

## 4. TECHNOLOGY ASSESSED AND TRANSFERRED

### Technology Transfer

#### IRM-HDPS

The Insecticide Resistance Management / High Density Planting System module is being implemented by CICR, Nagpur through SAU's, ICAR and recognized agriculture organizations in collaboration with State Department of Agriculture. These strategies were implemented in specific districts of 11 cotton growing states depending on pest situation *viz.* Punjab, Haryana, Rajasthan, Gujarat, Madhya Pradesh, Maharashtra, Tamil Nadu and West Bengal. The total area covered was 5924.81 hectares with 5568 farmers.

During the year 2014-15 IRM module was implemented in 7 major cotton growing states *viz.* Haryana, Gujarat, Madhya Pradesh, Maharashtra (Nagpur, Wardha, Akola), Andhra Pradesh, Tamil Nadu and West Bengal. The total area covered was 4829.19 hectares under 89 villages involving 3818 farmers.

The average additional profit estimated due to implementation of IRM technologies was Rs. 11773.2 per farmer. The average number of sprays for IRM and Non IRM field were 3.1 as against 5.6 of Non IRM. The yield was 15.63 q/ha in IRM against 14.25 q/ha in case of Non IRM. The average

profit per farmer was counted to Rs. 32600 for IRM farmers as compared to Rs. 23250 for Non IRM farmers. The average cost of spray was reduced to Rs.3137.16 per hectare in IRM fields as against Rs. 5395.25 per hectare that was incurred in Non IRM.

HDPS (High Density Planting System) program was dovetailed along with the IRM program this year. In the former, non Bt varieties were promoted for cultivation under shallow soils in the rainfed cotton growing regions. Seeds were procured and distributed by CICR, package of practices were also provided. Bollworm management was crucial under HDPS as the varieties were of non BT. The technology of HDPS elicited great interest across the country. Farmers were convinced about the feasibility of the technology especially under rainfed shallow soil situation.

HDPS module was implemented in 11 major cotton growing states *viz.* Punjab, Haryana, Gujarat, Rajasthan, Madhya Pradesh, Maharashtra, undivided Andhra Pradesh, Odisha, Karnataka, Tamil Nadu and West Bengal. The total area covered was 131 villages under 1095.62 hectares with 1750 farmers. The range of seed cotton yield in each State is given in Table 4.1.

**Table 4.1: The range of seed cotton yield (q/acre) in each state across India during 2014-15**

Sr. No	State/Centre	Yield of cotton	
		Minimum	Maximum
1	Punjab	5.21	11.61
2	Haryana	5	12.60
3	Rajasthan	4.75	10.25
4	Madhya Pradesh	2.83	6.07
5	Maharashtra, Akola	0.50	8.00
	Maharashtra, Wardha	3.02	7.06
6	Andhra Pradesh	1.1	14.2
7	Odisha	6.9	13.8
8	Karnataka, Dharwad	3	16
9	Tamil Nadu	5.40	7.53

## Extension Activities

A total of 136 extension programs were conducted which includes farmer trainings, training of scouts and field days in various IRM villages. Around 489 farmer meetings were conducted. As a part of the

project implementation, about 814 field visits were conducted by the District co-ordinators and Field assistants in all the adopted villages to assess the pest load, to train farmers in identification of different pests and diseases and also to promote the advantages involved with IRM strategies.

**Table 4.2: Summary of extension activities carried out in IRM/ HDPS villages across India during 2014-15**

States/Districts	Extension programme				
	Field visits	Farmer meetings	Field day	Training of scouts	Farmer Training
Punjab	17	16	1	--	1
Haryana	71	12	2	--	1
Rajasthan	11	08	1	--	3
Maharashtra, Akola	38	28	3	--	4
Maharashtra, Wardha	12	41	1	3	6
Maharashtra CICR, Nagpur	27	17	--	--	11
Maharashtra, Parbhani	10	07	--	1	2
Madhya Pradesh	310	282	--	--	*19
Andhra Pradesh (including Telangana) Hyderabad	160	29	--	--	45
Odisha	10	5	--	2	--
Karnataka, Raichur	65	26	2	--	14
Karnataka, Dharwad	9	2	--	2	--
Tamil Nadu	44	6	--	1	3
West Bengal	30	10	2	1	5
<b>Total</b>	<b>814</b>	<b>489</b>	<b>12</b>	<b>10</b>	<b>114</b>

A total number of 15 Technology Chart, 8 Manuals/popular articles, 4287 Pamphlets, 73 Press releases, 43 Radio talk, 27 TV shows and 12 Field Schools were adopted for dissemination of information.

### CROPSAP

Disseminated cotton pest management strategies through ICT tools under Crop Pest Surveillance and Advisory Project (CROPSAP) has been executed in 28 districts of Maharashtra. Updated pest management strategies for target cotton pests namely sucking pests were monitored through real time pest data uploaded on website. Made 18 personal visits (in 14 districts of Maharashtra),

analyzed pest situation weekly, alerted and issued advisories wherever required during the crop season.

### On Farm Demonstrations in Cotton

Five promising cotton technologies were assessed through on farm demonstration in the CICR, Regional Station, Coimbatore. Enhancement of planting quality of seed through seed priming, transplanting technique, foliar nutrition and bio-pesticide formulation against sucking pests were demonstrated in cotton variety Suraj. Additionally, the High Density Planting System technology was demonstrated in cotton varieties Anjali and Suraj.