).
- Sorghum cultivars demonstrated under FLDs specially, PVK 801 had yielded 91% higher grains and stover than the others in Marathwada region in Maharashtra State. The FLD cultivars gave double (87%) fodder yield than the local check (Table 2 &3). It was observed that the local cultivar also performed well in terms of fodder yield.
- Forage cultivars; HC 136, HC 171, HC 260, HC 308, HJ 513, HJ 541, SSG 59-3 and COFS 29 performed better in terms of green fodder yield under FLD in Nuh, Hissar district, Piloni, Kaithal, Yamunanagar and Kurukshetra district in Hissar State. The single and multi-cut FLD cultivars gave 10% green fodder yield and net returns than the local check (Table 5).
- Performance of forage cultivars; Pant Chari 5 and Pant Chari 6 was found better in terms of grains yield among the demonstrated cultivars in Udham Singh Nagar district in Uttarkhand State. The FLD forage cultivars gave 21% higher green fodder yield than the local check, which was resulted into 40% more net returns (Table 5)

Yield gaps

It is observed from Table 4 that the grain yield of sorghum was lower under farmer's practice (1.97 t. ha⁻¹) as compared to FLD's (1.29 t. ha⁻¹) indicating wider gap (68%). However, comparatively lower yield gap (58%) was found as stover yield is concerned. In case of forage sorghum, 21% higher green forage yield was obtained from the FLD cultivars than the local check (Table 5) There is vast scope to bridge the yields gap by using the latest sorghum technologies.

Conclusion

The demonstrated improved sorghum cultivars irrespective of the agro-ecological regions yielded better and proved more economical than the local checks. However, the rate of increase varied at different locations. The 100% increase in grain yield of FLD cultivars was obtained in *Malwa* region of the Madhya Pradesh and the lowest by 44% was in *Vidharbha* and Marathwada regions of the Maharashtra. The highest green fodder yield increase was observed in Uttarkhand Sate (21%) followed by in Hissar State (10%). Since, the demonstrated sorghum cultivars shows potential to increase the yields and profits over local one at almost all the locations, FLDs may be conducted systematically in small area with location-specific sorghum technologies by following the guidelines strictly to build-up confidence among the farmers for its wide adoption.

Table 2: Yield of Sorghum varieties under *kharif* FLDs during 2016-17

S. N	FLD Centre		Demonstrated Sorghum variety										Mean	Local check (LC)	Yield advantage(%)
			SPH 1635	CSH 16	CSV 20	CSV 27	Raj Viji Jow 1862	CSV 25	CSV 15	JJ 1041	CSV 23	PVK 801			
1	Akola	Grain yield(t.ha ⁻¹)	3.03	-	-	-	-	-	-	-	-	-	3.03	2.10	44
		Stover yield(t.ha ⁻¹)	9.20	-	-	-	-	-	-	-	-	-	9.20	7.20	28
2	Indore	Grain yield(t.ha ⁻¹)	-	2.00	1.49	1.25	1.88	1.53	1.76	1.70	-	-	1.66	0.83	100
		Stover yield(t.ha ⁻¹)	-	5.02	4.64	4.05	5.83	4.45	5.00	5.50	-	-	4.93	2.42	103
3	Udaipur	Grain yield(t.ha ⁻¹)	-	-	-	-	-	-	-	-	0.87	-	0.87	0.44	97
		Stover yield(t.ha ⁻¹)	-	-	-	-	-	-	-	-	6.02	-	6.02	4.85	24
4	Parbhani	Grain yield(t.ha ⁻¹)	-	-	-	-	-	-	-	-	-	0.90	0.90	0.47	91
		Stover yield(t.ha ⁻¹)	-	-	-	-	-	-	-	-	-	2.80	2.80	1.50	87
	Mean	Grain yield(t.ha ⁻¹)	3.03	2	1.49	1.25	1.88	1.53	1.76	1.7	0.87	0.9	1.62	0.96	83
		Stover yield(t.ha ⁻¹)	9.2	5.02	4.64	4.05	5.83	4.45	5	5.5	6.02	2.8	5.74	3.99	61

Table 3: Economics of sorghum cultivation during *Kharif* FLDs 2016-17

S. No.	FLD Centre	Cost of cultivation (Rs. ha ⁻¹)		Net return (Rs. ha ⁻¹)		B:C ratio	
		FLD	LC	FLD	LC	FLD	LC
1	Akola	21117	19500	44699	26400	2.12	1.35
2	Indore	10821	5800	23940	11507	3.53	2.98
3	Udaipur	16244	13075	10469	4932	0.65	0.38
4	Parbhani	11962	8520	21869	7517	1.83	1.07
	Mean	15036	11724	25244	12589	2.03	1.45

Table 4: State-wise yield gap between FLDs and local check (LC) during *Kharif* 2016

S. No.	States	Grain yield (t.ha ⁻¹)			Stover yield (t.ha ⁻¹)		
		FLD	LC	Yield gap (%)	FLD	LC	Yield gap (%)
1	Maharashtra	3.03	2.10	44	9.20	7.20	28
2	Madhya Pradesh	1.66	0.83	100	4.93	2.42	103
3	Rajasthan	0.87	0.44	97	6.02	4.85	24
	Mean	1.97	1.29	68	6.00	4.35	58

Table 5: Yield and economics of forage sorghum FLDs 2016-17

S. No.	Sorghum cultivar	Green fodder Yield (t. ha ⁻¹)	Cost of Cultivation (Rs.ha ⁻¹)	Gross Return (Rs.ha ⁻¹)	Net Return (Rs.ha ⁻¹)	B:C ratio
I. AICRP-Hisar - Single-cut varieties						
1	HC 136	37.00	25978	37000	11022	1.43
2	HC 171	36.38	25978	36375	10397	1.40
3	HC 260	36.57	25978	36566	10589	1.41
4	HC 308	39.33	25978	39333	13355	1.51
5	HJ 513	41.55	25978	41545	15568	1.60
6	HJ 541	43.75	25978	43754	17776	1.68
	Mean	39.10	25978	39095	13118	1.51
	FP	32.56	25617	32563	6945	1.27
Multi-cut varieties						
7	SSG 59-3	49.00	31290	49000	17710	1.57
8	COFS 29	50.00	31290	50000	18710	1.60
	Mean	49.50	31290	49500	18210	1.59
	FP	48.30	31448	48300	16852	1.54
II. AICRP-Pantanagar						
1	Pant Chari 5	41.58	13038	35341	22303	1.71
2	Pant Chari 6	53.69	14804	45640	30836	2.08
	Mean	47.64	13921	40491	26570	1.90
	FP	25.65	9482	21806	12324	1.30
	Overall mean	43.00	24629	41455	16827	1.60
	FP	35.50	22182	34223	12040	1.37



Farmer-wise details of FLDs (Kharif 2016-17)

ANNEXURE-I: Results of FLDs on sorghum organized by AICRP, Akola (M.S.)

S. No.	Name of farmers (Contact No.)	Village,Block, District, Pin code (Contact No.)	Cast category	Sorghum area (ha)	Sorghum cultivar	Cost of production (Rs./ha)	Yield (q /ha)		Gross return (Rs./ha)	Net return (Rs./ha)	B:C ratio
							Grain	Fodder			
1	Ramprasad Ramkrushna Chavare	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	21670	31.6	84	65807	44137	2.037
2	Sandip Satynarayan Changani	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	19800	30.35	90	65325	45525	2.299
3	Prakash Mahadevrao Gund	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	19240	31.6	84	65807	46567	2.42
4	Bdrinarayan Bhgvan Gund	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	23680	32.85	107	72815	49135	2.075
5	Vinod Vithoba Shelke	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	19770	29.1	92	63890	44120	2.232
6	Devanand Yashvant Shelke	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	21670	29.6	100	66400	44730	2.064
7	Dyaneshwar Udhav Shelke	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	23865	34.1	109	75130	51265	2.148
8	Pralhad Sitaram Kathale	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	24175	31.6	122	74240	50065	2.071
9	Bharat Dyanba Gavhane	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	16150	21.6	80	50000	33850	2.096
10	Bhanudas Kashiram Jadhav	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	25800	32.85	93	69735	43935	1.703
11	Ramkrushna Pandhri Chavre	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	19950	23.6	100	57400	37450	1.877
12	Shrikisan Vithoba Avatde	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	19700	25.6	95	59300	39600	2.01
13	Ram Dyanba Nimse	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	18875	29.6	81	62220	43345	2.296
14	Agadh Rameshwar Gavhane	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	20825	29.1	77	60590	39765	1.909
15	Manorama Sakharam Chavre	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	18275	26.6	93	60360	42085	2.303
16	Krushivti Sugdev Chavre	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	18750	34.1	93	71610	52860	2.819
17	Sunil Tukaram Wankhede	At. Takli Nimkarda, Tq. Balapur, Dist. Akola	OBC	0.4	SPH 1635	18400	24.6	84	55380	36980	2.01
18	Bhagvan Ithape	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	20155	26.6	103	62560	42405	2.104
19	Sandip Prakash Gund	At. Vairagad Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	18500	29.1	81	61470	42970	2.323
20	Pandhri Sukhdev Hadhole	At. Post Kanheri Gavli, Tq. Balapur, Dist. Akola	OBC	0.4	SPH 1635	19300	29.1	74	59930	40630	2.105
21	Devanand Bilbile	At. Post Kanheri Gavli, Tq. Balapur, Dist. Akola	OBC	0.4	SPH 1635	20270	29.1	87	62790	42520	2.098
22	Sunil Bhau Navkar	At. Post Kanheri Gavli, Tq. Balapur, Dist. Akola	OBC	0.4	SPH 1635	22170	31.6	82	65440	43270	1.952
23	Santosh Sable	At. Post Kanheri Gavli, Tq. Balapur, Dist. Akola	OBC	0.4	SPH 1635	24575	41.6	97	83740	59165	2.408
24	Gajanan Kashiram Dhadse	At. Post Kanheri Gavli, Tq. Balapur, Dist. Akola	OBC	0.4	SPH 1635	21825	26.6	96	61020	39195	1.796
25	Chandrakant Shriram Kale	At. Post Kanheri Gavli, Tq. Balapur, Dist. Akola	OBC	0.4	SPH 1635	17900	24.6	95	57800	39900	2.229
26	Shri. Bhusan Gopal Patil	At. Vadi Post. Naygao Tq- Nandura Dist. Buldhana	OBC	0.4	SPH 1635	24325	31.6	75	63900	39575	1.627
27	Shri. Vasant Baliram Patil	At. Vadi Post. Naygao Tq- Nandura Dist. Buldhana	OBC	0.4	SPH 1635	24800	36.6	108	78733	53933	2.175
28	Shri. V.V. Deshmukh	At. Vadi Post. Naygao Tq- Nandura Dist. Buldhana	OBC	0.4	SPH 1635	22700	34.1	96	72270	49570	2.184
29	Shri. Sukhadev Namdev Charate	At. Vadi Post. Naygao Tq- Nandura Dist. Buldhana	OBC	0.4	SPH 1635	22955	36.6	88	74260	51305	2.235
30	Shri. Valbharao Deshmukh	At. Untari Tq. Chikali Dist. Buldhana	OBC	0.4	SPH 1635	23430	34.6	103	74560	51130	2.182

**ANNEXURE-II: Results of FLDs on sorghum organized by AICRP, Indore (M. P.)**

S. No.	Name of farmers (Contact No.) & village,Block, District, Pin code	Sorghum area (ha)	Sorghum cultivar	Cost of production (Rs./ha)	Yield (q /ha)		Gross return (Rs./ha)	Net return (Rs./ha)	B:C ratio
					Grain	Fodder			
1	Shri Sunil S/o Badrilal Patel, Village Nagda	0.4	CSH 16	10950	13	45	28500	17550	2.60
2	Ritesh S/o Nirbhaya Singh Sishodia, Nagda	0.4	CSV 20	10800	12	45	27000	16200	2.50
3	Arjun S/o Gangaram Patel, Nagda	0.4	CSV 20	10800	11.5	40	25250	14450	2.34
4	Rameshwar S/o Jagannath Patel , Nagda	0.4	CSH 16	10950	18	54	37800	26850	3.45
5	Tejram S/o Ramlal Patel , Palnagar	0.4	CSV 27	10800	12	42	26400	15600	2.44
6	Madan S/o Gaidalal Chohan , Nagda	0.4	CSH 16	10950	17	38	33100	22150	3.02
7	Manoharlal S/o Jagannath Patel ,Palnagar	0.4	CSH 16	10950	19	42	36900	25950	3.37
8	Babulal Lal S/o Gaidalal ,Village :- Palnagar	0.4	Raj VJ 1862	10800	18	54	37800	27000	3.50
9	Radheshyam S/o Kada Ji ,Palnagar	0.4	CSV 20	10800	16	49	33800	23000	3.13
10	Narendra S/o Kashiram Mukati ,Palnagar	0.4	SPV 2376	10800	15.3	75	37950	27150	3.51
11	Maniram S/O Govindraram, Palnagar	0.4	SPV 2376	10800	15.8	75	38700	27900	3.58
12	Babulal S/O Govind Kamdar , Palnagar	0.4	Raj V.J. 1862	10800	18	60	39000	28200	3.61
13	Kailash S/O Maikasingh , Palnagar	0.4	CSV 20	10800	16	48	33600	22800	3.11
14	PiK Lal S/O Jawar Chand , Palnar	0.4	SPV 2250	10800	14.5	46	30950	20150	2.87
15	Vishnu S/O Jawar Chand,, PalNagar	0.4	CSH 16	10950	22	48	42600	31650	3.89
16	Ramcharan S/O Ranchhod Lal Patel , PalNagar	0.4	SPV 2250	10800	17	48	35100	24300	3.25
17	Darshan S/O Madan Lal Mukati ,Pal Nagar	0.4	SPV 2375	10800	14.1	75	36150	25350	3.35
18	Usman S/O Najir , Nagda	0.4	CSV 20	10800	14	38	28600	17800	2.65
19	BheruS/O Braj lal Patel ,Nagda	0.4	SPV 2250	10800	15.3	44	31750	20950	2.94
20	Abhishekh S/O Brahmanand Patel , Nagda	0.4	SPV 2250	10800	15.1	39	30450	19650	2.82
21	Subhash Raj ,Palnagar	0.4	Raj V J 1862	10800	19	60	40500	29700	3.75
22	Alka bai , Palnagar	0.4	CSH 16	10950	22	50	43000	32050	3.93
23	Eshwar Lal Patel Guradia	0.4	SPV 2250	10800	15	44	31300	20500	2.90
24	Ram Singh Chohan , Baganda	0.4	CSV 25	10800	14	45	30000	19200	2.78
25	Usaf Shaikh , Nagda	0.4	CSV 25	10800	15.3	44	31750	20950	2.94
26	Parveen sheikh, Nagda	0.4	SPV 2250	10800	15	43	31100	20300	2.88
27	Shyam Mukati ,Palnagar	0.4	CSV 20	10800	16	48	33600	22800	3.11
28	Jitendra S/o Manohar, Palnagar	0.4	CSV 27	10800	13	39	27300	16500	2.53
29	Ram Prasad Yadav , Palnagar	0.4	SPV 2357	10800	15	75	37500	26700	3.47
30	Ishmail Shaikh , Nagda	0.4	CSV 20	10800	16.3	48	34050	23250	3.15
31	Badrilal Patel , Palnagar	0.4	CSH 16	10950	21	52	41900	30950	3.83
32	Ranchhod Choudhry , Nagda	0.4	CSV 20	10800	18	55	38000	27200	3.52
33	Erfan Shaikh , Nagda	0.4	CSH 16	10950	22	55	44000	33050	4.02
34	Dinesh Chand Patel , Pal Nagar	0.4	SPV 2250	10800	14.8	46	31400	20600	2.91
35	Suresh Patel ,Nagda	0.4	CSV 25	10800	16.1	49	33950	23150	3.14
36	Nandkishor Patel Palnagar	0.4	CSV 25	10800	16.4	44	33400	22600	3.09
37	Akash S/O Mahesh Sisodia , Nagda	0.4	CSV 25	10800	15	45	31500	20700	2.92
38	Rohit S/O Subhash Sisodia, Nagda	0.4	CSV 25	10800	15	40	30500	19700	2.82



S. No.	Name of farmers (Contact No.) & village,Block, District, Pin code	Sorghum area (ha)	Sorghum cultivar	Cost of production (Rs./ha)	Yield (q /ha)		Gross return (Rs./ha)	Net return (Rs./ha)	B:C ratio
					Grain	Fodder			
39	Shantabai , Palnagar	0.4	SPV 2375	10800	14.6	75	36900	26100	3.42
40	ManoharS/O Bapulal, Palnagar	0.4	CSH 16	10950	22	59	44800	33850	4.09
41	Radheshyam Dubey , Palnagar	0.4	CSH 16	10950	23	55	45500	34550	4.16
42	Murarilal S/o HajarilalaMukati Pal nagar	0.4	CSH 16	10950	21	54	42300	31350	3.86
43	Vikram S/O Nagdiram Shathi, Nagda	0.4	Raj Vijay Jowar 1862	10800	20	63	42600	31800	3.94
44	Shyama Bai W/O Ramchandra, Nagd	0.4	CSV 15	10800	18	52	37400	26600	3.46
45	Sangita bai W/O Saligram ,Nagda	0.4	CSV 15	10800	17.5	48	35850	25050	3.32
46	Ramdoot S/O Nagiram ,Nagda	0.4	Raj Vijay Jowar 1862	10800	19	55	39500	28700	3.66
47	Bhimsingh Rawat , Hirapur	0.4	CSV 15	10800	17	48	35100	24300	3.25
48	Bharat Singh Rathore , Pipalia	0.4	Raj Vijay Jowar 1862	10800	19	58	40100	29300	3.71
49	Shrawan S/O Brindrawan , Nagda	0.4	CSV 15	10800	18	52	37400	26600	3.46
50	Ravindra S/O Ramchandra, Nagda	0.4	JJ 1041	10800	17	55	36500	25700	3.38

ANNEXURE-III: Results of FLDs on sorghum organized by AICRP, Udaipur (Rajsthan)

S. No.	Name of farmers (Contact No.) & village,Block, District, Pin code	Caste category	Sorghum area (ha)	Sorghum cultivar	Cost of production (Rs./ha)	Yield (q /ha)		Gross return (Rs./ha)	Net return (Rs./ha)	B:C ratio
						Grain	Stover			
1	Sh. OOnkar lal S/O Sh. Hira ji Ahir	OBC	0.40	CSV 23	15828	5.40	43.00	18040	2212	0.14
2	Sh. Devi lal S/O Sh. Nand Ram ji Ahir	OBC	0.40	CSV 23	15963	6.00	43.90	19075	3112	0.19
3	Sh. OOnkar lal S/O Sh. Mangi lal ji Ahir,	OBC	0.40	CSV 23	15828	6.00	44.20	19150	3322	0.21
4	Sh. Kishan lal S/O Sh. Mangi lal ji Ahir	OBC	0.40	CSV 23	16343	6.50	46.00	20268	3925	0.24
5	Sh. Bhagwan lal S/O Sh. Kalu Ram ji Ahir,	OBC	0.40	CSV 23	16298	4.88	47.20	18381	2083	0.13
6	Sh. Shanker lal ji S/O Sh. Kalu Ram ji Ahir,	OBC	0.40	CSV 23	16328	4.46	43.00	16764	436	0.03
7	Sh. Laxman ji S/O Sh. Narain lal ji Ahir,	OBC	0.40	CSV 23	16303	5.55	42.40	18093	1790	0.11
8	Sh. Madhu ji S/O Sh. Mangu lal jiAhir	OBC	0.40	CSV 23	16353	5.40	41.80	17740	1387	0.08
9	Sh. Udai lal S/O Sh. Hari Ram ji Ahir	OBC	0.40	CSV 23	16378	5.40	42.40	17890	1512	0.09
10	Sh. Ratan lal ji S/O Sh. Bhura lal ji Ahir,	OBC	0.40	CSV 23	16503	6.00	42.25	18663	2160	0.13
11	Sh. OOnkar lal S/O Sh. Bhima ji Ahir	OBC	0.40	CSV 23	16778	5.40	44.44	18400	1622	0.10
12	Smt. Naraini devi w/o Sh. Kisan lal ji ji Ahir,	OBC	0.40	CSV 23	16278	5.55	45.10	18768	2490	0.15
13	Smt. Jassu Bai w/o Sh. Onkar lal ji Sukhwal,	OBC	0.40	CSV 23	16328	5.93	45.10	19274	2946	0.18
14	Smt. Sita devi w/o Sh. Devi lal ji ji Ahir,	OBC	0.40	CSV 23	16163	6.15	44.80	19503	3340	0.21
15	Sh. Suresh chand ji s/o Sh Onkar lal ji Sharma,	Gen	0.40	CSV 23	16173	6.15	48.40	20403	4230	0.26
16	Sh. Kishan lal ji s/o Sh Bhera ji Yadav	OBC	0.40	CSV 23	16173	6.09	43.00	18972	2799	0.17
17	Sh. Shanker lal ji s/o Sh Pyra ji Bheel	ST	0.40	CSV 23	15678	5.86	43.00	18664	2986	0.19
18	Sh. Kishan Das ji s/o Sh Manqi Das ji Vaishanav,	Gen	0.40	CSV 23	15813	4.95	41.80	17133	1320	0.08
19	Sh. Devi lal ji s/o Sh Lalu lal ji Yadav	OBC	0.40	CSV 23	15878	5.10	40.30	16960	1082	0.07
20	Sh. Radhey shyam ji s/o Sh Narain lal ji Yadav,	OBC	0.40	CSV 23	15993	5.10	43.00	17635	1642	0.10
21	Sh. Mohan lal ji s/o Sh Lalu ram ji Sharma,	OBC	0.40	CSV 23	16063	4.97	43.00	17453	1390	0.09
22	Sh. Jagan nath ji Teli	OBC	0.40	CSV 23	15928	4.95	41.80	17133	1205	0.08
23	Sh. Narain lal ji s/o Sh Puran ji Yadav	OBC	0.40	CSV 23	16078	4.88	40.30	16656	578	0.04
24	Sh. Bhaqwan ji s/o Sh Mangu lal ji	OBC	0.40	CSV 23	16303	4.89	47.20	18402	2099	0.13



S. No.	Name of farmers (Contact No.) & village, Block, District, Pin code	Caste category	Sorghum area (ha)	Sorghum cultivar	Cost of production (Rs./ha)	Yield (q/ha)		Gross return (Rs./ha)	Net return (Rs./ha)	B:C ratio
						Grain	Stover			
25	Sh. Gopal lal ji s/o Sh Pabu ji Yadav	OBC	0.40	CSV 23	16228	4.95	48.40	18783	2555	0.16
26	Sh. Nand lal ji s/o Sh Bheru lal ji Bheel	OBC	0.40	CSV 23	16453	4.89	46.90	18327	1874	0.11
27	Sh. Ladu lal ji s/o Sh Kishn lal ji Bheel	ST	0.40	CSV 23	16428	5.10	46.54	18520	2092	0.13
28	Sh. Manohar Dan	OBC	0.40	CSV 23	16528	6.15	44.80	19503	2975	0.18
29	Sh. Roop Dan, Village Kalyan puri	OBC	0.40	CSV 23	16413	5.40	43.00	18040	1627	0.10
30	Sh. Kani Ram ji s/o Sh Naval Ram Gameti, Village Uada Mangri Kham ki Madri, Post Rakhyawal, Tehsil: Mavali, District Udupur	ST	0.40	CSV 23	16338	12.00	74.00	34700	18362	1.12
31	Sh. Rupa ji s/o Sh Navala Ram Bheel, Village Dhimda, Kham ki Madri, Post Rakhyawal, Tehsil: Mavali, District Udupur	ST	0.40	CSV 23	13373	14.00	77.00	38150	24777	1.85
32	Sh. Bhaktwar singh s/o Sh Shambhu singh ji, Village Bham li, Kham ki Madri, Post Rakhyawal, Tehsil: Mavali, District Udupur	OBC	0.40	CSV 23	16473	14.00	78.00	38400	21927	1.33
33	Sh. Dilip Jati ji s/o Sh Goverdhan Sagar Jati,	OBC	0.40	CSV 23	16358	15.65	84.00	42128	25770	1.58
34	Sh. Shaker ji s/o Sh Lakha Ram Bheel,	ST	0.40	CSV 23	16478	10.25	88.00	35838	19360	1.17
35	Sh. Hira Lal ji s/o Sh Moti Lal ji Nai,	OBC	0.40	CSV 23	16363	8.85	74.00	30448	14085	0.86
36	Sh. Bhanwar lal ji s/o Sh Bhola ji Dangli, Village Vitholi, Post Rakhyawal, Tehsil: Mavali, District Udupur	OBC	0.40	CSV 23	16278	12.50	72.00	34875	18597	1.14
37	Smt.. Shambhoo Bai w/o Sh Megha Ji Meghwal, Village Vitholi, Post Rakhyawal, Tehsil: Mavali, District Udupur	SC	0.40	CSV 23	16328	12.00	70.00	33700	17372	1.06
38	Sh. Suresh s/o Sh Chinni lal ji Paliwal,	Gen	0.40	CSV 23	16728	12.00	72.00	34200	17472	1.04
39	Sh. Mukesh kumar Suthar s/o Sh Hem Raj Suthar, Village Kham ki Madri, Post Rakhyawal, Tehsil: Mavali, District Udupur	OBC	0.40	CSV 23	16203	14.00	71.50	36775	20572	1.27
40	Sh. Meetha lal s/o Sh Goverdhan Sagar Jati, Village Chouki ka kuwa, Kham ki Madri, Post Rakhyawal, Tehsil: Mavali, District Udupur	OBC	0.40	CSV 23	16278	12.00	78.80	35900	19622	1.21
41	Sh. Tulsi Ram Prajapat s/o Sh Kashi Ram Prajapat,	OBC	0.40	CSV 23	16453	12.50	81.00	37125	20672	1.26
42	Sh. Jaga Ram ji s/o Sh Partha ji Dangli,	OBC	0.40	CSV 23	16503	13.75	81.00	38813	22310	1.35
43	Sh. Vijay Singh ji s/o Sh Bheru Singh ji Rao, Village Kham ki Madri, Post Rakhyawal, Tehsil: Mavali, District Udupur	OBC	0.40	CSV 23	16818	14.50	80.00	39575	22757	1.35
44	Sh. Kesu Ram ji s/o Sh Kana ji Dangli, Village & P.O. Rakhyawal,	OBC	0.40	CSV 23	16588	14.50	92.00	42575	25987	1.57
45	Sh. Dalla Ram ji Dangli s/o Sh Deva Ram ji Dangli,	OBC	0.40	CSV 23	13873	14.30	74.00	37805	23932	1.73
46	Sh. Shanker Lal ji s/o Sh Mohan Dangli,	OBC	0.40	CSV 23	17023	13.54	74.00	36779	19756	1.16
47	Sh. Sohan lal s/o Sh Lachhi Ram ji Prajapat, Village Vitholi, Post Rakhyawal, Tehsil: Mavali, District Udupur	OBC	0.40	CSV 23	16633	10.50	70.00	31675	15042	0.90
48	Sh. Phoola ji s/o Sh Navala ji Bheel,	ST	0.40	CSV 23	16428	11.00	65.00	31100	14672	0.89
49	Sh. Shanker ji s/o Sh Bheru lal ji Bheel,	ST	0.40	CSV 23	16578	11.00	74.00	33350	16772	1.01
50	Sh. Raju Rebari s/o Sh Hansa Ram Rebari,	OBC	0.40	CSV 23	16528	10.55	74.00	32743	16215	0.98
51	Sh. Moti ji Gayri s/o Sh Bagta Ram Gayari,	OBC	0.40	CSV 23	16203	10.50	70.00	31675	15472	0.95
52	Sh. Manohar Singh s/o Sh Bahadur Singh ji,	OBC	0.40	CSV 23	16568	10.25	65.00	30088	13520	0.82
53	Sh. Jai Ram Lohar,	OBC	0.40	CSV 23	16463	10.30	88.00	35905	19442	1.18
54	Sh. Kamal Chand Dangli,	OBC	0.40	CSV 23	16803	10.50	92.00	37175	20372	1.21
55	Sh. Dinesh Chand Dangli,	OBC	0.40	CSV 23	16578	10.30	87.00	35655	19077	1.15
56	Sh. Gopi Lal Dangli,	OBC	0.40	CSV 23	16678	11.00	85.80	36300	19622	1.18

**ANNEXURE-IV: Results of FLDs on sorghum organized by AICRP, Parbhani (Maharashtra)**

S. No.	Name of farmers (Contact No.) & village,Block, District, Pin code	Cast Category (Male / Female)	Sorghum area (ha)	Cost of production (Rs./ha)	Yield (q /ha)		Gross return (Rs./ha)	Net return (Rs./ha)	B:C ratio
					Grain	Fodder			
1	Trimukh Dadarao Survase At Post Manoli Tq. Manwat Dist. Parbhani Mob.9552177955	Open	0.4	11910	12	34	43000	31090	2.61
2	Vasant Rustumrao Shinde At Post Manoli Tq. Manwat Dist. Parbhani Mob.8975207106	Open	0.4	11910	7	24	28000	16090	1.35
3	Rama Pralhadrao Survase At Post Manoli Tq. Manwat Dist. Parbhani Mob.9689499286	Open	0.4	11910	5	26	26200	14290	1.20
4	Manik Banshi Shinde At Post Manoli Tq. Manwat Dist. Parbhani Mob.9665457758	Open	0.4	11910	12	32	41600	29690	2.49
5	Shivaji Shesherao Mande At Post Manoli Tq. Manwat Dist. Parbhani Mob.7757048264	Open	0.4	12710	13.5	34	45400	32690	2.57
6	Vitthal Manikrao Shinde At Post Manoli Tq. Manwat Dist. Parbhani Mob.9860654257	Open	0.4	11910	9.5	34	39000	27090	2.27
7	Shankar Sakharam Mande At Post Manoli Tq. Manwat Dist. Parbhani Mob.9767542479	Open	0.4	11910	12	35.5	44050	32140	2.70
8	Avdhoot Haribhau Shinde At Post Manoli Tq. Manwat Dist. Parbhani Mob.9011967594	Open	0.4	11910	9	25	31900	19990	1.68
9	Purushottam Ganpatrao Shinde At Post Manoli Tq. Manwat Dist. Parbhani Mob.9767459247	Open	0.4	12710	13	35	45300	32590	2.56
10	Laxman Nivrutti Shinde At Post Manoli Tq. Manwat Dist. Parbhani Mob.9011967594	Open	0.4	11910	6.5	20	24400	12490	1.05
11	Bhagwan Ramrao Survase At Post Manoli Tq. Manwat Dist. Parbhani Mob.9665473342	Open	0.4	11910	7	28	30800	18890	1.59
12	Ramrao Sahebrao Shinde At Post Manoli Tq. Manwat Dist. Parbhani Mob.9881525504	Open	0.4	11910	12.5	32	42400	30490	2.56
13	Bansi Bapurao Survase At Post Manoli Tq. Manwat Dist. Parbhani Mob.8975135020	Open	0.4	11910	7.5	26	30200	18290	1.54
14	Mohan Janardhan Kulkarni At Post Manoli Tq. Manwat Dist. Parbhani Mob.9850771400	Open	0.4	11910	7.5	27	30900	18990	1.59
15	Ganesh Vitthal Ghandge At Post Manoli Tq. Manwat Dist. Parbhani Mob.9922621663	OBC	0.4	11910	6	20	23600	11690	0.98
16	Vajjnath Gyandev Shinde At Post Manoli Tq. Manwat Dist. Parbhani Mob.9421383481	Open	0.4	11910	7	23	27300	15390	1.29
17	Bhagwan Dadarao Talekar At Post Manoli Tq. Manwat Dist. Parbhani Mob.9881750913	ST	0.4	11910	11	32	40000	28090	2.36
18	Vikas Ramrao Shinde At Post Manoli Tq. Manwat Dist. Parbhani Mob.9921189750	Open	0.4	11910	7	20	25200	13290	1.12
19	Ashok Keshavrao Survase At Post Manoli Tq. Manwat Dist. Parbhani Mob.9673962877	Open	0.4	11910	9	25	31900	19990	1.68
20	Tukaram Punjaji Talekar At Post Manoli Tq. Manwat Dist. Parbhani	ST	0.4	11910	11	35	42100	30190	2.53



S. No.	Name of farmers (Contact No.) & village,Block, District, Pin code	Cast Category (Male / Female)	Sorghum area (ha)	Cost of production (Rs./ha)	Yield (q /ha)		Gross return (Rs./ha)	Net return (Rs./ha)	B:C ratio
					Grain	Fodder			
	Mob.9975531101								
21	Dnyanoba Vitthalrao Mande At Post Manoli Tq. Manwat Dist. Parbhani Mob.9922696738	Open	0.4	11910	11	35	42100	30190	2.53
22	Uddhav Kishanrao Survase At Post Manoli Tq. Manwat Dist. Parbhani Mob.8805573349	Open	0.4	12710	12	36	44400	31690	2.49
23	Shridhar Nivrutti Shinde At Post Manoli Tq. Manwat Dist. Parbhani Mob.9657951135	Open	0.4	11910	11.5	41	47100	35190	2.95
24	Bharat Namdev Mande At Post Manoli Tq. Manwat Dist. Parbhani Mob.9011339350	Open	0.4	11910	9	30	35400	23490	1.97
25	Vitthal Shesherao Shinde At Post Manoli Tq. Manwat Dist. Parbhani Mob.8605664647	Open	0.4	11910	9	28	34000	22090	1.85
26	Balasaheb Rambhau Mande At Post Manoli Tq. Manwat Dist. Parbhani Mob.9767142322	Open	0.4	11910	9	26	32600	20690	1.74
27	Ramesh Bapurao Shinde At Post Manoli Tq. Manwat Dist. Parbhani Mob.7057680914	Open	0.4	11910	8	25	30300	18390	1.54
28	Dhuraji Chandoba Chavhan At Post Manoli Tq. Manwat Dist. Parbhani	Open	0.4	11910	6.5	19	23700	11790	0.99
29	Bhagwan Dattrao Solanke At Post Manoli Tq. Manwat Dist. Parbhani Mob.9649752576	Open	0.4	11910	7	24.5	28350	16440	1.38
30	Vishnu Bapurao Mande At Post Manoli Tq. Manwat Dist. Parbhani Mob.9561323738	Open	0.4	11910	7	24.5	28350	16440	1.38
31	Madan Maharaj Shinde At Post Manoli Tq. Manwat Dist. Parbhani Mob.9822322517	Open	0.4	11910	6	21	24300	12390	1.04
32	Maroti Shankarrao Satpute At Post Borda Tq. Gangakhed Dist. Parbhani	OBC	0.4	11910	6.5	19.5	24050	12140	1.02
33	Mrs. Alkabai Balaji Awale, Manaspuri Tq. Kandhar Dist. Nanded	SC/Female	0.4	11910	8.5	30	34600	22690	1.91
34	Gajanan Pandurang Awale, Manaspuri Tq. Kandhar Dist. Nanded	SC	0.4	11910	9	31.5	36450	24540	2.06
35	Akash Pandurang Awale, Manaspuri Tq. Kandhar Dist. Nanded	SC	0.4	11910	10	35	40500	28590	2.40
36	Balaji Bapurao Awale, Manaspuri Tq. Kandhar Dist. Nanded	SC	0.4	11910	10	35	40500	28590	2.40
37	Shrikant Ganpatrao Chate Patil, Tamba, Tq. Kej Dist. Beed Mob. 9970662415	OBC	0.4	11910	8	28	32400	20490	1.72
38	Balasaheb Rangrao Chate Patil, Tamba, Tq. Kej Dist. Beed	OBC	0.4	11910	7.5	26	30200	18290	1.54
39	Laxmanrao Rangrao Chate Patil, Tamba, Tq. Kej Dist. Beed	OBC	0.4	11910	7	25	28700	16790	1.41
40	Umakant Ganpatrao Chate Patil, Tamba, Tq. Kej Dist. Beed Mob. 9503126710	OBC	0.4	11910	11	32	40000	28090	2.36
41	Bhgwanao Rajebhau Chate Patil, Tamba, Tq. Kej Dist. Beed	OBC	0.4	11910	10	30	37000	25090	2.11
42	Purshotam Trimbakrao Chate Patil, Tamba, Tq. Kej Dist. Beed	OBC	0.4	11910	9.5	26	33400	21490	1.80
43	Suresh Ganpatrao Chate Patil, Tamba, Tq. Kej Dist. Beed	OBC	0.4	11910	8	25	30300	18390	1.54
44	Rajebhau Pandharinath Chate Patil, Tamba, Tq. Kej Dist. Beed	OBC	0.4	11910	7	20	25200	13290	1.12
45	Appasaheb Chate, Tamba, Tq. Kej Dist. Beed	OBC	0.4	11910	7	23	27300	15390	1.29
46	Ganpatrao Chate, Tamba, Tq. Kej Dist. Beed	OBC	0.4	11910	8.5	26	31800	19890	1.67

**ANNEXURE-V: Results of FLDs on forage sorghum organized by AICRP, Hisar (Hisar)**

S. No.	Name of farmers (Contact No.) & village,Block, District, Pin code	Cast Category (M/F)	Sorghum area (ha)	Sorghum cultivar	Cost of production (Rs./ha)	Green fodder Yield (q /ha)	Gross return (Rs./ha)	Net return (Rs./ha)	B:C ratio
1	Hazi Ali Mohammad S/o Jahaj Khan, VPO Khedla, District Nuh Mob 9813165403	OBC	0.2	HC 171	25978	400	40,000	14,022	1.54
			0.2	HJ 541	25978	440	44,000	18,022	1.69
2	Madan Singh S/o Jai Narain, VPO Sangel, District Nuh Mob 9671992301	Gen	0.2	HC 260	25978	402	40,200	14,222	1.55
3		Gen	0.1	HC 136	25978	385	38,500	12,522	1.48
				0.1	HC 171	25978	380	38,000	12,022
	Gaffar S/o Sardar , VPO Mohammadpur, District Nuh Mob 8929516786		0.2	HC 260	25978	370	37,000	11,022	1.42
4	Aashu S/o Sardar, VPO Mohammadpur, District, Nuh Mob 9813468621	OBC	0.4	HC 136	25978	400	40,000	14,022	1.54
5	Haroon S/o Jalal Khan, VPO Mohammadpur, District Nuh, Mob 9813738438	OBC	0.4	HC 308	25978	400	40,000	14,022	1.54
6	Subhash Chander S/o Ruli Ram, VPO Mangali, Block Hisar-I, District Hisar- 9466335796	OBC	0.4	HC 260	25978	325	32,500	6,522	1.25
7	Satish Kumar S/o Om Prakash, VPO Mangali, Block Hisar-I, District Hisar- 9813562295	Gen	0.4	HJ 541	25978	428	42,800	16,822	1.65
8	Sarwan kumar S/o Dalip Singh, VPO Mangali, Block Hisar-I, District Hisar- 9416340162	OBC	0.4	HJ 513	25978	400	40,000	14,022	1.54
9		Gen	0.2	SSG 59-3	31290	490	49,000	17,710	1.57
	Dholu Ram S/o Dalip Singh, VPO Mangali, Block Hisar-I, District Hisar Mob 9416340162		0.2	COFS 29	31290	500	50,000	18,710	1.60
10		Gen	0.2	HC 136	25978	370	37,000	11,022	1.42
	Jaipal S/o Tekchand, VPO Pilani, District Kaithal Mob 9812686541		0.2	HJ 513	25978	400	40,000	14,022	1.54
11		OBC	0.1	HC 308	25978	370	37,000	11,022	1.42
	Krishan S/o Prem Singh, VPO Majra, District Kaithal Mob 9466032080		0.1	HJ 513	25978	405	40,500	14,522	1.56
12		OBC	0.1	HJ 513	25978	400	40,000	14,022	1.54
	Baljit S/o Lehna Singh, VPO Nanch, District Kaithal, Mob 9813587432		0.1	HJ 541	25978	430	43,000	17,022	1.66
13		Gen	0.1	HJ 513	25978	415	41,500	15,522	1.60
	Ram Kumar S/o Dal Singh, VPO Dubhal, District Kaithal, Mob 9466785109		0.1	HJ 541	25978	440	44,000	18,022	1.69
14		Gen	0.1	HJ 513	25978	410	41,000	15,022	1.58
	Anil Kumar S/o Radha Krishan, VPO Deaban, District Kaithal, Mob 9466216495		0.1	HJ 541	25978	450	45,000	19,022	1.73
15		Gen	0.1	HC 136	25978	360	36,000	10,022	1.39
	Dalel Singh S/o Sadhu Ram, VPO Damla, District Yamunanagar, Mob 9416632292		0.1	HC 171	25978	335	33,500	7,522	1.29
16		Gen	0.1	HJ 513	25978	430	43,000	17,022	1.66
	Ravinder S/o Shyam Singh, VPO Ishpur, District Yamunanagar mob 9896505515		0.1	HJ 541	25978	450	45,000	19,022	1.73
17		Gen	0.1	HJ 513	25978	420	42,000	16,022	1.62
	Yash Pal S/o Jiya Lal, VPO Bakana, District Yamunanagar Mob 9416449496		0.1	HJ 541	25978	410	41,000	15,022	1.58
18		Gen	0.1	HC 136	25978	355	35,500	9,522	1.37
	Charan Singh S/o Rishi Pal, VPO Bakana, District Yamunanagar Mob 7404248006		0.1	HJ 541	25978	400	40,000	14,022	1.54
19		BC	0.1	HC 136	25978	350	35,000	9,022	1.35
	Rahul S/o Naresh, VPO Radauri, District Yamunanagar, Mob 9466575005		0.1	HC 171	25978	340	34,000	8,022	1.31
20		OBC	0.1	HJ 513	25978	430	43,000	17,022	1.66
	Raj Kumar Arya s/o Sh. Om Prakash Arya, VPO. Mehra, Kurukshetra, Mob 9416914051		0.1	HJ 541	25978	450	45,000	19,022	1.73
21	Rajiv Kumar s/o Sh. Parmeshwari Prashad, VPO. Amin, Kurukshetra, Mob 9896730616	Gen	0.2	HJ 513	25978	430	43,000	17,022	1.66
22	Hazari Lal S/o Sh. Sita Ram, VPO. Adhoni, Kurukshetra, Mob 9068065772	Gen	0.2	HC 308	25978	410	41,000	15,022	1.58
23	Smt. Gurdevi W/o Sh. Om Prakash, VPO. Mehra, Kurukshetra, Mob 9416570414	OBC	0.1	HJ 513	25978	430	43,000	17,022	1.66
24	Sh. Ashwani Kumar s/o Sh. Parmeshwari Prashad, VPO. Amin, Kurukshetra- 9416571881	Gen	0.2	HJ 541	25978	460	46,000	20,022	1.77
25	Sh. Ashwani Kumar	Gen	0.1	HJ 541	25978	455	45,500	19,522	1.75

**ANNEXURE-VI: Results of FLDs on forage sorghum organized by AICRP, Pantanagar (Jharkhand)**

S. No.	Name of farmers (Contact No.) & village, Block, District, Pin code	Sorghum area (ha)	Sorghum cultivar	Crop days	Cost of production (Rs./ha)	Green fodder Yield (q /ha)	Gross return (Rs./ha)	Net return (Rs./ha)	B:C ratio
1	Shri Sarvjeet Singh S/o Shri Ramchandra Singh, Vill. Bakenia, Block-Gadarpur, Distt. Udham Singh Nagar (9837521033)	0.4	Pant Chari 5	80	13038	425	36125	23087	1.77
2	Shri Sarveshwar Singh S/o Shri Ramchandra Singh, Vill. Bakenia, Block-Gadarpur, Distt. Udham Singh Nagar (05949263833)	0.2	Pant Chari 6	105	14804	555	47175	32371	2.19
3	Shri Hariom, Vill. Bakenia, Block-Gadarpur, Distt. Udham Singh Nagar (9639597580)	0.2	Pant Chari 6	105	14804	530	45050	30246	2.04
4	Shri Satendra Tiwari, Vill. Bakenia, Block-Gadarpur, Distt. Udham Singh Nagar	0.4	Pant Chari 6	110	14804	500	42500	27696	1.87
5	Shri Jaleshwar Nath Tripathi, Vill. Bakenia, Block-Gadarpur, Distt. Udham Singh Nagar	0.4	Pant Chari 6	105	14804	610	51850	37046	2.5
6	Shri Ravisankar Singh S/o Ram Yodha Singh, Vill. Bakenia, Block-Gadarpur, US Nagar (9837630645)	0.2	Pant Chari 5	78	13038	450	38250	25212	1.93
7	Shri Mangal Singh S/o Fatte Singh, Vill. Bakenia, Block-Gadarpur, Distt. US Nagar (9639099272)	0.4	Pant Chari 5	80	13038	435	36975	23937	1.84
8	Shri Gurudatta Singh, Vill.-Vamanpuri, Block- Gadarpur, Distt. Udham Singh Nagar (9927549521)	0.4	Pant Chari 5	82	13038	425	36125	23087	1.77
9	Shri Balveer Singh S/o Ladda Singh, Vill.-Vamanpuri, Block- Gadarpur, US Nagar (9917384463)	0.4	Pant Chari 5	82	13038	398	33830	20792	1.59
10	Shri Puranchand S/o Magaram, Vill.-Sakenia, Block- Gadarpur, Distt. U Singh Nagar (9837506480)	0.2	Pant Chari 5	79	13038	411	34935	21897	1.68
11	Dr. Tara Chand S/o Shri Satish Chand, Vill.-Sakenia, Block- Gadarpur, Distt. US Nagar (9837510624)	0.4	Pant Chari 6	112	14804	530	45050	30246	2.04
12	Shri Milak Raj S/o Fatte Chand, Vill.-Sakenia, Block- Gadarpur, Distt. U Singh Nagar (9837786719)	0.2	Pant Chari 6	115	14804	502	42670	27866	1.88
13	Shri Allahnoor S/o Samsheer Khan, Vill.-Sakenia, Block- Gadarpur, Distt. U Singh Nagar (9756756411)	0.4	Pant Chari 5	84	13038	430	36550	23512	1.8
14	Shri Chaadvir Singh S/o Charan Singh, Vill.-Sakenia, Block- Gadarpur, Distt. US Nagar (9756683251)	0.4	Pant Chari 6	108	14804	525	44625	29821	2.01
15	Shri Mandeep S/o Shri Ramesh Kumar, Vill.-Sakenia, Block- Gadarpur, Distt. US Nagar (9837741440)	0.4	Pant Chari 6	110	14804	510	43350	28546	1.92
16	Shri Vinod Kumar S/o Shri Veer Singh, Vill.-Sakenia, Block- Gadarpur, Distt. US Nagar (9837621321)	0.4	Pant Chari 5	90	13038	405	34425	21387	1.64
17	Shri Pargat Singh, Vill.-Malpuri, Block-Sitarganj, Distt. Udham Singh Nagar (9927736450)	0.4	Pant Chari 6	117	14804	505	42925	28121	1.9
18	Shri Narvell Singh, Vill.-Malpuri, Block-Sitarganj, Distt. Udham Singh Nagar (9012017809)	0.4	Pant Chari 6	105	14804	580	49300	34496	2.33
19	Shri Paramjeet Singh, Vill.-Malpuri, Block-Sitarganj, Distt. Udham Singh Nagar (8057130179)	0.4	Pant Chari 6	115	14804	575	48875	34071	2.3
20	Shri Risal Singh, Vill.-Malpuri, Block-Sitarganj, Distt. Udham Singh Nagar (9719331113)	0.4	Pant Chari 5	88	13038	430	36550	23512	1.8
21	Shri Umesh Singh S/o Shri Dhan Singh, Vill.-Kanpura, Block-Sitarganj, US Nagar (9837624902)	0.2	Pant Chari 6	112	14804	600	51000	36196	2.45
22	Smt. Rajvati W/o Bhagwan Singh, Vill.-Kanpura, Block-Sitarganj, Distt. U Singh Nagar (8057403784)	0.2	Pant Chari 5	78	13038	395	33575	20537	1.56
23	Smt. Shanti Devi W/o Shri Ramavatar, Vill.-Kanpura, Block-Sitarganj, Distt. US Nagar (8958117319)	0.2	Pant Chari 5	81	13038	410	34850	21812	1.67
24	Shri Jeevan Singh S/o Rshpal Singh, Vill.-Kanpura, Block-Sitarganj, Distt. Udham Singh Nagar	0.2	Pant Chari 5	85	13038	425	36125	23087	1.77
25	Shri Suraj Singh S/o Surjeet Singh, Vill.-Kanpura, Block-Sitarganj, Distt. Udham Singh Nagar	0.2	Pant Chari 5	80	13038	405	34425	21387	1.64
26	Shri Vadam Singh S/o Chaman Singh, Vill.-Kanpura, Block-Sitarganj, Distt. US Nagar (9639994718)	0.2	Pant Chari 6	108	14804	530	45050	30246	2.04
27	Shri Gopal Singh S/o Yasvant Singh, Vill.-Kanpura, Block-Sitarganj, Distt. US Nagar (8958069631)	0.2	Pant Chari 5	85	13038	390	33150	20112	1.54
28	Neelam C/o Sonpal Singh, Vill.-Kanpura, Block-Sitarganj, Distt. Udham Singh Nagar (9557834113)	0.2	Pant Chari 6	112	14804	505	42925	28121	1.9
29	Naresh Singh S/o Bhagpat Singh, Vill.-Kanpura, Block-Sitarganj, Distt. Udham Singh Nagar	0.2	Pant Chari 6	105	14804	523	44455	29651	2
30	Bhagwan Singh S/o Ramprasad Vill.-Kanpura, Block-Sitarganj, Distt. U Singh Nagar (9012299246)	0.2	Pant Chari 5	85	13038	410	34850	21812	1.67
31	Hemwati W/o Ranjeet Singh, Vill.-Kanpura, Block-Sitarganj, Distt. U Singh Nagar (7500580365)	0.2	Pant Chari 5	85	13038	427	36295	23257	1.78
32	Shri Ratan Singh S/o Bhikhari Singh, Vill.-Kanpura, Block-Sitarganj, Distt. US Nagar (9012499376)	0.2	Pant Chari 5	90	13038	425	36125	23087	1.77
33	Smt. Kamleshwati S/o Ram Singh, Vill.-Kanpura, Block-Sitarganj, Distt. US Nagar (7500493977)	0.2	Pant Chari 6	110	14804	518	44030	29226	1.97
34	Shri Kaloo Singh W/o Bhagwan Singh, Vill.-Dhushari, Block-Sitarganj, Distt. US Nagar (7500672741)	0.2	Pant Chari 6	110	14804	530	45050	30246	2.04
35	Rani Devi W/o Jagdish Singh, Vill.-Dhushari, Block-Sitarganj, Distt. Udham Singh Nagar (9012503837)	0.2	Pant Chari 5	80	13038	388	32980	19942	1.53