
PROJECT COORDINATOR REPORT

Introduction

All India Coordinated Research Project on Cotton under Indian Council of Agriculture Research is dedicated to strengthen cotton research in the country. Cotton, as a leading natural fiber, is an important agricultural commodity, providing income to millions of cotton farmers and related textile industries besides, significant export earnings in the country. Numerous region specific both production as well as protection technologies have been developed and introduced by coordinated efforts with strong network of various Institutions including ICAR-CICR, ICAR-CIRCOT, State Agricultural Universities (SAUs). Development of cotton genotypes which under goes rigorous coordinated multi-location testing trials of cotton varieties and hybrids, development and testing of location specific cotton production and protection technologies under AICRP on Cotton have been significant since its inception in the year 1967. The efforts of AICRP on Cotton are well coordinated and focused to meet the challenges faced by the farmers and industries both domestically and internationally.

Indian Cotton Scenario

Cotton production in India during 2018-19 is expected around 361 lakh bales of 170 kg from 122.38 lakh hectares with a productivity of 501 kg lint/ha (CAB as on 22:11:2018). During the current year 2018-19, Maharashtra, Gujarat and Telangana were the major cotton growing states covering around 70.45% (86.22 lakh hectare) in area under cotton cultivation and 62.60% (226 lakh bales) of cotton production in India. An area of around 14.45 lakh ha (Punjab-2.84, Haryana-6.65 & Rajasthan-4.96) was sown under cotton during 2018-19 in North zone. Even with 6.41% decrease in area under cotton, the cotton production increased from 56 to 60.50 lakh bales with enhancement of 8% as compared to last year in North Zone. Significant production change in North Zone attributed to remarkable productivity increase in Haryana from 571 to 690 kg/ha; and Rajasthan from 640 to 754 kg/ha.

In Central Zone, the productivity level decreased from 479 to 445 kg/ha, mainly attributed to productivity decline in Gujarat from 674 to 577 kg/ha as a result of which 12 lakh bales reduction in Gujarat from 104 lakh bales last year to 92 lakh bales current year. There was a marginal decrease in area and production observed in South zone.



Cotton Balance Sheet

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17p	2017-18p
SUPPLY										
Opening stock	35.50	71.50	40.50	45.77	40.00	40.00	33.00	66.00	36.44	43.76
Crop	290.00	305.00	339.00	367.00	370.00	398.00	386.00	332.00	345.00	370.00
Import	10.00	6.00	2.38	7.51	14.59	11.51	14.39	22.79	30.94	15.00
TOTAL SUPPLY	335.50	382.50	381.88	420.28	424.59	449.51	433.39	420.79	412.38	428.76
DEMAND										
Mill Consumption	190.00	219.00	221.77	223.59	251.74	268.03	278.06	270.20	262.70	268.00
S.S.I Consumption	20.00	23.00	24.46	22.12	23.59	25.20	26.38	27.08	26.21	27.00
Non-Mill Consumption	19.00	17.00	13.38	5.00	7.83	6.32	5.00	18.00	21.50	20.50
Export	35.00	83.00	76.50	129.57	101.43	116.96	57.72	69.07	58.21	70.00
TOTAL DEMAND	264.00	342.00	336.11	380.28	384.59	416.51	367.16	384.35	368.62	385.50
Closing Stock	71.50	40.50	45.77	40.00	40.00	33.00	66.23	36.44	43.76	43.26

p – Provisional; Source: CAB estimate as on 16.06.2018

State wise Cotton Area (in Lakh ha)

State	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18p	2018-19p
Punjab	5.30	5.60	4.80	4.46	4.20	3.39	2.85	2.91	2.84
Haryana	4.92	6.41	6.14	5.36	6.48	6.15	5.70	6.69	6.65
Rajasthan	3.35	4.70	4.50	3.93	4.87	4.48	4.71	5.84	4.96
NORTH ZONE	13.57	16.71	15.44	13.75	15.55	14.02	13.26	15.44	14.45
Gujarat	26.33	29.62	24.97	25.19	27.73	27.22	23.82	26.23	27.09
Maharashtra	39.42	41.25	41.46	41.92	41.90	42.07	38.00	42.07	41.19
Madhya Pradesh	6.50	7.06	6.08	5.14	5.74	5.63	5.99	6.03	6.97
CENTRAL ZONE	72.25	77.93	72.51	72.25	75.37	74.92	67.81	74.33	75.25
Telangana					17.13	17.73	14.09	18.97	17.94
Andhra Pradesh	18.79	18.79	24.00	23.89	8.21	6.66	4.72	6.44	5.51
Karnataka	5.45	5.54	4.85	6.62	8.75	6.42	5.10	5.31	5.75
Tamil Nadu	1.22	1.33	1.28	1.52	1.87	1.42	1.42	1.85	1.40
SOUTH ZONE	25.46	25.66	30.13	32.03	35.96	32.23	25.33	32.57	30.60
Odisha	0.74	1.02	1.19	1.24	1.27	1.25	1.36	1.45	1.58
Others	0.33	0.46	0.51	0.33	0.31	0.50	0.50	0.50	0.50
TOTAL	112.35	121.78	119.78	119.60	128.46	122.92	108.26	124.29	122.38



State wise Cotton Production (in Lakh bales of 170 kg)

State	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18p	2018-19p
Punjab	18.50	20.00	21.00	21.00	13.00	6.25	9.00	11.50	11.50
Haryana	17.00	26.00	26.00	24.00	23.00	14.50	20.50	22.50	27.00
Rajasthan	10.10	18.00	17.00	14.00	17.00	15.00	16.50	22.00	22.00
NORTH ZONE	45.60	64.00	64.00	59.00	53.00	35.75	46.00	56.00	60.50
Gujarat	106.20	122.00	93.00	124.00	112.00	90.00	95.00	104.00	92.00
Maharashtra	87.75	76.00	81.00	84.00	80.00	76.00	88.50	85.00	81.00
Madhya Pradesh	17.70	18.00	19.00	19.00	19.00	18.00	20.50	20.50	24.00
CENTRAL ZONE	211.65	216.00	193.00	227.00	211.00	184.00	204.00	209.50	197.00
Telangana					50.50	58.00	48.00	55.00	53.00
Andhra Pradesh	59.50	60.00	84.00	78.00	26.50	23.75	19.00	20.50	20.00
Karnataka	11.10	15.00	17.00	23.00	34.00	19.50	18.00	18.00	18.00
Tamil Nadu	7.20	6.50	6.00	5.00	6.00	6.00	5.00	5.50	6.00
SOUTH ZONE	77.80	81.50	107.00	106.00	117.00	107.25	90.00	99.00	97.00
Odisha	2.05	3.50	4.00	4.00	3.00	3.00	3.00	3.50	4.50
Others	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Total	339.10	367.00	370.00	398.00	386.00	332.00	345.00	370.00	361.00

State wise Cotton Productivity (in kg/ha)

State	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18p	2018-19p
Punjab	593	607	744	800	526	313	536	672	688
Haryana	587	690	719	761	603	401	611	571	690
Rajasthan	513	651	642	605	593	569	595	640	754
NORTH ZONE	571	651	704	729	579	433	590	617	712
Gujarat	686	700	633	837	687	562	678	674	577
Maharashtra	378	313	332	341	324	307	396	343	334
Madhya Pradesh	463	433	531	628	563	544	582	578	585
CENTRAL ZONE	498	471	452	534	476	418	511	479	445
Telangana					501	556	579	493	502
Andhra Pradesh	538	543	595	555	549	606	684	541	617
Karnataka	346	460	596	590	661	516	600	576	532
Tamil Nadu	1003	831	797	559	545	718	599	505	729
SOUTH ZONE	519	540	604	561	553	566	604	517	539
Odisha	471	583	571	548	401	408	375	410	484
India	513	512	525	565	511	458	542	506	501

Note: p – provisional; Source: CAB estimate as on 22:11:2018



Insect Pests and Diseases Scenario

During the year, Whitefly incidence was moderate in cotton and hence marginal economic loss in North Zone, especially, in Punjab and Rajasthan. Even the incidence of CLCuD was low. The incidence of White fly was recorded below ETL, incidence of Jassids was above ETL in the mid of July. In Gujarat (Junagarh) the incidence of pink bollworm was observed from 41st standard week and continued up to end of season. The highest larval population was recorded during 50th standard week of 2018 (18.00 larva / 20 green bolls). In Akola, the pink bollworm larval population was maximum during 50th MW (10-16 Dec). Pink bollworm damage in green bolls ranged from 10.00 to 55.00 per cent whereas loculi damage ranged from 5.33 to 15.49 per cent. Overall season was satisfactory for cotton crop but excess rainfall during initial stages and total terminal stress with no moisture in soil, and heavy incidence of sucking pests in the region resulted in reduction of seed cotton yield in Akola. In Guntur, dry spell aggravated the sucking pest incidence, especially thrips. Sucking pests leaf hoppers was the major pest with severe intensity throughout the season in Nandyal. The incidence of pink bollworm was observed in the first fortnight of November and the incidence progressed slowly with peak population in the month of January (30 larva/20 bolls) in Nandyal. Alternaria leaf spot was the major disease during the season in Nandyal. In Raichur, the major outbreak of insect pest was jassids, about 15-20 percent loss due to jassids in rainfed areas and about 20-25 per cent loss was noticed in irrigated. The other major pest outbreak was Mirid bug causing boll drop in Raichur. In Coimbatore, incidences of spotted boll worm, American boll worm, stem weevil and root rot complex were noticed.

World cotton Scenario

Current year the world cotton production is estimated at 118.93 million bales of 480 lb (USDA, May 2018), there is a decrease of 3.9% than last year. Although, India maintaining the position of leading cotton growers in the world, China leading in terms of cotton production. Although cotton is cultivated in 77 countries; the five countries - China, India, United States, Brazil and Pakistan, produces 78% of the total world production from 72% of the world gross cotton area. China and Bangladesh are being the largest net importers of cotton (19% each) of the total world import, followed by Vietnam (17%), Indonesia (8%) and Pakistan (7%). The United States maintaining leading exporter of cotton (36%) of the total world export, followed by Brazil (14%), India (10%) and Australia (9%). On the productivity front Australia leading with yield of 1814 kg/ha, followed by China (1726) and Brazil (1636) and India way behind at 507 kg lint/ha.



World cotton situation in major cotton producing countries: 2018

County	Area Harvested	Production	Import	Export	Domestic consumption	Yield
India	12250 (12450)	27000 (29000)	1400 (1677)	4200 (5182)	24800 (24150)	480 (507)
China	3500 (3400)	27750 (27500)	8000 (5725)	150 (125)	40500 (41000)	1726 (1761)
United States	4262 (4492)	18390 (20923)	5 (3)	15000 (15847)	3295 (3529)	939 (1014)
Brazil	1570 (1175)	11800 (9220)	50 (82)	6000 (4174)	3500 (3400)	1636 (1708)
Pakistan	2400 (2700)	7700 (8200)	3000 (3300)	125 (160)	10625 (10825)	699 (661)
Uzbekistan	1100 (1250)	3300 (3860)	0 (0)	800 (900)	2750 (2500)	653 (672)
Australia	300 (530)	2500 (4800)	0 (0)	3800 (3915)	35 (35)	1814 (1972)
Mali	730 (705)	1350 (1400)	0 (0)	1300 (1300)	25 (25)	403 (432)
Benin	560 (530)	1300 (1140)	0 (0)	1300 (1000)	15 (15)	505 (468)
Burkina	640 (850)	1000 (1200)	0 (0)	1100 (1150)	25 (25)	340 (307)
Turkmenistan	545 (545)	910 (1340)	0 (0)	450 (700)	675 (650)	364 (535)
Cote d'Ivoire	370 (366)	800 (785)	0 (0)	750 (620)	25 (20)	471 (467)
Cameroon	230 (225)	525 (500)	0 (0)	500 (400)	20 (20)	497 (484)
Sudan	180 (180)	500 (475)	0 (0)	375 (350)	75 (70)	605 (575)
Egypt	145 (91)	500 (300)	475 (550)	300 (220)	635 (590)	751 (718)
Ethiopia	65 (60)	175 (175)	60 (50)	0 (0)	240 (230)	586 (635)
Chad	120 (120)	90 (100)	0 (0)	100 (250)	10 (10)	163 (181)
World	33258 (33616)	118929 (123762)	42090 (41037)	42086 (40918)	123537 (123233)	779 (802)

Note: Figures in braces pertains to 2017-18; Area in 1000 ha; yield in kg/ha; quantity in 1000 bales of 480 lb. Source: USDA as on 09:05:2019.

Notification of Cotton Varieties and Hybrids

Nineteen Cotton Variety / Hybrid released during 2018-19 for various agro-climatic regions

S. No.	Name	Date of notification	Average yield (q/ha)	Fibre length (mm)	Mic value	Bundle Strength	Area of adaptation
1	Subiksha	26-12-2018	15.42	32.7	3.7	33.8	South Zone States
2	Suchitra	26-12-2018	17.67	28.0	4.2	29.0	Central Zone States
3	RHH 1007	26-12-2018	23.06	28.5	4.3	21.5	South & Central Zone States
4	HS 292	26-12-2018	23.16	27.8	4.3	21.7	South Zone States
5	GJ COT 102	26-12-2018	19.55	27.6	4.4	23.7	Central Zone States
6	JLA 0603	26-12-2018	15.15	24.6	5.9	21.5	South Zone States
7	UASR COT 1	26-12-2018	10.0 - 12.0	28.4 - 30.4		21.8 - 22.6	Karnataka
8	GN COT 26	26-12-2018	16.4	25.9	4.5	21.4	South Gujarat
9	GN COT 29	26-12-2018	14.93	26.8	4.7	20.9	South Gujarat
10	GN COT 32	26-12-2018	22.01	28.9	4.5	22.5	Gujarat
11	RVK 67	26-12-2018	16.0-17.0	25.7-26.7	4.2	22.3	Madhya Pradesh
12	G. Cot. 36	1/4/2019	24.29	29.5		29.3	South Zone States
13	G. Cot. 34	1/4/2019	23.55	28.3		26.2	Central Zone States
14	G. Cot 38	1/4/2019	19.4	27.8		26.7	Central Zone States
15	SCS 1061	1/4/2019	14.79	27.6		24.4	Central Zone States
16	NHH 715	1/4/2019	19.08	28.3	4.4	21.8	South Zone States
17	NHH 715	1/4/2019	16.78	28.0	4.5	21.3	Central Zone States
18	G. Cot.Hy.22	1/4/2019					Gujarat
19	LD 1019	1/4/2019					Punjab

Cotton Varieties and Hybrids identified by CVIC during 2018

S. No.	Name	Species	Institution	Average yield (q/ha)	Fibre length (mm)	Bundle Strength	Area of adaptation
1	GISV 272	G. hirsutum	NAU, Surat	23.55	28.3	26.2	Central Zone States
2	GJHV 497	G. hirsutum	JAU, Junagadh	19.40	27.8	26.7	Central Zone States
3	SCS 1061	G. hirsutum	UAS, Raichur	14.79	27.6	24.4	Central Zone States
4	GSHV 177	G. hirsutum	NAU, Surat	24.29	29.5	29.3	South Zone States
5	RHB 1122	H X B	MPKV, Rahuri	17.40	34.0	31.1	Central Zone States
6	PA 785	G. arboreum	VNMKV, Parbhani	13.50	29.0	27.6	Central Zone States
7	CCH 14-1	G. hirsutum	CICR, Coimbatore	18.01	32.2	31.0	South Zone States
8	RVK 11 (IH 11)	G. hirsutum	RVSKVV, Indore	19.51	26.8	23.7	South Zone States
9	RHB 1122	H X B	MPKV, Rahuri	20.27	34.7	32.9	South Zone States



Breeder seed Production during 2018-19 (in quintal).

During the year 2018-19, Breeder Seed production was 31.44q against the indent of 22.19q.

S. No.	Name of the Producing centre	Variety	Year	Indent	Production	Deficit / Surplus
1.	CCSHAU, Hisar	AAH-1 (F)	1999	0.10	0.15	0.05
2.	CCSHAU, Hisar	AAH-1 (M)	1999	0.04	0.08	0.04
3.	PDKV, Akola	AKA-5 (AKH-605)	1983	1.00	1.60	0.60
4.	PDKV, Akola	AKA-7 (AKA 8307)	2001	1.00	2.50	1.50
5.	PDKV, Akola	AKA-8	2008	0.50	0.90	0.40
6.	PDKV, Akola	AKH-081	1988	0.20	1.00	0.80
7.	PAU, Faridkot	F 2228	2016	2.20	2.50	0.30
8.	PAU, Faridkot	F 2383	2016	3.30	3.30	0.00
9.	PAU, Faridkot	F-1318	1997	0.70	0.00	-0.70
10.	PAU, Faridkot	F-1861	2003	0.30	0.40	0.10
11.	PAU, Faridkot	F-846	1993	0.40	0.40	0.00
12.	PAU, Faridkot	FDK 124	2011	0.10	0.20	0.10
13.	CCSHAU, Hisar	H-1098	1997	0.10	0.50	0.40
14.	CCSHAU, Hisar	HD-123	2000	0.80	1.20	0.40
15.	MPKV, Jalgaon	JLA-505	2016	0.10	0.24	0.14
16.	PAU, Ludhiana	LD 327	1989	0.10	0.30	0.20
17.	PAU, Ludhiana	LD-949	2017	2.00	2.00	0.00
18.	PAU, Ludhiana	LH 2076	2010	0.10	0.10	0.00
19.	PAU, Ludhiana	LH 2108	2012	0.10	0.20	0.10
20.	MNKV, Nanded	NH-615	2009	0.20	2.00	1.80
21.	MNKV, Nanded	NHH-44 AC-738R	1985	0.03	0.03	0.00
22.	MNKV, Nanded	NHH-44 BN1A	1985	0.05	0.05	0.00
23.	MPKV, Jalgaon	Phule LJA-794	2005	0.50	0.72	0.22
24.	PDKV, Akola	PKHY-2 AK-32A	1983	0.04	2.00	1.96
25.	PDKV, Akola	PKHY-2 DHY-286R	1983	0.02	0.07	0.05
26.	SKRAU, Sriganagar	RG - 542	2013	1.00	3.50	2.50
27.	SKRAU, Sriganagar	RG-8	1988	4.35	5.50	1.15
28.	SKRAU, Sriganagar	RS-2013	2002	0.10	0.00	-0.10
29.	SKRAU, Sriganagar	RS-810	2001	0.10	0.00	-0.10
30.	SKRAU, Sriganagar	RST-9	1992	2.00	0.00	-2.00
		Total		22.19	31.44	9.91

Implementation of PPV legislation, 2001 and DUS testing of Cotton under ICAR-SAU system

In order to provide an effective system for protection of plant varieties, the right of farmers' and plant breeders' and to encourage the development of new varieties of plants it has been considered necessary to recognize and protect the rights of the farmers in respect of their contribution made at any time in conserving, improving and making available plant genetic resources for the development of the new plant varieties. Moreover, to accelerate agricultural development, it is necessary to protect plant breeders' rights to stimulate investment for research and development for the development of new plant varieties.

The Project Coordinator (Cotton) placed at ICAR-CICR, Regional Station is the Nodal center for Implementation of PPV legislation, 2001 and DUS testing of cotton since 2008 under AICRP (Cotton), a centrally sponsored and funded by PPV & FRA with an objective to Establish and maintain database on extant cotton varieties, Conduct DUS test of New candidate, Varieties of common knowledge, Farmers varieties and essentially derived varieties, maintenance breeding of reference cotton



varieties, morphological characterization of extant cotton varieties and also Registration of extant cotton varieties under this act. This programme is conducted with the support of participating centers ICAR-Central Institute for Cotton Research, Nagpur; National Seeds project Unit, UAS, Dharwad; Department of Cotton CCSHAU, Hisar; Regional Research Station Bhatinda, PAU and the Department of Cotton, MPKV, Rahuri

During the year 2018-19, the data base on extant cotton varieties has been updated. Seed multiplication, Characterization and maintenance breeding of 155 extant cotton varieties were carried out. Reference varieties for conduct of DUS test in tetraploid and Diploid cotton is maintained for 108 in *G. hirsutum*, 36 in *G. arboreum*, 4 in *G. herbaceum* and 7 in *G. barbadense*.

Field trials for the establishment of Distinctiveness, Uniformity and Stability of new cotton genotypes, varieties of common knowledge, and essentially derived variety was conducted in tetraploid and diploid cotton. There were 2 new candidate varieties in the second-year testing trial. In the first-year trial there were 4 new tetraploid candidate varieties and 2 varieties of common knowledge of which one in diploid were grown along with 15 reference varieties. The trial was conducted as per test guidelines of tetraploid and diploid cottons; Field sowing was taken up in randomized block design with 3 replications. Germination count at 12 DAS in corresponding field was recorded in all the entries. Morphological characters were recorded from seedling to fiber. The data received from participating centers were compiled and submitted to PPV&FRA for issue of registration certificate.

Front line Demonstration (FLD) under NFSM-commercial crops

Front Line Demonstration is a proven extension mechanism with the objectives of demonstrating the usefulness of the latest improved crop production and protection technologies to the farmers as well as extension workers with a view to reduce the time gap between technology generation and its adoption. It also enables the scientists to obtain direct feedback from cotton farmers and suitably reorient their research programs, develop appropriate technology packages and to create effective linkage among scientists, extension personnel and farmers. This novel programme was implemented in 1996 for cotton crop to demonstrate cotton production technologies through the networking centres of All India Coordinated Research Project (AICRP) on Cotton.

During the year 2018-19, Front Line Demonstrations were conducted nine states in three cotton growing zones by 16 centers of ICAR - AICRP on cotton. These demonstrations were conducted on ICM in cotton, desi / ELS cotton and seed production of ELS cotton and intercropping in cotton. In accordance with the decision of Government of India (GOI) regarding implementation of Special Component Plan (SCP) for Scheduled Caste and Tribal Sub Plan (TSP) for Scheduled Tribes and Gender Budgeting, the beneficiaries were selected for the year's front-line demonstration programme.

Technologies Demonstrated under FLD

During the reported year, under National Food Security Mission (Commercial Crops), 437 Front Line Demonstrations on Integrated Crop Management on cotton, 171 Front Line Demonstrations on Desi / ELS cotton / ELS cotton seed production and 186 Front Line Demonstrations on intercropping with cotton were conducted. The various technologies demonstrated including high yielding varieties and hybrids suitable for various agro-climatic conditions, Integrated Nutrient Management, Integrated Pest Management, use of Bio-fertilizers, Bio-pesticides, water management practices, improved agronomic practices and intercropping.



Achieved Physical and Financial Targets of Cotton Front Line Demonstrations under NFSM - Commercial Crops by the centres of ICAR- AICRP on Cotton during 2018-19

S. No	Centres	FLDs on ICM		FLDs on Desi / ELS cotton / ELS cotton seed production		FLDs on Intercropping in cotton		Amount Released in Rs During 2018-19
		A	C	A	C	A	C	
1	PAU, Faridkot	30	30	30	21	-	-	510000
2	CCSHAU, Hisar	30	30	30	30	-	-	397912
3	ICAR - CICR, Sirsa	60	60	-	-	-	-	480000
4	SKRAU, Sriganaganagar	30	30	30	30	-	-	469000
5	NAU, Surat	20	20	20	20	20	20	397000
6	JAU, Junagadh	20	20	-	-	20	20	320000
7	PDKV, Akola	20	13.6	-	-	20	15.2	115079
8	MAU, Nanded	20	40	20	-	20	20	420000
9	MPKV, Rahuri	20	20	20	-	20	20	462506
10	ICAR - CICR, Nagpur	20	20	20	-	20	20	500000
11	ANGRAU, Guntur	20	20	20	20	20	20	470000
12	UAS, Dharwad	30	30	20	20	20	20	580000
13	UAS, Raichur	30	30	-	-	-	-	240000
14	UAS, Chamrajanagar	30	38.4	-	-	-	-	240500
15	TNAU, Coimbatore	20	20*	20	20	20	20	435300
16	CICR, Coimbatore	15	15	10	10*	10	10	290000
Grand Total		415	437	240	171	190	185.2	6327297

(A – No. of FLDs allotted in hectare; C – No. of FLDs conducted actually in hectares)

(* - under summer irrigated)



ICAR Monitoring Team for AICRP Trials

Zone	North Zone	Central Zone	Central Zone	South Zone
States	Punjab, Haryana & Rajasthan - Sriganganagar	Maharashtra & Odisha	Gujarat, Banswara of Rajasthan, Madhya Pradesh	Andhra Pradesh, Karnataka & Tamil Nadu
Breeder	Dr. D. P. Saini, MPUAT, Banswara	Dr. Pankaj Rathore, PAU, Faridkot	Dr. S. Manickam, ICAR-CICR, Coimbatore	Dr. A. Manivannan, ICAR-CICR, Coimbatore
Agronomist	Dr. K. Sankaranarayanan, ICAR-CICR, Coimbatore	Dr. Kulvir Singh, PAU, Faridkot	Dr. Rathod, PDKV, Akola	Dr. R. Raja, ICAR-CICR, Coimbatore
Entomologist	Dr. Kalyan, MPUAT, Banswara	Dr. Rishi Kumar, ICAR-CICR, Sirsa	Dr. Nemade, PDKV, Akola	Dr. B. Dharajothi, ICAR-CICR, Coimbatore
Pathologist	Dr. Venkatesh Kulkarni, ARS, Dharwad	Dr. D. Monga, ICAR-CICR, Sirsa	Dr. Satish K Sain, ICAR-CICR, Sirsa	Dr. J. Gulsar Banu, ICAR-CICR, Coimbatore
Social Scientist	Dr. S. Usharani, ICAR-CICR, Coimbatore	Dr. Karpagam, ICAR-CICR, Coimbatore	Dr. M. Sabesh, ICAR-CICR, Coimbatore	Dr. A. R. Reddy, ICAR-CICR, Nagpur