Project Coordinators Report

Introduction

Research on cotton improvement in the country under AICCIP is coordinated by the Project Coordinator (Cotton) located at CICR Regional Station, Coimbatore. The Project Coordinator is supported by Principal Investigators for Breeding, Agronomy, Entomology and Pathology for the respective discipline programmes for the entire country. AICCIP project has 21centres (11 Main Centres and 10 Sub-Centres) in North, Central and South zones under 15 Agricultural Universities in the country to serve the R&D needs of cotton growers of different agro-climatic regions of our country. Major activities of various centres include the development of improved varieties and hybrids suitable to that region, development of location-specific technologies on crop production and crop protection. Production of Breeder Seeds of high yielding varieties and parents of hybrids is also taken care of. Front-Line Demonstrations on improved technologies and Kisan Melas are effectively organized for effective and speedy dissemination of new technologies to the cotton growers.

During 2001-02, India's cotton area represented 27% of the global area of cotton and production was only 12% of the world, because Indian cotton productivity was the lowest in the world. The advent of latest technologies developed by Public and Private R&D agencies including transgenic cotton and increase of area under cotton paved the way to achieve 22% of the world production in the year 2010-11. With the active role of FLD under AICCIP, the latest and innovative technologies like Integrated Nutrient Management (INM), Integrated Pest Management (IPM), use of bio-fertilizers, bio-pesticides, water management, weed management, intercropping system etc. have been demonstrated for higher productivity and net farm income. Cotton season during last *kharif* season was good and the country harvested 325 lakh bales from 110 lakh hectares. The encouragement that was received from both suitable agro-climatic conditions and high price for cotton gave morale boosting production level among cotton farmers. In order to maintain pace with the increased demand for the cotton in both the national and international markets, it is essential to give thrust for development of appropriate innovative and sustainable cotton production and protection technologies on a continuous scale to maintain higher level of productivity of quality cotton to the various stakeholders in the years to come.

There is a need for continuous improvement of fibre quality parameters through identification of newer genotypes and development of best crop management practices for maintaining the good fiber quality standards expected by the Industry. There is also an urgent need for developing superior genotypes for various staple qualities both in Extra Long Staple and short staple cottons to eliminate imports.

World Cotton Scenario

World cotton production is estimated at 25.19 million tons in 2010-11 (ICAC, 2010) which is 13% higher than the previous year 2009-11 due to 9% increase in the area and 4% increase in the productivity and better price for cotton. India continued to maintain the second largest producer of cotton next to china with 22% of world production. China, India, USA and Pakistan are the major cotton producing countries in the world with share of 75% and 71% of the world cotton production and area, respectively. India is the largest cotton growing country in the world with area under cotton around 33% (10.7 million ha) followed by China (5.4 million ha). China and India are the major cotton consuming countries in the world (around 58% of world cotton consumption). China consumes 9.9 million tons and India consumes 4.4 million tons of cotton produced in the world. As regards export, USA and India export around 55% of the world cotton with USA share of 3.1 million tons and Indian share of 1.2 million tons. Among the major cotton growing countries, Australia tops the productivity level of 1579 kg/ha followed by Brazil (1480 kg/ha) and China (1301 kg/ha).

There was huge price rise in the international market for cotton this year. World cotton price has increased all time high of 213 US cents per lb. in February, 2011 as per monthly average Cotlook-A index. It was ranging from 52 to 77 cents per lb. from 2005/06 to 2009/10 and it is calculated at an average of 148 cents per lb. from August2010 to February 2011 and still expected to rise.

Supply and Use of Cotton (2010-11)

Country	Area (000 ha)	Yield (kg/ha)	Production	Opening Stock	Import	Consumption	Export	Ending Stock
China	5442	1301	7079	3160	2831	9899	10	3160
India	**10720**	**516**	**5532**	**1498**	**130**	**4419**	**1231**	**1509**
USA	4211	943	3970	615	-	703	3117	765
Pakistan	3265	670	2188	469	276	2353	100	480
Brazil	1000	1480	1480	857	26	1000	472	889
Uzbekistan	1330	775	1031	263	1	273	759	263
World	33174	759	25185	9454	8016	24922	8016	9716

Source: Cotton world Statistics, ICAC, September, 2010; (000 Metric tons)

World Demand & Supply Situation

Year Beginning August 1	04-05	05-06	06-07	07-08	08-09	09-10	10-11*
World Beginning stock	8.71	11.89	12.55	12.78	12.23	11.94	8.87
World Cotton Production	27.00	25.68	26.75	26.02	23.32	21.78	24.91
World Cotton Consumption	23.58	24.99	26.42	26.50	23.52	24.61	24.70
World Cotton Exports	7.75	9.73	8.07	8.38	6.67	7.77	8.36
World Ending stocks	11.89	12.55	12.78	12.23	11.94	8.87	9.06

*Source : ICAC, 1st March 2011 ; *projected; Quantity in Million Metric tons*

Indian Cotton Scenario

Overall increase of area under cotton (6.1%) has been reported in the country from 103.29 to 110 lakh ha in 2010-11 (CAB estimate). There was 13% and 7% increase in the area under cotton reported in South and Central zones, respectively. Cotton area increase was observed in Andhra Pradesh from 14.83 (2009-10) to 17.1(2010-11) lakh ha and in Maharashtra from 35.03 to 40 lakh ha. Contrary to area enhancement, reduction in cotton area was also observed in North Zone, particularly in Rajasthan from 4.44 to 2.54 lakh ha. Central zone occupies 66% of the area under cotton in the country followed by South (21%) and North (11%) zones. As regards cotton production, Gujarat is the leading cotton producing state with record highest of 106.82 lakh bales, which is around 33% of the cotton produced in the country. Maharashtra and Andhra Pradesh also reported higher production than the previous year. Maharashtra produced 77.31 lakh bales (2010-11) with production enhancement of 18.5% while Andhra Pradesh produced 65.68 lakh bales during this year with production enhancement of 20.8% from previous year (2009-10). Though the production increased from 295 to 325 lakh bales (2010-11), the realized enhancement in the production level was possibly due to more area under cotton than by better productivity. There was also a marginal increase in the productivity in the country this year of about 503 kg/ha, which is around 3-4% increase over previous year. India has become a significant net exporter of cotton since 2005-06 due to consecutive bumper crops, largely

exceeding domestic mill use. India's exports reached a record of 88.5 lakh bales in 2007-08. During the year 2010-11, the cotton export from India is 49.5 lakh bales which is 67% less than previous year export of 83 lakh bales due to increased demand from mills for local consumption. Due to implementation of higher MSPs in 2008-09 and significant increase in international cotton price raised domestic price well above MSPs, allowing Indian cotton to regain competitiveness in the global market. The Government implemented series of measures to restrict cotton exports in order to ensure a reasonable carryover stock in the country. During the year 2010-11, it is estimated that 55 lakh bales of cotton are kept as carryover stock in the country to meet the future domestic mill demand.

Cotton Balance Sheet - India

	2006-07	2007-08	2008-09	2009-10	2010-11
Supply					
Opening Stock	52.00	47.50	35.50	71.50	40.50
Cotton Crop Production	280.00	307.00	290.00	295.00	325.00
Imports	5.53	6.38	10.00	7.00	5.00
Total Supply	337.53	360.88	335.50	373.50	357.50
Demand					
Mill Consumption	194.89	195.67	190.00	207.00	246.00
Consumption by SSI units	21.26	22.08	20.00	23.00	
Non-mill consumption	15.88	19.13	19.00	20.00	20.00
Total Consumption	232.03	236.88	229.00	250.00	266.00
Export	58.00	88.50	35.00	83.00	49.50
Total disappearance	290.03	325.38	264.00	333.00	335.50
Carry forward	**47.50**	**35.50**	**71.50**	**40.50**	**55.00**

Quantity in lakh bales of 170 kgs ; Source : Cotton Advisory Board (as on 26:02:2011)

State wise cotton area (lakh ha) from 2001-02 to 2010-11

State	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11
Punjab	6.00	4.49	4.52	5.09	5.57	6.07	6.04	5.27	5.36	5.30
Haryana	6.10	5.19	5.26	6.21	5.83	5.30	4.83	4.56	5.07	4.45
Rajasthan	3.47	3.86	3.44	4.38	4.71	3.50	3.69	3.02	4.44	2.54
Gujarat	16.87	16.34	16.47	19.06	19.06	23.90	24.22	23.54	26.25	26.20
Maharashtra	29.80	28.00	27.66	28.40	28.75	31.07	31.95	31.42	35.03	40.00
Madhya Pradesh	6.23	5.45	5.91	5.76	6.20	6.39	6.30	6.25	6.04	6.40
Andhra Pradesh	10.02	8.03	8.37	11.78	10.33	9.72	11.33	13.99	14.83	17.10
Karnataka	5.91	3.93	3.13	5.21	4.13	3.78	4.03	4.08	4.27	4.66
Tamil Nadu	2.00	0.85	1.03	1.29	1.40	1.00	0.99	1.09	1.14	1.60
Others	0.90	0.53	0.51	0.68	0.79	0.71	0.76	0.84	0.86	1.75
India	87.30	76.67	76.30	87.86	86.77	91.44	94.14	94.06	103.29	110.00

State wise cotton production (lakh bales) from 2001-02 to 2010-11

State	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11
Punjab	9.25	7.50	10.35	16.50	20.00	24.00	20.00	17.50	14.25	16.47
Haryana	5.50	8.75	11.50	15.50	12.00	15.00	15.00	14.00	14.75	13.84
Rajasthan	7.00	5.00	9.15	11.00	9.00	9.00	9.00	7.50	11.00	6.46
Gujarat	32.50	30.50	50.00	73.00	89.00	103.00	110.00	90.00	98.00	106.82
Maharashtra	34.25	26.00	31.00	52.00	35.00	50.00	62.00	62.00	63.00	77.31
Madhya Pradesh	20.00	18.00	19.65	16.00	19.00	19.00	20.00	18.00	15.00	18.04
Andhra Pradesh	26.75	19.75	27.40	32.50	33.00	36.00	46.00	53.00	52.00	65.68
Karnataka	7.00	5.00	4.20	8.00	6.00	6.00	8.00	9.00	9.00	10.15
Tamil Nadu	5.00	3.00	3.75	5.50	5.00	5.00	4.00	5.00	5.00	6.71
Others	0.75	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	4.00
TOTAL	148.00	124.50	168.00	231.00	229.00	268.00	295.00	278.00	283.00	325.48
Loose lint	10.00	11.50	11.00	12.00	12.00	12.00	12.00	12.00	12.00	NA
India	158.00	136.00	179.00	243.00	241.00	280.00	307.00	290.00	295.00	325.50

State wise cotton productivity (kg/ha) from 2001-02 to 2010-11

State	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11
Punjab	262	284	389	551	610	672	563	565	452	528
Haryana	153	287	372	424	379	481	528	522	495	529
Rajasthan	343	220	452	427	397	437	415	422	421	432
Gujarat	328	317	516	651	794	733	772	650	635	693
Maharashtra	195	158	191	311	213	274	330	335	306	329
Madhya Pradesh	546	561	565	472	494	505	540	490	422	479
Andhra Pradesh	454	418	557	469	527	630	690	644	596	653
Karnataka	201	216	228	261	268	270	337	375	358	370
Tamil Nadu	425	600	619	725	668	850	687	780	746	713
Others	142	321	333	250	215	2.39	224	405	198	396
India	308	302	399	470	478	521	554	524	486	503

Data pertaining to 2010-11 are estimates; Source: Cotton Advisory Board

Notification of Cotton Genotypes for Cultivation in 2010-11:

During the year 2010-11, ten cotton cultivars have been notified for commercial cultivation in the country for various agro-climatic zones. Out of the ten, nine cultivars are straight varieties and one is hybrid.

Name of the variety / hybrid	Species	Developed by	Area released for	Notification No. and Date
CICR – 1 (CISA-310)	Arboreum Variety	CICR, Sirsa	North Zone	SO-211(E) dt 29/01/2010
CNHO-12	Hirsutum Variety	CICR, Nagpur	Central Zone	SO-733(E) dt 01/04/2010
CICR-3 (CISA-614)	Arboreum Variety	CICR, Sirsa	North Zone	SO-733(E) dt 01/04/2010
LH-2076	Hirsutum Variety	PAU Ludhiana	Punjab	SO-733(E) dt 01/04/2010
VBCH-2231	Intra Hirsutum Hybrid	M/s. Vibha Agro Tech.	Central Zone	SO-2137(E) dt 31/08/2010
Phule-688 (RHC-688)	Hirsutum Variety	MKPV Rahuri	Maharashtra	SO-2137(E) dt 31/08/2010
SVPR-4	Hirsutum Variety	TNAU, Srivilliputhur	Tamil Nadu	SO-2137(E) dt 31/08/2010
HD-432	Arboreum Variety	HAU, Hisar	Haryana	SO-2137(E) dt 31/08/2010
H-1236	Hirsutum Variety	HAU, Hisar	Haryana	SO-2137(E) dt 31/08/2010
H-1098 (Improved)	Hirsutum Variety	HAUv	Haryana	SO-2137(E) dt 31/08/2010

Breeder Seed Production:

An effective maintenance of Nucleus and Breeder seed programme was undertaken by the concerned participating centres of AICCIP. The Breeder seed production in respect of National indent 2010-11 was taken up at ten AICCIP centres and at CICR, Regional Station, Coimbatore. The production was over and above the indent in almost all the locations.

S. No.	Location	Variety/ Parental Line	Indent : 2010-11 (quintal)	Produced : 2010-11 (quintal)
1.	PAU, Ludhiana	F 1378	0.30	0.50
		LH 1556	0.20	0.30
		F 846	0.15	0.25
		F 1861	0.20	0.45
2.	CCHAU,Hisar	H 1117	0.18	0.50
		H 1098	1.18	2.00
		HD 123	11.45	16.00
		HD 324	5.00	6.00
3.	RAU, Sriganganagar	RG 8	11.48	9.00
4.	CSAUT, Kanpur	Vikas	1.00	0.00
5.	NAU, Surat	**H 10**		
		BC-68-2	0.01	0.50
		LRA 5166	0.01	1.10

		H6		
		G Cot 100	0.01	0.50
		G Cot 10	0.01	1.25
		HB		
		G Cot 10	0.02	1.25
		Surat Dwarf	0.02	0.80
6	PDKV, Akola	AKA 5	2.25	2.81
		AKA 7	4.00	5.00
		AKA 8	1.50	1.87
		AKH 081	0.12	0.15
		PKV Hy-2		
		AK-32 9(F)	0.03	0.04
		DHY-286 (M)	0.01	0.13
7	MAU, Nanded	PH 348	0.40	0.40
		NH 452	0.40	1.50
		NHH 44		
		BN 1 (F)	0.01	1.50
		AC 738 (M)	1.10	1.50
8	MPKV, Rahuri	Y1	0.50	0.48
9	UAS, Dharwad	**Varalaxmi**		
		Laxmi (F)	0.01	Data Not Available
		SB 289E (M)	0.01	
		DCH 32		
		DS 28(F)	0.03	
		SB 425 YF(M)	0.04	
		Sahana	0.01	
10	LAM, Guntur	L603	0.01	0.01
		L604	0.01	0.01
		LK 861	0.01	0.01
		Sangam	0.01	Denotified
		Narasimha	0.03	0.03
		Krishna	0.01	0.01
		Priya (NA 920)	0.01	0.01
11	CICR, Coimbatore	LRA 5166	0.64	0.64
		Surabhi	0.61	0.64
		Anjali	0.01	0.01
		Supriya	0.01	0.01
		MCU 5 VT	0.61	0.61
		Suvin	0.02	0.02
		Savita		
		T7	0.01	No Prodn.
		M12	0.01	No Prodn.

Monitoring of AICCIP Trials:

Monitoring of AICCIP trials and also the Bt cotton hybrid evaluation trials under the aegis of ICAR being conducted by the AICCIP centres have been carried out by specially constituted team of AICCIP scientists. Suggestions/recommendations made by the team shall be discussed during the Annual Group Meeting for follow-up action.

Monitoring Team constituted during 2010-11

State	Breeder	Agronomist	Entomologist	Pathologist
Punjab, Haryana & Rajasthan (Sriganga Nagar)	Dr. O. P. Tuteja CICR, , Sirsa	Dr. R. Meena CICR, , Sirsa	Dr. Rishi Kumar CICR, , Sirsa	Dr. D. Monga CICR, Sirsa
Gujarat and Rajasthan (Banswara)	Dr. R.K. Patnaik, OUAT, BPT	Dr. B.C. Patil UAS, DWD	Dr.S.M.A.Mandal OUAT, BPT	Sh. S.N. Chattannavar UAS, DWD
Madhya Pradesh	Dr. Bharud, MPKV, Rahuri	Prof. J.G. Thokale MPKV, RAH	Dr. M. Bheemanna, UAS, Raichur	Sh. U. V. Ingole Dr.PDKV, Akola
Maharashtra	Dr. S. Rajarathinam, TNAU, Coimbatore	Dr. Kulvir Singh, PAU, Faridkot	Dr. S. Mohan, TNAU, Coimbatore	Dr. Daljeet Singh, PAU, Faridkot
CICR, Nagpur & Bhavanipatna	Dr. Chenga Reddy ANGRAU, Lam	Dr. Rajendran, TNAU, Coimbatore	Dr. Uttam Hole, MPKV, Rahuri	Dr. H.J.Kapadia JAU, Junagadh
Karnataka	Dr. S. S. Bhatade CRS, Nanded	Dr. Khargarate, MAU, Nanded	Dr. K.K. Dahiya HAU, HSR	Dr. Beniwal CCSHAU, Hisar
Andhra Pradesh	Dr. S. M. Palve, CICR, Nagpur	Dr. K. Sankaranarayanan, CICR, Coimbatore	Sh. A. V. Kolhe Dr.PDKV, Akola	Dr. R.R. Perane MPKV, RAH
Tamil Nadu	Dr. Kapoor RAU, SGNR	Dr. V. Kumar NAU, SRT	Dr. Vichiter Singh RAU, SGNR	Dr. P.V.Patil NAU, Surat

Front Line Demonstrations in Cotton

Front Line Demonstration (FLD) is one of the novel extension approaches of Indian Council of Agricultural Research (ICAR) implemented under the close supervision of the Scientists of the National Agricultural Research System (NARS). In cotton, this novel programme was carried out from 1996-97 onwards to demonstrate cotton production and protection technologies through All India Coordinated Cotton Improvement Project (AICCIP) net working centres. This programme ensures not only the quick dispersal of technologies by linking the cotton scientists, extension personnel and the farmers but also help scientists to get the feedback from the farmers on the latest technologies for further refinement. The main emphasis of this programme is teaching and demonstrating cotton farming skills, strengthening cotton economics and communities and organization building and networking. Bench mark survey was conducted before taking up the trial which included information on the crops and cropping system of the area, inter cropping, the average yields of cotton and the local practices adopted in terms of irrigation, use of fertilizer, plant protection, etc. Information on the cost of cultivation was also collected for the area as a whole. An impact analysis after the harvest was carried out in the light of reduction in insecticide use, reduction in cost of cultivation, awareness of modern technology etc. Further, 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.

FLDs on Cotton Production Technology

Under FLDs on Cotton Production Technology, each demonstration was conducted in one acre plot. High yielding varieties and hybrids suited for various agro-climatic conditions released transgenic cotton hybrids, Integrated Nutrient Management (INM), Integrated Pest Management (IPM), use of bio-fertilizers, bio-pesticides, water management, application of growth regulators, intercropping system, etc. were the production technologies demonstrated through this component. An amount of Rs.2000/ was allocated per demonstration. Out of this, Rs.1400/- was used for essential

inputs for demonstration and the rest was utilized for POL, hiring of vehicles, *Kisan Melas*, distribution of literatures, reports, display boards etc.

FLDs on IPM in Cotton

In order to popularize the location specific IPM modules, this component was implemented. The location specific IPM modules were executed in 10 hectare blocks to 50 hectare blocks. The item wise break up for IPM demonstration is given below:

Item	**Amount (Rs.)**
Input cost (Rs.1000/- per ha.)	50,000
Light traps/IPM kits/pheromone traps/bio-agent/bio-pesticides etc.,	38,000
POL / hiring of vehicle for monitoring surveillance	7,000
Post harvest management (ginning, grading, testing etc.,)	2,000
Literature /pamphlets / display materials	3,000
Total	**1,00,000**

FLDs on Farm Implements

To popularize the machineries use in cotton cultivation, this component was carried out. The area under demonstration was ensured that it should not be less than 25 hectares. Per unit of implement demonstration an amount of one lakh rupees was earmarked. Out of that, Rs.95,000/- was spent on purchase of implements and Rs. 5000/- for the expenditure on demonstration of the implements. No inputs were provided to the beneficiaries under this component.

Implementation of FLDs during 2010-11

During the year 2010-11, the following technologies were demonstrated by the AICCIP centres in the country.

Centre	**No. of FLDs**	**Technologies demonstrated**
HAU, Hisar	PT – 75 IPM – 2 units FI – 3 units	• Yield maximization of Bt cotton hybrids with improved technology • Deep ploughing, Seed treatment, regular monitoring of pest, spraying proper dose of pesticides and water • Sub soiler for deep ploughing and Rotavator for hoeing
RAU, Sriganganagar	PT – 50 IPM – 1units FI – 2 units	• Improved Bt cotton hybrid MRC 6025 + INM • Improved Bt cotton hybrid MRC 7017 + INM • Improved Bt cotton hybrid RCH 314 + INM • Improved Bt cotton hybrid RCH 134 + INM • Improved hirsutum variety RS 810 + IPM • Improved hirsutum variety RS 810 + IPM + INM • IPM techniques • Knap sack sprayer and aero blast sprayer
CICR, Sirsa	PT – 50	• CICR 2, CISAA 2, CISA 310, CSHH 198 and hybrid seed production of CICR 2 and CSHH 198
NAU, Surat	PT – 100 IPM – 1	• Newly released varieties viz., G. Cot 21, G. Cot 23, G. Cot 25 and Anand Desi cotton 1 • Approved Bt cotton hybrids • Recommended agronomic practices • Integrated Pest Management techniques

JAU, Junagadh	PT – 50 IPM – 1	• Brahma BG-II, Supermen, Vikram-5 BG-II, Ajit-155 BG-I, RCH-2, Mallika BG-II,Vikram-5, RCH-2 BG-II , Tulsi-4, Tulsi-17, Ajit-11, Ajit-155, Krushidhan, Obam Solar- 60, Mahasagar BG-II, Ganesh BG-II, Pratik BG-II, Rachi - 2, Neno-BG-II, Sigma-BG-II, Arjun and Cash BG-II • Application of micro nutrients • Intercropping • Irrigation Management • Improved agronomical practices • Integrated Pest Management
JNKVV, Indore	PT – 50 IPM – 1 FI -2	• Varietal demonstration • INM • Intercropping • IPM • Rotavator • Power weeder
MPKV, Rahuri	PT – 50 IPM – 1 FI -2	• Yield maximization of Mallika Bt, Ajit 155 Bt, RCH 2 Bt and RCH 118 Bt • Integrated Nutrient Management of Mallika Bt, RCH 118 Bt and RCH 2 Bt • Integrated Weed Management for summer irrigated cotton (Kanak Bt, Mallika Bt, RCH 2 Bt and Ajit 155 Bt) • Integrated Disease Management (RCH 118 Bt, Mallika Bt, RCH 2 Bt, Kanak Bt and Ajit 155 Bt) • Hybrid performance of Kanak Bt Vs Ajit 155 Bt, Kanak Bt Vs Mallika Bt, Ajit 155 Bt Vs Mallika Bt, Ajit 155 Bt Vs RCH 2 Bt and RCH 2 Bt Vs Kanak
CICR, Nagpur	PT – 50	• Performance of Bt cotton hybrid Bunny Bt II, Mallika Bt II and Maroti super Bt II • Integrated Nutrients Management • Cotton based intercropping (Cotton + Soybean) • Reddening control (foliar application of DAP and MgSO4) • Weed Management
TNAU, Coimbatore	PT – 50 IPM – 1	• RCH 2 BG II, Bunny Bt, Mallika Bt, Tulis 9 BG II, Bunny Bt II, Super Bunny Bt II, Tulsi BG II, Tulsi Bt and PA 255. • Integrated Pest Management
CICR, Coimbatore	PT – 50 IPM – 1 FI -2	• Integrated Crop Management for Suraj • Integrated Crop Management for Bt cotton hybrids RCH 530 BG II, RCH 2 Bt and RCH 20 Bt • Integrated Crop Management for ELS cotton hybrids RCH 708 Bt and RCH 625 Bt BG II • Intercropping with pulses • Application of growth regulators • Foliar spray and soil test based fertilizer recommendation. • Integrated Pest Management • Power Weeder

(PT- Production Technology, IPM – Integrated Pest Management, FI – Farm Implements)

Future tasks of AICCIP:

All India Coordinated Cotton Improvement Project needs to address the following thrust area for sustaining and increasing production and productivity in India in the coming years. Future emerging problems are to be tackled with researchable issues besides refining and fine tuning the existing research programme for speedy dissemination of cost effective viable technology to the farming community.

- Development of biotic and abiotic stress tolerant genotypes, especially with special attention to resistance to Cotton leaf curl virus, mealy bug, mirid bug, pink bollworm, drought and salinity/water logging stresses.
- Constant efforts are needed for developing efficient genotypes suitable to shallow soils, especially for Vidarbha region.
- Enhancement in productivity of quality Extra long staple cotton hybrids besides suitable high yielding cultivar in *G. barbadense* matching extraordinary fibre qualities of Suvin.
- Development of high yielding *desi* hybrids with improvement in fibre quality
- Identification and adaptive experimentation for ideal plant types for closer spacing and efficient nutrient uptake with fair amount of biotic stress tolerance.
- Development of suitable genotype for machine picking for those areas where acute shortage of farming labour is experienced.
- Developing Modern Drip and Fertigation system in the Central and South Zone states, besides increasing the Irrigation Water Use Efficiency in the Northern states.
- Efficient crop management strategies, successful extension of INM and water harvest programme and fine tuning of IPM approaches hold the key for record production in Central zone.
- Cotton yields are reduced by 50-80%, with unchecked weed growth or ineffective weed control. Fine–tuning weed control strategies augur well for cotton that includes integrated approaches in a long term perspective.
- Faster dissemination of insecticide Resistance Management strategies with better options of IPM for Bt-cotton hybrids need to be continuously followed through FLDs under the supervision of AICCIP personal for effective resource utilization.
- Cotton value Chain as approved by NAIP and being pursued by CIRCOT, CICR & Super Spinning Mills in a Public-Private partnership mode needs further attention by all concerned for replication in a location specific manner.

The proven technologies developed by the AICCIP centres will be disseminated through brochures/ bulletins/ technical handouts etc. in English, Hindi and other Regional languages and also through mass media. Besides, the information will be put on Website for the use of extension functionaries and farming community with regular updates of news and views that matter to the clientele. All stakeholders are requested to post information on cotton and related issues to the Project Coordinator (Cotton improvement) & Head, Central Institute for Cotton Research, Regional Station, Coimbatore – 641 003 (Tamil Nadu) so that the same can be incorporated on the basis of suitability and need. The official website of CICR and AICCIP is: www.cicr.org.in, this is periodically updated for the benefit of all stakeholders for effective dissemination of cotton technologies.

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