On Farm Testing

Technology Assessment

Trial 1 : (Plant Protection)

1.	Title	:	Assessment of stem application method of insecticide for management of sucking pests in cotton.
2.	Problem diagnose/defined	:	Farmers are frequently applying high doses of insecticides to manage sucking pests in cotton, which leads residue problem and its hazardous to environment as well as human being.
3.	Details of technologies selected for assessment /refinement	:	T1 : Stem Application of Acephate 75 WP (4:1 :: Water : Insecticide) T2 : Spraying of recommended insecticides: (Need based Foliar application Imidaclopride 17.8 SL and Acephate 75 WP) T3 : Farmers method as Check : (Frequently Foliar application Imidaclopride 17.8 SL and Monocrotophos 36EC) i. e. at Weekly interval.
4.	Source of technology	:	GAU, Navsari
5.	Production system/thematic area	:	Rainfed
6.	Thematic area	:	IPM
7.	Performance of the Technology with performance indicators	:	On going
8.	Final recommendation for micro level situation	:	On going
9.	Constraints identified and feedback for research	:	---

Results of Cotton IPM OFT (2011 Kharif)

Treatments	Mean Population Numbers of Sucking pests /3 leaves/plant				Yield (Q/ha)	% increase	Gross Return (Rs.ha)	Cost of cultivation (Rs/ha)	Net Return (Rs/ha)	B:C ratio
	Aphids	Jassids	Whitefly	Thrips						
T1-Stem application (Acephate 75WP)	1.1	1.7	2.0	1.8	17.42	18.5	52260	12000	40260	3.355
T2-Chemical base Reccom	8.0	9.6	11.9	10.2	15.66	6.54	46980	12100	34880	2.883
T3-Farmers method (Check)	21.3	6.7	13.3	15.5	14.7	-	44100	12500	31600	2.528

**** Study continued for next year.***

10. Process of farmers participation and their reaction : Farmers participation in planning, execution and monitoring

Trial :2 : (Plant Protection)

1.	Title	:	Management of *Helicoverpa armigera* in Indian bean by Non chemical means.
2.	Problem diagnose/defined	:	Farmers are frequently applying high doses of insecticides to manage *H.* armegera, this leads residue problem while export of Indian bean.
3.	Details of technologies selected for assessment/refinement	:	T1 :- Bio intensive module : (i) Monitoring through the pheromone traps, (ii)Spraying of Neem based pesticides (iii) Hand piking of bigger larvae (iv) Spraying of *Ha*NPV T2 :- Chemical recommended insecticides: : (Need based Foliar application of Monocrotophos 36EC) T3 :- Farmers method: (Frequently Foliar application Imidaclopride 17.8 SL, Acephate 75 WP and Monocrotophos 36EC) i. e. at Weekly interval
4.	Source of technology	:	NAU, Navsari
5.	Production system/thematic area	:	Rainfed
6.	Thematic area	:	IPM
7.	Performance of the Technology with performance indicators	:	On going
8.	Final recommendation for micro level situation	:	On going
9.	Constraints identified and feedback for research	:	--
10.	Process of farmers participation and their reaction	:	Farmers participation in planning, execution and monitoring

Results of OFT on Indian bean during 2011 (Kharif)

Treatments	Mean No. larave of Heliothis /plant	No. of damaged pods/ 1000 pods	Damaged pods (%)	Yield (kg/ha)	% increase	Gross Return (Rs.ha)	Cost of cultivation (Rs/ha)	Net Return (Rs/ha)	B:C ratio
T1-Bio Intensive Modules	1.496	133	1.33	1875	23.4	42187.5	9500	32687.5	3.44
T2-Chemical base Reccom	2.497	349	3.49	1610	5.9	36225.0	11500	24725	2.15
T3-Farmers method Check	2.563	569	5.69	1520	-	34200.0	13500	20700	1.53

**** Study continued for next year.***

Crop Production

Trial 1

1. Title	:	Assessment of feasibility of hand operated automatic seed drill In hilly area of Narmada district
2. Problem diagnose/defined	:	The farmers are and marginal with fragmented land. The tribal people are find it difficult to sow their crop in small piece of land with bullock drown sowing method.
3. Details of technologies selected for assessment /refinement	:	T1 : Sowing through hand operated automatic seed drill equpment T2 : Hand sowing
4. Source of technology	:	GAU, Navsari
5. Production system/ thematic area	:	Farm mechanization
6. Thematic area	:	Farm mechanization
7. Performance of the Technology with performance indicators	:	On going
8. Final recommendation for micro level situation	:	On going
9. Constraints identified and feedback for research	:	---
10. Process of farmers participation and their reaction	:	Farmers participation in planning, execution and monitoring.

Trial 2

1.	Title	:	Assessment of feasibility of bullock drawn automatic seed drill In hilly area of Narmada district
2.	Problem diagnose/defined	:	The farmers are having undulating land. They are using bullock drwn seed drill which sow only one row at a time..
3.	Details of technologies selected for assessment /refinement	:	T1 : Sowing through bullock drawn automatic seed drill equipment T2 : Hand sowing
4.	Source of technology	:	GAU, Navsari
5.	Production system/ thematic area	:	Farm mechanization
6.	Thematic area	:	Farm mechanization
7.	Performance of the Technology with performance indicators	:	On going
8.	Final recommendation for micro level situation	:	On going
9.	Constraints identified and feedback for research	:	---
10.	Process of farmers participation and their reaction	:	Farmers participation in planning, execution and monitoring.

Trial 3 LiveStock

1)	Title	:	Effect of supplementing mineral mixture and concentrate on Body growth performance in calves
2)	Problem diagnose/defined	:	Poor body growth performance in calves
3)	Details of technologies selected for assessment /refinement	:	T1: Traditional Practice T2: Feeding of 15 gm mineral mixture + Deworming T3: T2 + Concentrate feeding @ 1% of body wt.
4)	Source of technology	:	Nutrition department, AAU, Anand.
5)	Production system thematic area	:	Nutrition Management
6)	Thematic area	:	Nutrition Management
7)	Performance of the Technology with performance indicators	:	On going
8)	Final recommendation for micro level situation	:	On going
9)	Constraints identified and feedback for research	:	-
10)	Process of farmers participation and their reaction	:	Farmers participation in planning, execution and monitoring.

Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Live stock	Rain fed	Poor body growth performance in calves	Effect of supplementing mineral mixture and concentrate on Body growth performance in calves	12	T1: Traditional Practice	Body wt at birth, 1st, 3rd, 6th and 12th month of age	Body wt at 1st : 26.80 3rd : 35.23 6th: 47.44 12th:90.35	*Study continue*	Farmers reacted as the treatment improves the health of calves
					T2: Feeding of 15 gm mineral mixture + Deworming		1st : 27.96 3rd : 40.46 6th: 57.36 12th:104.72		
					T3: T2 + Concentrate feeding @ 1% of body wt		1st : 30.84 3rd : 42.67 6th: 63.52 12th:112.25		

Technology Assessed	***Production per unit**	**Net Return (Profit) in Rs. / unit**	**BC Ratio**
11	12	13	14
T1: Traditional Practice	***Study continue***		
T2: Feeding of 15 gm mineral mixture + Deworming			
T3: T2 + Concentrate feeding @ 1% of body wt			

**** Study continued as this is a long term experiment.***

Technology Refinement

Trial 1

1.	Title	:	Refinement of Row spacing in chilli
2.	Problem diagnose/defined	:	The sowing distance of this crop adopted by farmer is so closer resulted in poor crop growth and yield.
3.	Details of technologies selected for assessment /refinement	:	T1 : 30 x30 cm (farmer's practices) T2 : 60 x60 cm (Recommended spacing) T3 : 45 x30 cm (refinement)
4.	Source of technology	:	GAU, Navsari
5.	Production system/ thematic area	:	Rainfed / Sowing distance
6.	Thematic area	:	Sowing distance
7.	Performance of the Technology with performance indicators	:	Shown in table
8.	Final recommendation for micro level situation	:	Recommended technology is better than farmers' practice
9.	Constraints identified and feedback for research	:	Due to weed infestation farmers prefered to go for narrow spacing with traditional method of cultivation.
10.	Process of farmers participation and their reaction	:	Farmers participation in planning, execution and monitoring.

Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter				Result assessment	Feedback from the farmer
							1st year	2nd year	3rd year	Mean		
1	2	3	4	5	6	7	8	9	10	11	12	10
Chilli	Rainfed	The sowing distance is very closer	Refinement of crop spacing in Chilli	5	T1 : 30 x30 cm (farmer's practices)	1. Plant Height cm at harvest	84.6	81.6	79.6	85.6	The mean data pooled over three year were found that the treatment no. T2 : 60 x60 cm (Recommended spacing) gave the highest fruit yield as compared to T1 and T3. The data of economics table indicated that treatment 2 gave the highest net returns and BC ratio (1:3.33)	Recommended treatment is better than framers practice as well as refined treatment.
						2. No. fruit/plant	134.6	132.4	130.1	132.4		
						3.Length of fruit cm	8.2	7.8	7.4	7.8		
						4.Yield Q/ha	114.6	122.4	120.1	119.0		
					T2 : 60 x60 cm (Recommended spacing)	1. Plant Height cm at harvest	88.8	86.8	83.2	87.3		
						2. No. fruit/plant	142.6	142.4	139.0	141.3		
						3.Length of fruit cm	8.8	8.6	7.9	8.4		
						4.Yield Q/ha	124.0	127.6	131.25	127.6		
					T3 : 45 x30 cm (refinement)	1. Plant Height cm at harvest	86.2	84.0	80.1	83.4		
						2. No. fruit/plant	138.2	139.8	142.2	140.1		
						3.Length of fruit cm	8.5	8.3	8.6	8.5		
						4.Yield Q/ha	129.4	129.8	101.2	120.1		

Technology Assessed	*Production per unit (kg/ha)				Net Return (Profit) in Rs. / unit				BC Ratio			
11	12				13				14			
	1st year	2nd year	3rd year	Mean	1st year	2nd year	3rd year	Mean	1st year	2nd year	3rd year	Mean
T1 : 30 x30 cm (farmer's practices)	11460	12240	12010	11900	76600	84400	82100	81033	1:3.02	1:3.22	1:3.16	1:3.13
T2 : 60 x60 cm (Recommended spacing)	12400	12760	13125	12760	86000	89600	93250	89133	1:3.26	1:3.36	1:3.45	1:3.33
T3 : 45 x30 cm (refinement)	12940	12980	10120	12010	91400	91800	63200	82100	1:3.41	1:3.42	1:2.66	1:3.16