

ICAR-ATARI, Pune
ANNUAL PROGRESS REPORT OF KVK LATUR DURING 2017-18
(1st April 2017 to 31st March 2018)

1. GENERAL INFORMATION ABOUT THE KVK

1.1. Name and address of KVK with phone, fax and e-mail

Address with PIN code	Telephone		E mail	Website address & No. of visitors (hits)
Krishi Vigyan Kendra Latur, Addl. MIDC, Plot No. P-160, Barshi Road, Post- Gangapur, Tq.Dist Latur (MH) 413531	Office	FAX	kvklaturms@gmail.com	www.kvklatur.in 1745
	02382-267411	02382-267355		

1.2 .Name and address of host organization with phone, fax and e-mail

Address	Telephone		E mail	Website address
Manjara Charitable Trust, Latur Addl. MIDC, Plot No. P-160, Barshi Road, Post- Gangapur, Tq.Dist Latur (MH) 413531	Office	FAX	kvklaturms@gmail.com	www.kvklatur.in
	02382-267411	02382-267355		

1.3. Name of the Senior Scientist and Head with phone & mobile no.

Name	Telephone / Contact		
Dr. Digrase Sachin Swaruprao	Office	Mobile	Email
	02382-267411	9423211384 9404957511	sdigrase@gmail.com

1.4. Year of sanction: 2005

1.5. Staff Position (as on March 31, 2018)

Sl. No.	Sanctioned post	Name of the incumbent	Discipline	If Permanent, Please indicate		Date of joining	If Temporary, pl. indicate the consolidated amount paid (Rs./month)
				Current Pay Band	Current Grade Pay		
1	Senior Scientist and Head	Dr. Digrase S.S.	Horticulture	38800	9000	14.10.2016	-
2	Subject Matter Specialist	Bedre S.B.	Agril. Extension.	23700	5400	11.07.2006	-
3	Subject Matter Specialist	Deshmukh S.B.	Entomology	23700	5400	11.07.2006	-
4	Subject Matter Specialist	Smt.Gunjal A.A.	Home Science	23700	5400	13.10.2006	-
5	Programme Assistant	Dr. Salunke S.B.	Veterinary	15830	4200	01.10.2006	-
6	Computer Programmer	Suryawanshi V.M.	Computer	14120	4200	19.01.2009	-
7	Farm Manager	Kokate S.L.	-	15830	4200	16.10.2006	-

8	Accountant/Superintendent	Deshmukh A.J.	-	15830	4200	11.07.2006	-
9	Stenographer	Smt.Adgaonkar M.M.	-	11290	2400	01.04.2006	-
10	Driver 1	Pitale N.B.	-	9080	2000	01.04.2006	-
11	Supporting staff 1	Sagar O.K.	-	7940	1800	01.04.2006	-
12	Supporting staff 2	Jadhav V.H.	-	7940	1800	01.04.2006	-

1.6. Total land with KVK (in ha) : 20

S. No.	Item	Area (ha)
1	Under Buildings	2
2.	Under Demonstration Units	2
3.	Under Crops	5
4.	Horticulture	6
5.	Pond	0.3
6.	Internal Road & drainage	4.7

1.7. Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Year	Plinth area (Sq.m)	Expenditure (Rs.)	Starting year	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	2011-12	550	65,00,000	-	-	-
2.	Farmers Hostel	ICAR	2011-12	305	42,70,000	-	-	-
3.	Staff Quarters (6)	ICAR	2011-12	400	50,00,000	-	-	-
4.	Demonstration Unit (1)	ICAR	2008-09	80	5,00,000	-	-	-
5	Fencing	ICAR	2010-11	2800 Rgm	7,00,000	-	-	-
6	Rain Water harvesting system	-	-	-	-	-	-	-
7	Threshing floor	-	-	-	-	-	-	-
8	Farm godown	-	-	-	-	-	-	-
9	ICT lab	-	-	-	-	-	-	-
10	Other	-	-	-	-	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Tractor (MH-24-D-2876)	2006-2007	5,09,002	2297 (hrs)	Needs replacement
Jeep (MH-24-H-3000)	2006-2007	5,52,738	235937	Condemned on 03.05.16 & reported to Director ATARI
Motor Cycle (MH-24-Q-1404)	2006-2007	50,714	77772	Needs replacement
Motor Cycle (MH-24-Q-1405)	2006-2007	50,714	84024	Needs replacement

C) Equipments & AV aids

Name of the equipment / Implements	Year of purchase	Cost (Rs.)	Present status
Tractor with two bar sari plough	2006-07	5,09,002.00	Under working
Double palti plough	2006-07	42,019.00	Under working
Computer with projector	2006-07	1,21,900.00	Needs replacement
04 row CRIDA Bullock drawn seed cum ferti planter	2006-07	15,225.00	Under working
06 row CRIDA tractor drawn seed cum ferti planter	2006-07	44,000.00	Under working
Spring type cultivator	2006-07	26,434.00	Under working
Sugarcane harrow	2006-07	961.00	Under working
V shape harrows (02 Nos.)	2006-07	1,860.00	Under workings
Genset (Generator)	2011-12	2,50,000.00	Under workings
Computer (02 Nos) Printer & Tab	2016-17	1,20,000.00	Under workings

1.8. Details SAC meeting conducted in the year

Date	Name and Designation of Participants	Salient Recommendations	Action taken
	Nil	Nil	Nil

2. DETAILS OF DISTRICT**2.1. Major farming systems/enterprises (based on the analysis made by the KVK)**

S. No	Farming system/enterprise
1	Dry land Single cropping system Sorghum (K), Soybean, Pigeon pea, Sunflower Inter-cropping system Sorghum + Pigeon pea (4:2/3:3), Soybean + Pigeon pea (4:2) Double cropping system Sorghum (K) – Bengal gram, Green gram – sorghum (R), Soybean – Bengal gram/Sorghum (R)/Safflower

2	Irrigated Soybean – Sorghum (R)/ Groundnut/ Sugarcane
3	Multiple cropping system Sorghum (K)- wheat – Green gram Soybean – Bengal gram – summer groundnut

2.2. Description of Agro-climatic Zone & major agro ecological situations (based on soil and topography)

a) Soil type

Sl. No.	Agro-climatic Zone	Characteristics
1	Assured rainfall zone	The assured rainfall zone comprises part of Ahmedpur, Chakur and udgir taluka with assured rainfall and light to heavy soil, with hilly track comes under this zones. Annual precipitation varies from 881 to 903 mm
2	Moderate rainfall zone	Some part of Latur, Renapur AUSA, Nilanga, Shirur Antantpal, Deoni, Taluka is under moderate rainfall zone receiving rainfall 700 to 800 mm.

b) Topography

S. No.	Agro ecological situation	Characteristics
1	AES-I (western part of Latur and central part of AUSA)	Low rainfall, light to medium soils with flat area
2	AES-II (Renapur, northern part of Shirur Antantpal and east of Latur)	Low rainfall medium to heavy Soil with flat area
3	AES- III (Nilanga, western part of Udgir, Chakur and Deoni)	Moderate rainfall medium to heavy soil with hilly area
4	AES-IV (Jalkot and western part of Ahmedpur north east of Chakur)	Moderate rainfall light to medium soil with area
5	AES-V (Ahmedpur)	Moderate rainfall, light to medium soils with flat area
6	AES-VI (Western part of Latur, central part of Shirur Antantpal)	Medium to heavy soils with command area

2.3 Soil Types

S. No	Soil type	Characteristics	Area in ha
1	Light	0.75-25 cm depth	145079
2	Medium	25-50 cm depth	60274
3	Black Cotton	Above 50 cm depth	137288

2.4. Area, Production and Productivity of major crops cultivated in the district (2017-18)

S. No	Crop	Area (ha)	Production (MT.)	Productivity (Qt./ha)
1	Rice	1428	800	5.60
2	Cotton	4920	1774	10.30 (Lint 3.60)
3	Redgram	93764	1042106422	11.35
4	Kharif Jawar	33953	28308	8.33
5	Bajra	1501	409.77	2.73
6	Sunflower	634	178.25	2.81
7	Maize	6227	4783	7.68
8	Sesamum	1266	162.34	1.28
9	Groundnut	1358	503.79	3.70
10	Niger	803	93.30	1.16
11	Soybean	408556	472425	11.56
12	Blackgram	16139	5547	3.43
13	Greengram	17088	4659.8	2.72
14	Castorseed	7	1	200
15	Total Kh. oil seeds	3459	2118	612
16	Sugarcane	464	23546	51
17	Cotton	38	27	119
18	Rabi Jowar	222	81	364
19	Wheat	472	108	229
20	Rabi Maize	20	11	545
21	Other Rabi cereals	10	2	225
22	Total Rabi cereals	723	202	279
23	Bengal gram	670	200	298
24	Other Rabi Pulses	4	1	215
25	Total Rabi Pulses	673	201	298
26	Total Rabi foodgrains	1396	402	288
27	Safflower	129	38	291
28	Linseed	5	0	48
29	Sunflower Rabi	40	13	332
30	Other Rabi Oilseed	5	1	140
31	Total Rabi oilseeds	178	52	290
32	Summer Groundnut	15	11	736
33	Total Summer Oilseeds	15	11	736

2.5. Weather data (2017-18)

Month	Rainfall (mm)	Temperature 0 C		Relative Humidity (%)	
		Maximum	Minimum	Maximum	Minimum
26-04 Mar.	0.0	34.1	17.6	44	15
05-11 Mar.	0.0	33.7	17.9	25	22
12-18 Mar.	15.0	32.5	17.9	36	41
19-25 Mar.	0.0	35.9	20.1	21	23
26-01 Apr.	0.0	38.9	23.8	34	20
02-08 Apr.	0.0	38.8	23.1	38	16
09-15 Apr.	0.0	39.3	21.6	25	11
16-22 Apr.	0.0	40.5	23.8	25	10
23-29 Apr.	0.0	38.7	23.5	36	15
30-06 May	0.0	38.7	25.3	46	19
07-13 May	0.0	39.7	26.8	47	21
14-20 May	0.0	39.8	27.9	38	21
21-27 May	0.0	40.2	27.7	35	21
28-03 June	4.0	38.1	26.6	66	33
04-10 June	25.0	33.1	23.6	91	53
11-17 June	100.0	30.5	23.1	98	65
18-24 June	6.0	32.8	23.7	90	56
25-01 July	21.0	27.0	23.2	92	61
02-08 July	75.0	31.9	23.2	88	54
09-15 July	0.0	30.6	23.2	90	59
16-22 July	34.0	28.6	22.5	97	55
23-29 July	3.0	30.0	22.0	95	56
30-05 Aug	0.0	30.9	22.3	92	51
06-12 Aug	4.0	29.7	22.8	94	54
13-19 Aug	21.0	28.3	22.1	98	58
20-26 Aug	184.0	27.9	21.5	100	74
27-02 Sept	22.0	29.5	21.7	97	74
03-09 Sep	4.0	30.9	22.8	98	61
10-16 Sep	137.0	30.3	22.0	100	70
17-23 Sep	20.0	28.6	21.6	100	74
24-30 Sep	8.0	31.7	21.9	100	82
01-07 Oct.	0.0	31.5	21.6	90	74
08-14 Oct.	101.0	30.5	22.6	100	66
15-21 Oct.	13.0	31.2	21.1	89	52
22-28 Oct.	0.0	31.3	19.6	88	41

29-04 Nov.	0.0	29.3	15.9	85	33
05-11 Nov.	0.0	29.3	15.7	79	35
12-18 Nov.	0.0	29.7	16.0	73	37
19-25 Nov.	0.0	30.5	19.7	86	46
26-02 Dec.	0.0	29.2	14.3	75	30
03-09 Dec.	0.0	28.9	16.8	88	47
10-16 Dec.	0.0	29.6	15.5	80	35
17-23 Dec.	0.0	27.8	11.7	80	30
24-31 Dec.	0.0	27.9	11.6	76	29

2.6. Production and productivity of livestock, Poultry, Fisheries etc. in the district

Category	Population	Production	Productivity
Cattle			
<i>Crossbred</i>	10300	300.00 Lakh Kg.	7.980 Kg
<i>Indigenous</i>	54400	292.87 Lakh Kg.	1.475 Kg
Buffalo	94300	1140.31 Lakh Kg.	3.313 Kg
Sheep			
<i>Crossbred</i>	783	-	-
<i>Indigenous</i>	35000	21.168 MT (Wool)	0.605 Kg.
Goats	41300	36.17 Lakh kg. (Milk)	0.240 kg
	235962	113.26 MT (Meat)	12 Kg.
Pigs			
<i>Crossbred</i>	1172	-	-
<i>Indigenous</i>	8159	-	-
Rabbits	520	-	-
Poultry			
Hens	-	-	-
<i>Desi</i>	58600	71.57 Lakh (Eggs)	122 Eggs
Category		Production (Q.)	Productivity
Fish (Reservoir)	8121 Hec	2105 MT	259.20 kg.hec

2.7. Details of Operational area / Villages

Taluka	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
Latur	Latur	Ankoli	Oilseed and pulses	• Low yield • Heavy incidence of pests • Indiscriminate use of pesticides • Less awareness about seed treatment	• Improved variety • Integrated Nutrient Management • IPM • Improved implements
			Sugarcane	• Traditional method of cultivation • Less technical knowledge about fertilizer management	• Improved cultivation practices • INM
			Dairy	• Less availability of green fodder and low yield of green fodder • Low milk yield	• Fodder management • Feed management • Nutritional management • Disease management
	Latur	Chincholirao	Soybean, Bengalgram, sorghum, custom hiring centre	• Improved sowing equipments • equipments for insitu moisture conservation • Unavailability of processing equipments	• Improved farm machinery, Soil moisture conservation • Post harvest technology and value addition
			Oilseed and pulses	• Low yield • Heavy incidence of pests	• Improved variety • Integrated Nutrient Management • IPM • Improved implements
			Dairy	• Less availability of green fodder and low yield of green fodder • Low milk yield	• Fodder management • Feed management • Nutritional management • Disease management

			Poultry	• Low productive desi birds rearing • High mortality • Less income	• Backyard poultry management
		Chata	Soybean, pigeon pea, sugarcane, sorghum, wheat custom hiring centre	• Cleaning & grading of grains • Improved equipments	• Post harvest technology
			Soybean, pigeon pea, sorghum, custom hiring centre	• Cleaning & grading of grains • Improved equipments	• Post harvest technology
			Soybean, sorghum, sugarcane	• Improved sowing equipments • drainage of waterlogged soils	• Improved farm machinery
			Oilseed and pulses	• Low yield • Heavy incidence of pests	• Improved variety • Integrated Nutrient Management • IPM • Improved implements
Latur	Latur	Bhoisamudrga, Harangul & Tandulwadi	Drudgery reducing equipments	• Unaware about improved drudgery reducing tools • Unavailability of improved equipments • Occupational health problems	• Demonstration of improved drudgery reducing tools
		Akarwai	Supplementary foods	• Lack in nutritionally rich supplementary food for infants • Poor nutritional status of children	• Introduction of nutritionally rich supplementary foods made from locally available food items

2.8. Priority thrust areas:

Crop/Enterprise	Thrust area
• Soybean	• Integrated nutrient management & varietal demonstration, • IPM (Leaf eating caterpillars, girdle beetle, stem fly)& IDM (antracnose)
• Rabi sorghum	• Integrated pest management & varietal demonstration
• Safflower	• varietal demonstration • Pod borer & wilt management
• Soybean	• Insitu moisture conservation • Improved sowing equipments • post harvest technology
• Bengal gram	• Soil moisture conservation

• Sorghum	• Soil moisture conservation
• Mango	• Integrated nutrient management • Jassids & Powdery mildew management
• Pomegranate	• Use of proper intercultural operations • Preventive measures for diseases
• Horticultural crops /Commercial crops	• Commodity wise Interest Group formation
• Improved farm machinery	• Low level of mechanization
• Improved farm machinery	• Drudgery reduction
• Crossbred cow, Buffalo,	• Feed and fodder management
• Poultry	• Backyard poultry farming
• Goatery	• Feed and fodder management • Disease management • Fertility management
• Drudgery reducing technologies	• Introduction of improved drudgery reducing equipments
• Post harvest management & value addition	• Post harvest management for loss reduction • Small scale processing & value addition
• Foods & Nutrition	• Awareness on nutritional importance • Establishment of nutritional gardens • Efficient nutritional diet for food security
• Entrepreneurship development	• Entrepreneurial activities for income generation
• Sericulture	• Advance technology of bi-voltine cocoon production

3. TECHNICAL ACHIEVEMENTS

3.1. A. Details of target and achievements of mandatory activities

OFT				FLD			
1				2			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
12	12	118	118	18	18	508	508

Training				Extension Programmes			
3				4			
Number of Courses		Number of Participants		Number of Programmes		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
61	55	1525	2235	195	205	7500	8405

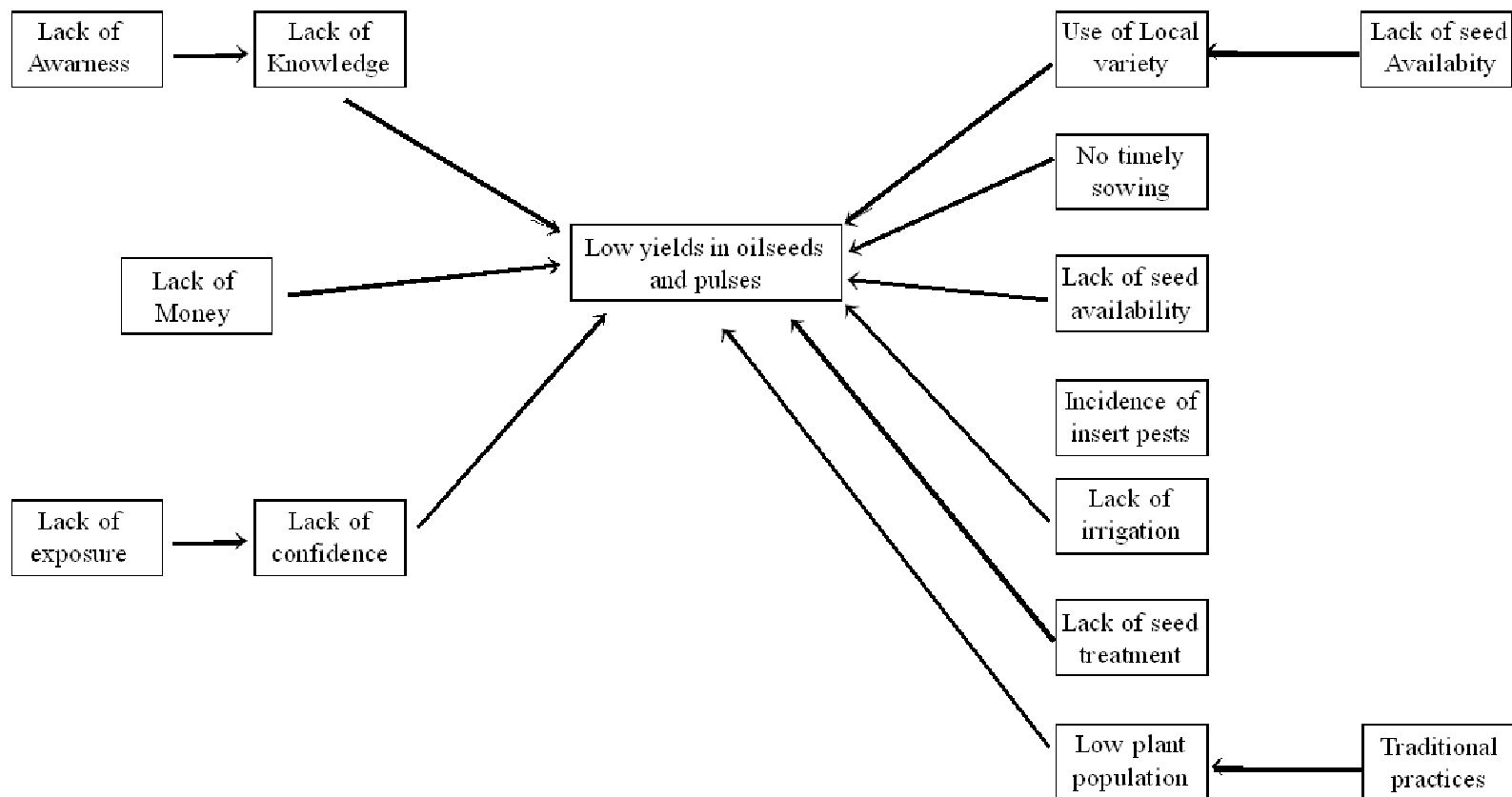
Seed Production (Qtl.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
175	178	220000	237714
		20000	26650 fodder

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
1000	1334	1200	1469

3.1. B. Operational areas details during 2017-18

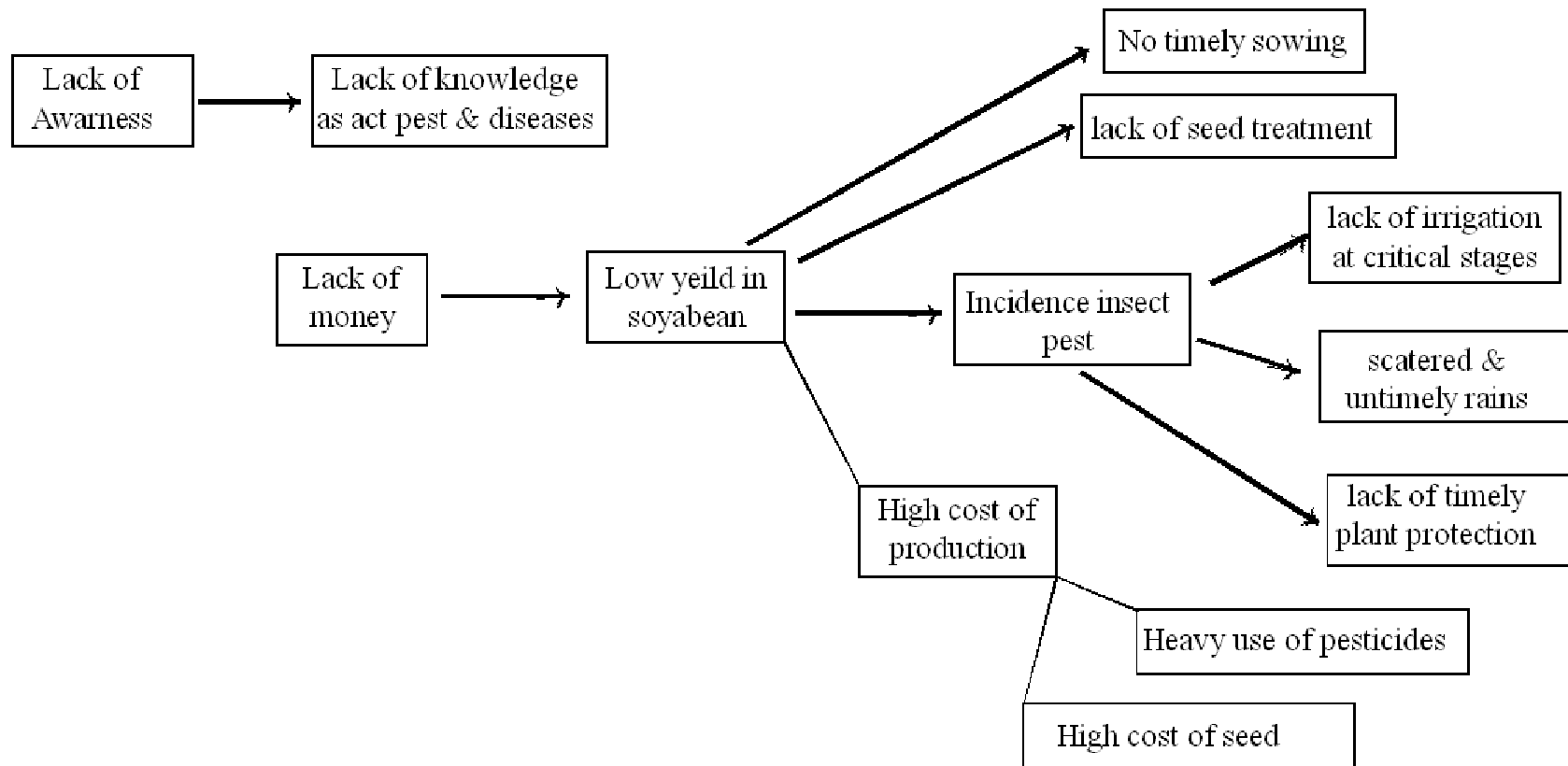
S.No.	Major crops & enterprises being practiced in cluster villages	Prioritized problems in these crops/ enterprise	Extent of area (Ha/No.) affected by the problem in the district	Names of Cluster Villages identified for intervention	Intervention (OFT, FLD, Training, extension activity etc.)
1	Tomato	Heavy infestation of late blight, leaf curl and low yielding cultivars	75 % cultivated area	Janwal, Shirur anantpal	OFT
2	Sericulture	Low yield of cocoon per 100 dfls	80% sericulturist	Chikhurda, Almala	OFT
3	Soybean	Heavy infestation of girdle beetle, leaf eating caterpillar, soybean mosaic	70 % cultivated area	Dhanori, Chincholirao	OFT
4	Chilli	low yield due to leaf curl virus incidence	75 % cultivated area	Killari	FLD
5	Pigeon pea	High residue problem, heavy infestation of pod borer complex	75 % cultivated area	Dhanori, Chincholirao	FLD
6	Okra	Low yield and heavy incidence of YMV	70 % cultivated area	Rani akulga, shirur anantpal	FLD
7	Chick pea	High residue problem, heavy infestation of pod borer complex and wilting problem	70 % cultivated area	Dhanori, Chikurda	FLD
8	Supplementary food	Homemade traditional infant food deficient in protein-energy, calcium & micro nutrients	80% population	Akharwai	OFT, Training
9	Drudgery reducing improved tools	Time consuming activity Facing health problems due to drudgery prone activity	90% population	Bhoisamudraga, Tandulwadi, Harangul	OFT, FLD, Training
10	Dairy	Low milk yield, Repeat breeding problem Longer inter calving period Scarcity and shortage of green fodder	75 % population	Gangapur Akharwaie	OFT, FLD and training
11	Poultry	Less egg production and income from backyard poultry farming	90 % population	Chincholirao, katpurRamegaonSakhara	FLD and training
12	Goat	Uncontrolled breeding	95 % population	Babhalgaon, Chincholirao, Nandgaon	OFT

Crop Production

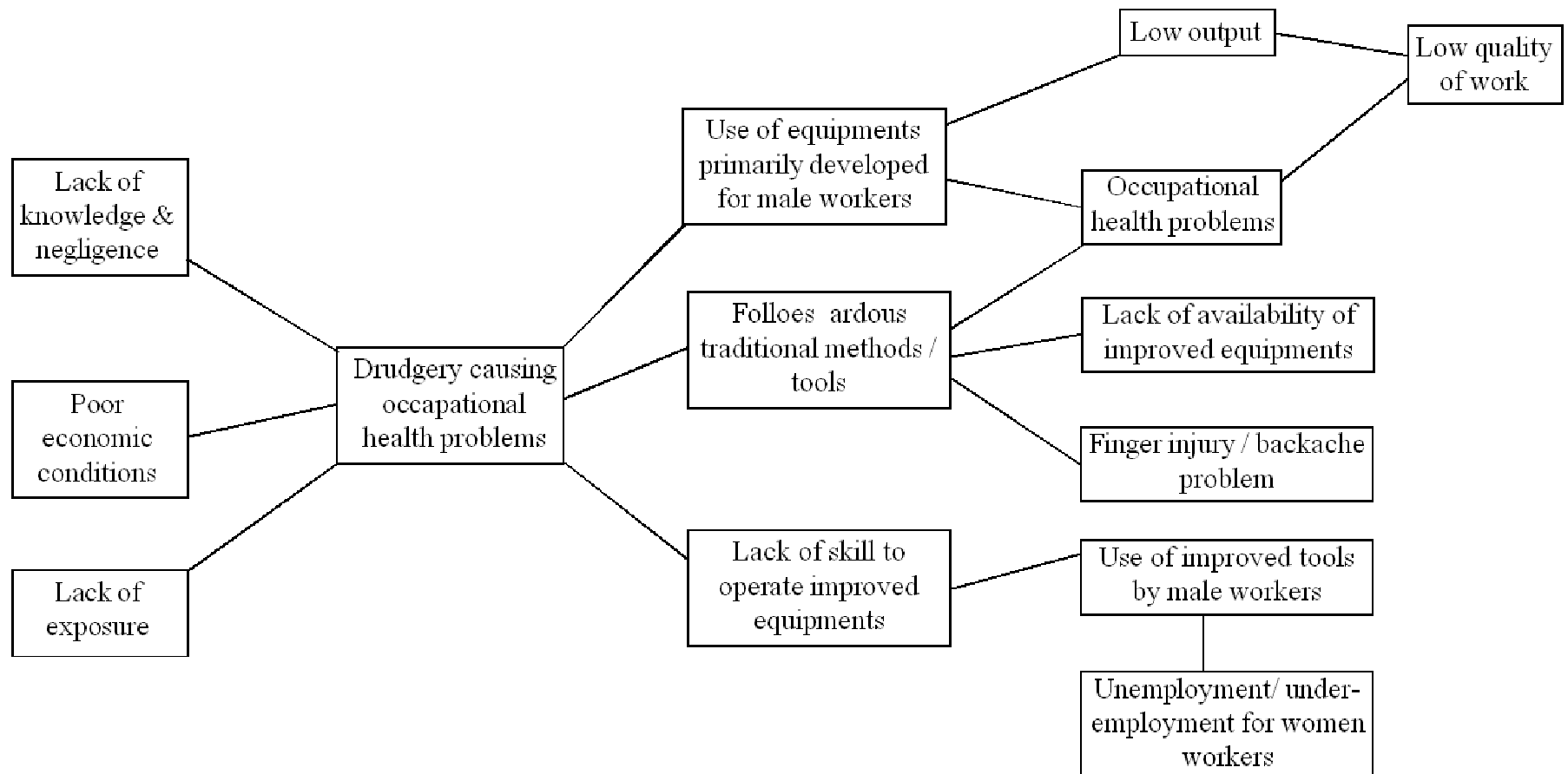


**Problem cause Diagramme for low yields in oilseed & pulses
Crop production**

2. Plant Protection



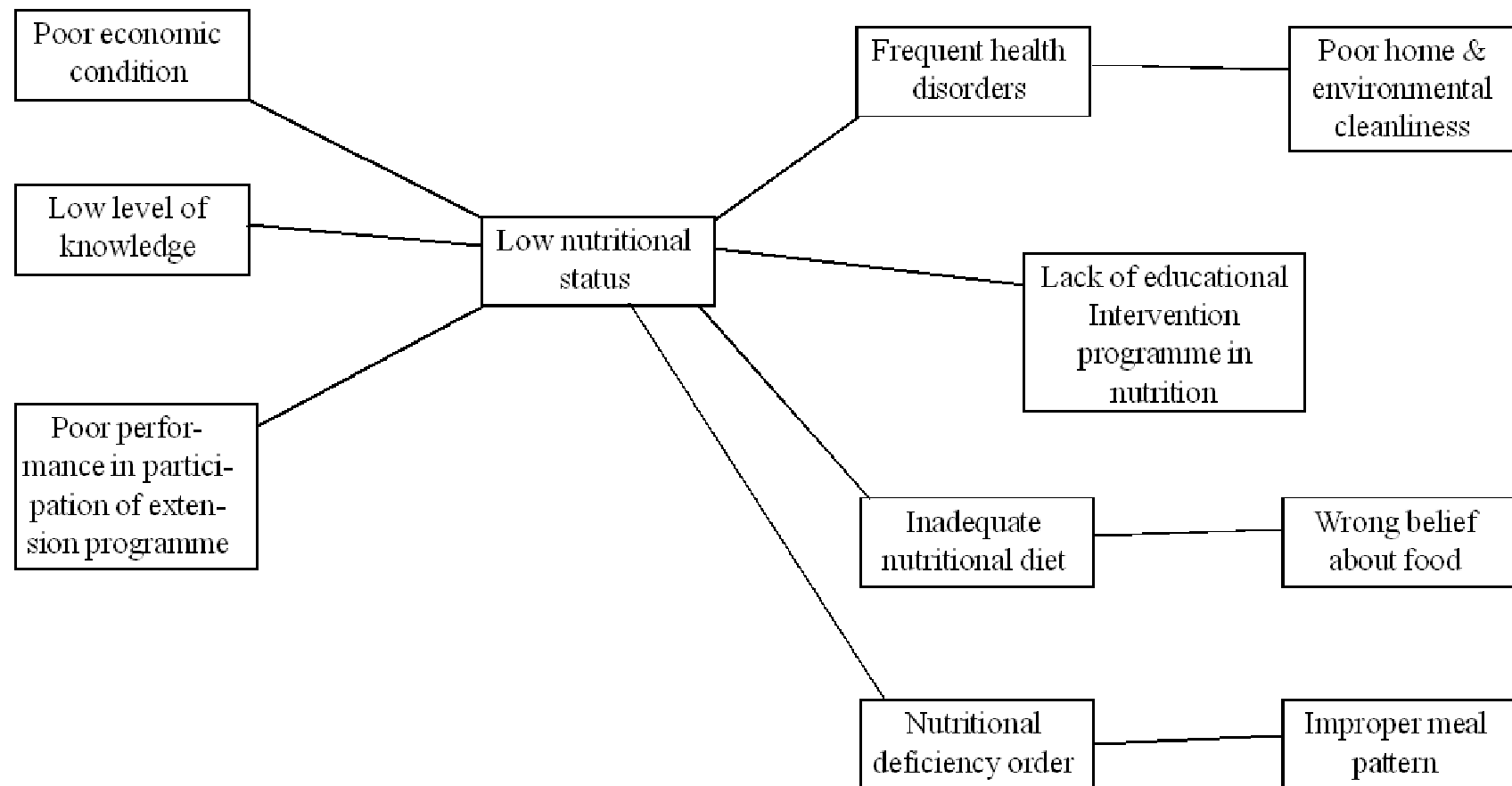
Problem cause diagramme for low yeild in soybean



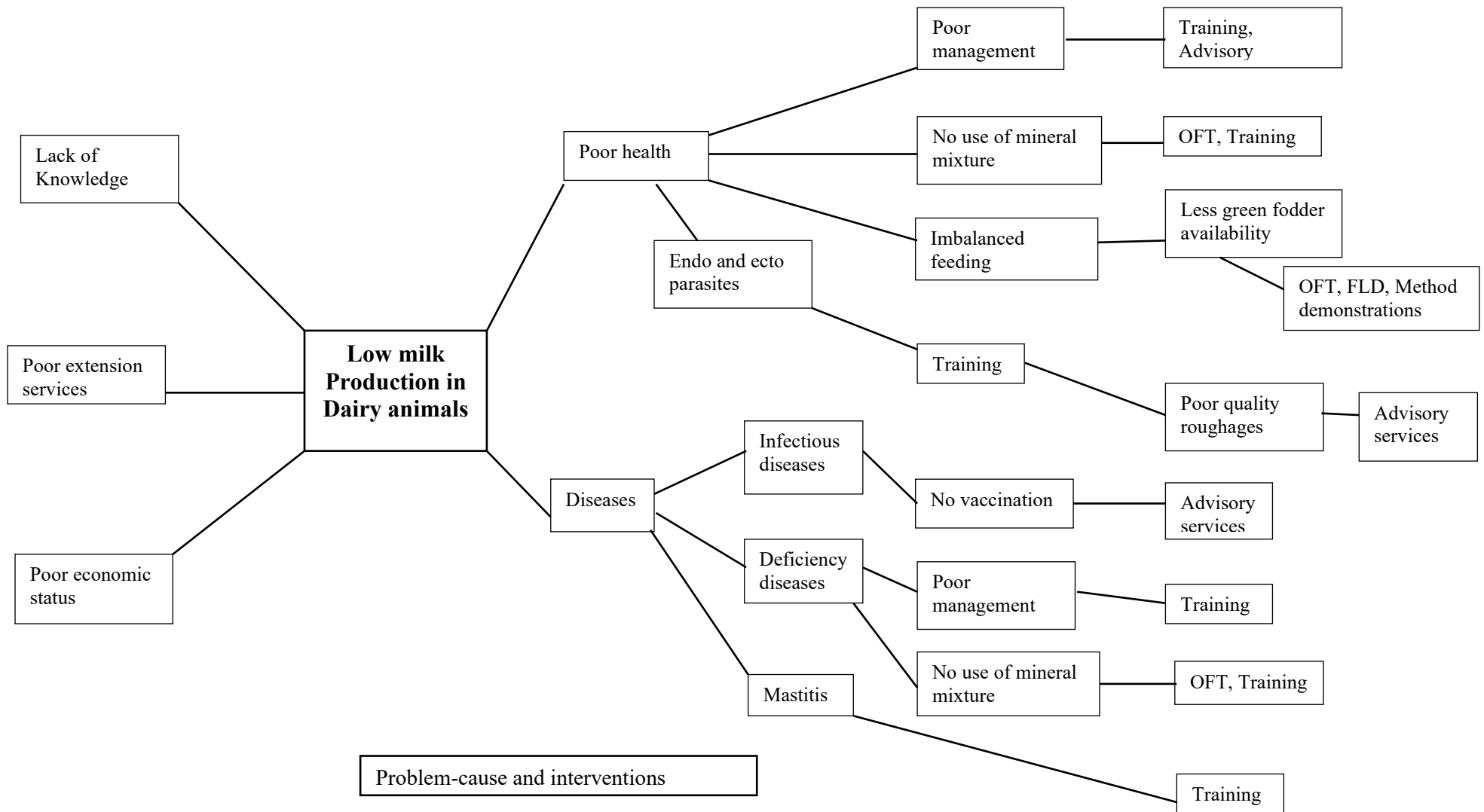
Problem cause diagram of drudgery causing occupational health problems in form women

Home Science

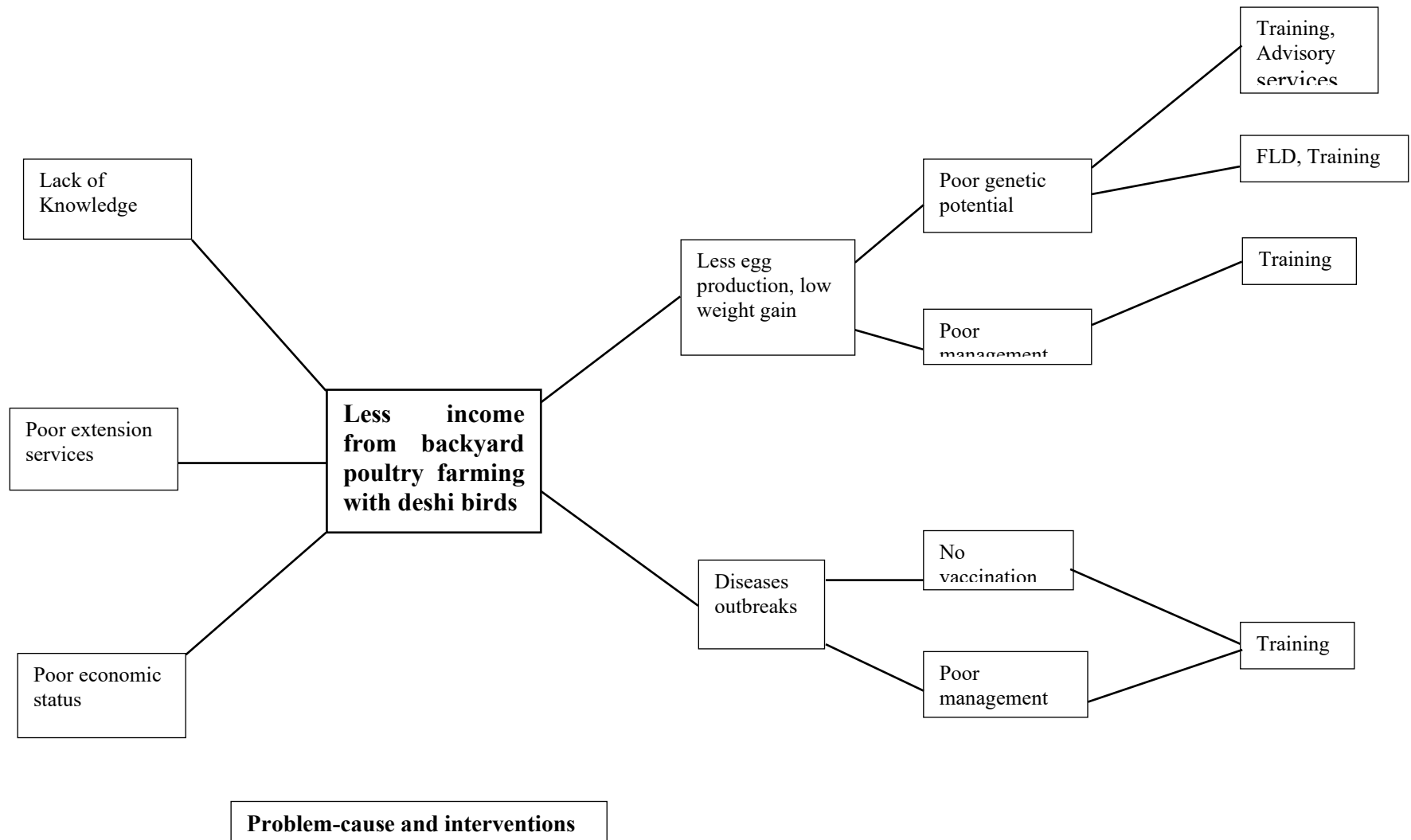
Diagram - I



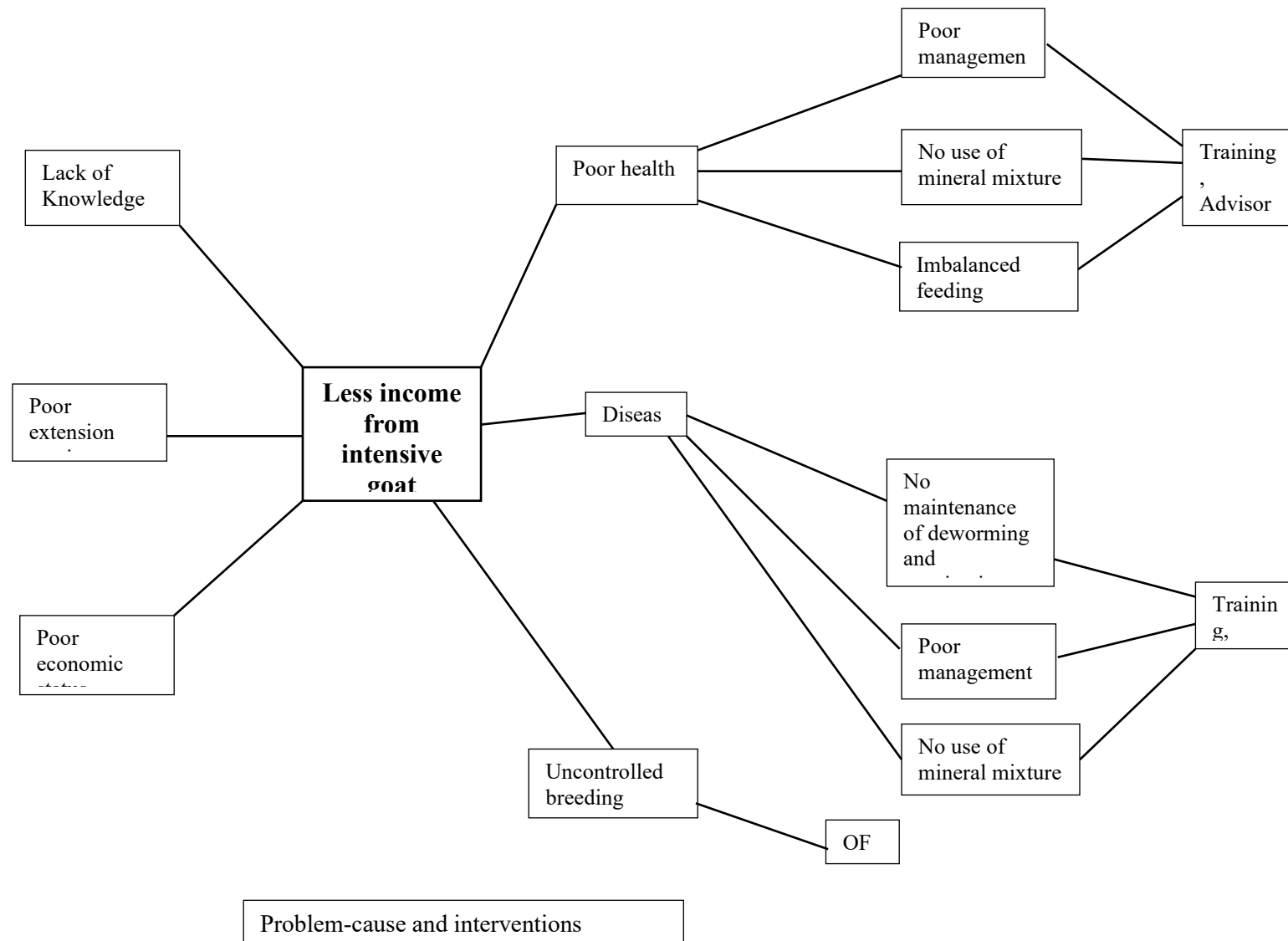
Discipline: Animal sciences



Discipline: Animal sciences



Discipline: Animal sciences



3.2. Technology Assessment and Refinement

A1. Abstract on the number of technologies assessed in respect of crops

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management										
Varietal Evaluation										
Integrated Pest Management										
Integrated Crop Management										
Integrated Disease Management										
Small Scale Income Generation Enterprises	1									10
Weed Management										
Resource Conservation Technology										
Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition	1									10
Drudgery Reduction	2									20
Storage Technique										
Mushroom cultivation										
Total	4									40

A2. Abstract on the number of technologies refined in respect of crops

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management										
Varietal Evaluation		01		01						
Integrated Pest Management		01			01					
Integrated Crop Management										
Integrated Disease Management										
Small Scale Income Generation Enterprises				01						
Weed Management										
Resource Conservation Technology										
Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique										
Mushroom cultivation										
Total		02		02	01					

A3. Abstract on the number of technologies assessed in respect of livestock enterprises

Thematic areas	Cattle	Poultry	Piggery	Rabbitry	Fisheries	TOTAL
Evaluation of Breeds	01					01
Nutrition Management						
Disease of Management						
Value Addition	01					01
Production and Management	01					01
Feed and Fodder						
Small Scale income generating enterprises	03					03
TOTAL	06					06

A4. Abstract on the number of technologies refined in respect of livestock enterprises

Thematic areas	Cattle	Poultry	Piggery	Rabbitry	Fisheries	TOTAL
Evaluation of Breeds						
Nutrition Management						
Disease of Management						
Value Addition						
Production and Management						
Feed and Fodder						
Small Scale income generating enterprises						
TOTAL						

B. Achievements on technologies Assessed and Refined

B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trail covering all the Technological Options)
Integrated Nutrient Management					
Varietal Evaluation	Soybean	Varietal assessment of soybean var. MAUS-158 and MACS-118	13	13	10
	Sugarcane	Varietal assessment of sugarcane var. MS-10001 and COVSI--8005	10	10	04
Integrated Pest Management	Soybean	Assessment of pre-mixed insecticidal formulation Betacyfluthrin + Imidacloprid (350 ml/ha) for management of girdle beetle and whitefly in soybean	10	10	04
Integrated Crop Management					

Integrated Disease Management	Tomato	IPM & IDM with introduction of triple disease resistant (leaf curl virus, bacterial wilt and early blight) and High yielding Tomato F1 Hybrid Var. Arka Rakshak .	10	10	04
Small Scale Income Generation Enterprises	Soybean	Use of soybean roaster for preparation of commercial soya nuts	10	10	-
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
	Rajkeera	Assessment of low cost weaning food on infant health (9 to 12 months)	10	10	-
Drudgery Reduction	Seedling transplanter & sapling carrier	Use of manual seedling transplanter& sapling carrier for seedling transplantation	10	10	-
	Water wheel	Use of water wheel for water transportation	10	10	-
Storage Technique					
Mushroom cultivation					
Total					

B.2. Technologies Refined under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trail covering all the Technological Options)
Integrated Nutrient Management					
Varietal Evaluation					
Integrated Pest Management					
Integrated Crop Management					
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					

Mushroom cultivation					
Total					

B.3. Technologies assessed under Livestock and other enterprises

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Evaluation of breeds				
Nutrition management	Dairy	Feeding of mineral mixture	10	10
Disease management				
Value addition				
Production and management	Goat	Estrous synchronization by using indigenously developed progesterone sponges	50	05
	Sericulture	Assessment on use of growth hormone Serimore on cocoon yield and quality	10	10
Feed and fodder	Dairy	Planting of high yielding new Napier fodder variety CO-4	10	10
Small scale income generating enterprises				
Total			80	35

B.4. Technologies Refined under Livestock and other enterprises

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Evaluation of breeds				
Nutrition management				
Disease management				
Value addition				
Production and management				
Feed and fodder				
Small scale income generating enterprises				
Total				

C1.Results of Technologies Assessed

On Farm Trial: 1

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology assessed	Parameters of assessed	Data on the parameter			Results of assessment	Feedback from the farmer	Details of assessment done
1	2	3	4	5	6	7	8			9	10	11
Soybean	Rainfed Supportive sprinkler irrigation	Low yield due to low potential cultivars, high infestation stem fly and girdle beetle	Assessment of different varieties of soybean MAUS- 158 AND MACS- 1188	13	Different varieties of soybean MAUS-158 AND MACS-1188		T1	T2	T3	Farmers like both varieties & its harvesting of MACS-1188 by machine	The MAUS- 158 shows very good tolerance to stem fly, also sustain in water stress period and low shattering habit. MACS-1188 suitable for mechanical harvester.	-
						Yield qtls/ha	22.75	26	27.5			
						No. of day for maturity	96	101	103			

Technology Refined	Source of Technology for Technology Option1 / Justification for modification of assessed Technology Option 1	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
12	13	14	15	16	17
Technology Option 1 (best performing Technology Option in assessment)	Farmers practice	22.75	Qtls/ha	43,425	2.2
Technology Option 2 (Modification over Technology Option 1)	VNMK, Parbhani	26.00	Qtls/ha	54,475	2.6
Technology Option 2 (Modification over Technology Option 1)	Agharkar Research Institute, Pune	27.5	Qtls/ha	59,575	2.7



Soybean variety - MACS-1188



Soybean variety - MAUS-158

On Farm Trial:2

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology assessed	Parameters of assessed	Data on the parameter			Results of assessment	Feedback from the farmer	Details of assessment done
1	2	3	4	5	6	7	8			9	10	11
Sugarcane	Irrigated	Low sucrose percentage, less number of tillers, susceptible to pest and disease and low milable canes per ha.	Assessment of different varieties of Sugarcane MS-10001 and COVSI-8005	10	Different varieties of Sugarcane MS-10001 and COVSI-8005		T1	T2	T3	The results of present assessment showed that the yield of sugarcane crop by using var. co-86032 was 107.5 tons/ha the yield by cultivating variety with INM practices showed 128 & 128.5 tons/ha in Var. MS-10001 and COVSI-8005 respectively in which is 19.06 % increase over T1.	The var. MS-10001 was very delicate at internodes and flowering occurs in early growth stages that adversely affect the yields. In var. COVSI-8005 tillering in ratoon crop is very low and infestation of early shoot borer is more. Also it is susceptible to water stress conditions.	-
						Yield ton/ha	107.5	128	128.5			
						No. of seedling require/ha	12500	12500	12500			

Technology Refined	Source of Technology for Technology Option1 / Justification for modification of assessed Technology Option 1	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
12	13	14	15	16	17
Technology Option 1 (best performing Technology Option in assessment)	Farmers practice	107.5	tons/ha	141500	2.4
Technology Option 2 (Modification over Technology Option 1)	VSI, Manjari, Pune	128	tons/ha	186600	2.9
Technology Option 2 (Modification over Technology Option 1)	Regional Research Station, Padegaon	128.5	tons/ha	187600	2.9



Sugarcane variey CO-86032



Sugarcane variey COVSI-8005

On Farm Trial :3

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology assessed	Parameters of assessed	Data on the parameter		Results of refinement	Feedback from the farmer	Detail s of asses ment done
1	2	3	4	5	6	7	8		9	10	11
Tomato	Cultivated in Rabi season as irrigated crop. The soil is medium to heavy and low in nitrogen, deficit in phosphorous and high in potash contents.	In recent years the occurrence of diseases such as Tomato leaf curl virus (ToLCV), and early blight (EB) have become very serious causing considerable yield loss in major tomato growing areas of Latur district.	Assessment of Tomato Var. ArkaRakshak with IPM Package for the management of tomato leaf curl virus, early blight and bacterial wilt	10	Integrated Pest Management and Integrated Disease Management with Cultivation of High yielding and triple disease resistant (leaf curl virus, bacterial wilt and early blight) of Tomato F1 Hybrid Var. ArkaRakshak		T1	T2	The results of present assessment showed that the yield of crop by using farmers practice was 29.50 tons/ha as the yield by using Arakarakhak with IPM showed 36.50 tons/ha which is 23.72 % increase over T1.	The seed availability of Arakarakhak is a big constraint, need to commercialize on large scale with help of private seed producing companies.	
						Leaf curl virus %	21.11	11.50			
						Early blight disease %	32.10	14.20			
						Bacterial wilt %	0	0			
						Yield (t/ha)	29.50	36.50			

Technology Refined	Source of Technology for Technology Option1 / Justification for modification of assessed Technology Option 1	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
12	13	14	15	16	17
Technology Option 1 (best performing Technology Option in assessment)	Farmers practice	29.50	Tons/ha	44610	2.02
Technology Option 2 (Modification over Technology Option 1)	IIHR, Bangalore	36.50	Tons/ha	64610	2.45



Crop stand at farmers field of Tomato high yielding and triple disease resistant F1 Hybrid Var. ArkaRakshak

On Farm Trial :4

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technolog y assessed	Paramete rs of assessed	Data on the parameter		Results of refinement	Feedback from the farmer	Details of refineme nt done
1	2	3	4	5	6	7	8		9	10	11
Soybean	Cultivated in kharif season as rainfed crop. The soil is medium to heavy and low in nitrogen, deficit in phosphorous and high in potash contents.	Heavy incidence of girdle beetle, leaf eating caterpillar and white fly may reduce the yield by up to 40%. Also the incidence of whitefly increasing and that causes spread of yellow mosaic virus.	Integrated Management of leaf eating caterpillars, girdle beetle and whitefly in soybean by using Betacyfluthrin + Imidacloprid	10	Spraying of pre mixed insecticide Betacyfluthrin + Imidacloprid at flowering stage @ 250ml per hector for management of leaf eating caterpillars, girdle beetle and whitefly in soybean		T1	T2	The results of present assessment showed that the yield of crop by using farmers practice was 23.7 qtls/ha as the yield by using spray Betacyfluthrin + Imidacloprid showed 26.8 qtls/ha which is 13.08 % increased over T1. The leaf eating caterpillar infested plants per meter row was 4.70 in farmers practice and it was 2.50 in assessed technology which is 88% less as farmer's practice. In case girdle beetle infested plants per meter row were observed 4.20 and whitefly infested plants per meter was 1.70 observed in farmers practice, whereas it was 1.45 and 0.50 in assessed technology. This results in decrease the losses due to infestation of leaf eating caterpillar, girdle beetle and whitefly.	The recommendation of use of phorate 10 G at the time of sowing is very inconvenient, it can uniformly mix with the fertilizers. Most of the insecticides are not gives significant results for management of both defoliators and internal borers	
						Leaf eating caterpillar infestation plants per meter row	4.70	2.50			
						Girdle beetle infestation plants per meter row	4.20	1.45			
						White fly infestation plants per meter row	1.70	0.50			
						Yield	23.7	26.8			

Technology Refined	Source of Technology for Technology Option1 / Justification for modification of assessed Technology Option 1	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
12	13	14	15	16	17
Technology Option 1 (best performing Technology Option in assessment)	Farmers practice	23.7	Qtls/ha	51080	2.73
Technology Option 2 (Modification over Technology Option 1)	IISR, Indore	26.8	Qtls/ha	60120	2.93



Assessment on Integrated Management of leaf eating caterpillars, girdle beetle and whitefly in soybean by using premix insecticide Beta-cyfluthrin + Imidacloprid

On Farm Trial : 5

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology assessed	Parameters of assessed	Data on the parameter		Results of assessment	Feedback from the farmer	Details of refinement done
1	2	3	4	5	6	7	8		9	10	11
Sericulture	Cultivated in kharif season as Irrigated crop. The soil is medium to heavy and low in nitrogen, deficit in phosphorus and	Most of the sericulture farmers facing problems of low yields per 100 dfls due to less days required for maturity and low feeding by Silkworm	Assessment on use of growth hormone Serimore for increasing yield and quality of silk worm cocoon	10	Spray of Serimore in a single dose at 48 hr after 4th moult at concentrations of 0.1 µl/silkworm larvae i.e. 5 ml Serimore dissolved in 2.5 liters potable water and sprayed on to the silkworm.		T1	T2	Serimore showed a significant positive response in larval and cocoon characters that 0.1 µl/silkworm larvae administered at 48hrs of 5th instar elicited a favorable response in silkworm in significantly improving the cocoon yield up to 14 %, cocoon	The recommendation of use of phorate 10 G at the time of sowing is very inconvenient, it can uniformly mix with the fertilizers. Most of	
						Cocoon weight (g)	1.96	1.83			
						Shell weight (g)	0.38	0.33			
						No of cocoons/kg	511	569			

	high in potash contents.	larvae. The low feeding of last instars larvae has direct relation on weight and quality of cocoon .				B:C ratio	2.72	3.02	shell weight 15 %. It makes the silkworms to build heavier cocoons with higher silk content. It increases the larval duration by one day, makes the silkworms to eat mulberry leaf more vigorously. The results showed that Serimore with bioactive components can enhance the cocoon yield which can be exploited not only to maximize the profits of sericulturists but also to improve the quality.	the insecticid es are not gives significan t results for managem ent of both defoliator s and internal borers	
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Technology Refined	Source of Technology for Technology Option1 / Justification for modification of assessed Technology Option 1	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
12	13	14	15	16	17
Technology Option 1 (best performing Technology Option in assessment)	Farmers practice	73.50	Kgs/100 dfls	23250	2.72
Technology Option 2 (Modification over Technology Option 1)	CSRTI, Mysore	85.30	Kgs/100 dfls	28740	3.02



Assessment on use of growth hormone Serimore for increasing yield and quality of silk worm cocoon

On Farm Trial :6

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Value addition	-	Homemade traditional infant food is deficient in protein, energy, calcium & micro nutrients	Assessment of low cost weaning food infant health (9 to 12 months)	10	T1 : Traditional infant food + breast milk	Weight gain of the infant grams/3 months	780	Feeding of sudhrudh weaning food of 25 to 30 gm/day per baby for 3 months helped to gain (1170 gm) which was 33% increased over traditional infant food (780 gm)	The mother farmer expressed that there is need to supplement the protein energy rich infant food to the baby for better nutrition of the infants	-	-
					Signs & symptoms	Physically inactive & frequent infections					
					T2: Homemade sudhrudh weaning food + breast milk	Weight gain of the infant grams/3 months	1170				
					Signs & symptoms	Physically active & minimizes infections					



Assessment of low cost weaning food on infant health (9 to 12 months)

On Farm Trial :07

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Vegetable	Rabi	1.Time consuming & need maximum labour input 2. Drudgery prone activity	Use of manual seedling transplanter and sapling carrier for seedling transplantation	10	T1 : traditional method of seedling transplanting in bending position	No. of seedling transplanted Seedling/hr	480/hr	No. of seedling transplanting are increased by 38.46% than traditional seedling transplanting while seedling survival rate (6.31%) is higher	It is very useful equipment for small land holders & farm women are easily adopted this advanced method of seedling transplantation & results in reduction in drudgery	-	-
					Seedling survival rate Seedling/100	89					
					T2 : Vegetable seedling transplantation by seedling transplanter& sapling carrier	No. of seedling transplanted Seedling/hr	780/hr				
					Seedling survival rate Seedling/100	95					



Assessment on manual seedling transplanter and sapling carrier

On Farm Trial : 08

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Drudgery reduction tool	-	Time consuming activity Due to heavy loads women facing many health problems like chronic back, neck pain etc	To assess the efficiency of water wheel for collection of water	10	T1 : Girls & women carrying heavy pot of water on their head	Time taken in minute for 50 ltr water transportation from 1 km for 1 person	30	The use of water wheel for transportation of water saves time upto 77% and also minimizes the efforts of rural women on this activity	It is easy to use, durable and saves time of the working women	-	-
						Trips per 500 lit water from 1 km	25				
					T2: Rolling of water by water wheel	Time taken in minute for 50 ltr water transportation from 1 km for 1 person	10				
						Trips per 500 lit water from 1 km	10				



Assessment on water wheel for collection of water

On Farm Trial :09

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Value addition	-	Unevenness and uncrispiness in traditional roasting Unaware about low cost processing equipments	Assessment on use of soybean roaster for making commercial soya nuts	10	T1 : Traditional method - Roasting of soybean in pan T2: Roasting of soybean by in electric soybean roaster	Time taken for roasting Minute/250 gm	8	Due to use of soybean roaster saves 37.5% time and also quality of soya nuts are more crispiness which are commercially acceptable	Farm women are well aware about small scale processing of soya nuts by using electrically operated soybean roaster & they are eager to start commercial production of soya nuts through SHG members	-	-
						Crispiness of soya nuts	Crispiness				
						Time taken for roasting Minute/250 gm	5				
						Crispiness of soya nuts	More Crispiness				

On Farm Trial: 10

Crop/ enterprise	Farm ing situa tion	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the paramete r	Results of assessment	Feedback from the farmer	Any refin eme nt need ed	Justificat ion for refineme nt
1	2	3	4	5	6	7	8	9	10	11	12
Dairy	-	Low milk yield and Repeat breeding problem	Feeding of mineral mixture to dairy animals	10	Farmer's practice No mineral mixture feeding	1. Milk yield lit /day 2 .Fat %, 3 .Incidence of repeat breeding, %	10.2 3.7 30	Results show that the feeding of mineral mixture increased milk production by 7 % and reduced the repeat breeding problem by 66 % as compared to the farmers practice.	Feeding of mineral mixture increased the milk production per cow and improves the hair coat of the animals	-	-
					Technology assessed feeding of mineral mixture @ 50 gms/day/animal	1 .Milk yield lit /day 2. Fat %, 3. Incidence of repeat breeding, %	11.0 3.8 10				

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice) No mineral mixture feeding	-	10.2	Lit/ animal	9750	1.16:1
Technology option 2 feeding of mineral mixture	NDRI	11.0	Lit/ animal	14410	1.23:1



Assessment of feeding of mineral mixture to dairy animals

On Farm Trail: 11

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Goat	Intensive rearing system	Uncontrolled breeding, No synchrony in heat exhibition, difficulty in management	Assessment of estrus synchronization by using indigenously developed progesterone sponges in goats	50	Technology option 1 (Farmer's practice) No heat synchronization (Follows natural oestrous)	Female showing estrus %, Conception rate % Cost for synchronization, Rs/goat	54 88 Nil	This result showed that use of Progesterone indigenous vaginal sponges for heat synchronization in goat increased the females in estrus by 46 % and fertility by 63 % over the farmers practice i.e. use of natural estrus.	Technology is easy to adopt and method of sponge insertion is also easy. By using this protocol 100 goats showed sign of estrous within 48 hrs. Twinning percentage is also increased.	-	-
					Technology assessed Oestrous synchronization (Use of Progesterone indigenous vaginal sponges for 15 days with PMSG inj. @ 200 IU I/M at the time of sponge removal.	Female showing estrus %, Conception rate % Cost for synchronization, Rs/goat	100 94 225	Hence, to achieve tight synchrony and good conception rate indigenously prepared intra vaginal sponges may be used with PMSG inj at the time of sponge removal in goats.			

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice) No heat synchronization (Follows natural oestrous)	-	14.4	Kg live weight of produced kids per goat at sale/Season	1440	1.66
Technology option 2 Oestrous synchronization (Use of Progesterone indigenous vaginal sponges for 15 days with PMSG inj. @ 200 IU I/M at the time of sponge removal.	CSWRI, Avikanagar	28	Kg live weight of produced kids per goat at sale/Season	2520	1.66



Photographs of Assessment on estrous synchronization in goats

On Farm Trial : 12

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Hybrid Napier Fodder crop	Irrigated	Low green fodder yield, hairy leafs	Assessment of high yielding new hybrid Napier fodder variety CO- 4	10	Farmers practice: PhuleYashwant (RBN-9)	Green fodder yield q/ha/(reporting period)	1140	Results showed that planting of CO-4 fodder variety gives 21 % more green fodder yield than the PhuleYashwant fodder crop variety.	Fast growing with very good yield It has more tillers and leaves Mature rapidly so, regular cuttings requires Requires more irrigations than the farmers practice.	-	-
					Technology Assessed: Planting of CO-4 fodder variety.	Green fodder yield q/ha/(reporting period)	1450				
						Avg. no. of tillers /clump	20				
						No of cuts (reporting period)	04				
						Avg. no. of leaves per stem	10				
						Green fodder yield q/ha/(reporting period)	35				
						Avg. no. of tillers /clump	04				
						No of cuts (reporting period)	13				
						Avg. No. of leaves per stem					

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice) Phuleyashwant (RBN-9)	MPKV, Rahuri	1140	Kg/ha	44500	1.64
Technology option 2 Planting of CO-4 fodder variety.	TNAU, Coimbatore	1450	Kg/ha	75000	2.07



Photographs of Assessment on improved fodder crop CO-4

Discipline: Crop Production

OFT: 1

1. **Title of Technology Assessed:** Assessment of different varieties of soybean MAUS-158, MACS-1188
2. **Problem Definition:** Low yield due to low potential cultivars, high infestation stem fly and girdle beetle
3. **Details of technologies selected for assessment:**
T1 : Cultivation of Soybean variety MAUS-71
T2: Cultivation of Soybean varieties MAUS-158
T3 : Cultivation of MACS-1188 both varieties are high yielding registrant for stem fly & no shattering in MACS-1188
4. **Source of technology:** VNMKV, Parbhani & Agarkar Institute, Pune
5. **Production system and thematic area :** Varietal
6. **Performance of the Technology with performance indicators:** The var. MAUS-158 show significant tolerance to the girdle beetle and stem fly. In addition, it shows tolerant to water stress during dry spell. Regarding MACS-1188, it shows low shattering characters and found suitable to mechanical harvesting. Performance of the MAUS-158, MACS-1188 is giving 12.5 & 17 percent more yield respectively over MAUS-71. The drawback in MACS-1188 was observed that the straw after threshing is not preferred by cattle's due to dull color and having thorny nature.
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring**
Techniques: Farmers expected to available for more seeds at the time sowing to increase the production. The MAUS-158 shows good growth during dry spell and very low vegetative growth during excess rains. In MACS-1188, it shows very less shattering character but susceptible to yellow mosaic virus due to succulent leaves.
8. **Final recommendation for micro level situation:**
9. **Feedback for research:**
1. Var. MACS-1188 should recommend to heavy soils having facility of protective irrigation

2. Need to recommend last spray at the time of pod formation for sucking pest complex for vector management i.e. white Fly

10 **Process of farmer's participation and their reaction:** MACS-1188 is suitable for mechanical harvesting

OFT: 2

1. **Title of Technology Assessed:** Assessment of different varieties of Sugarcane MS-10001, COVSI-8005

2 **Problem Definition:** Low yield

3 **Details of technologies selected for assessment:**

T₁: Cultivation of sugarcane var. Co-86032 with spacing 5 x 2 fit with drip irrigation system

T₂: Cultivation of sugarcane var. MS-10001 with spacing 5 x 2 fit with drip irrigation system

T₃: Cultivation of sugarcane var. COVSI-8005 with spacing 5 x 2 fit with drip irrigation system

4 **Source of technology:** VSI, Manjari, Pune and Regional Sugarcane Research Station, Padgaon

5 **Production system and thematic area :** Varietal

6 **Performance of the Technology with performance indicators:**

The results of present assessment showed that the yield of sugarcane crop by using var. co-86032 was 107.5 tons/ha the yield by cultivating variety with INM practices showed 128 & 128.5 tons/ha in Var. MS-10001 and COVSI-8005 respectively in which is 19.06 % increase over T₁.

7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring**

Techniques: .

The var. MS-10001 was very delicate at internodes and flowering occurs in early growth stages that adversely affect the yields. In var. Covsi-8005 tillering in ratoon crop is very low and infestation of early shoot borer is more. Also it is susceptible to water stress conditions.

8 **Final recommendation for micro level situation:**

1.

9 **Feedback for research:**

1. In ratoon cultivation of var. COVSI-8005 need to focus on plant population as this var. having high sucrose level and after harvesting if fungicide spray not given the sooty mold directly affects emergence of new tillers.

10 **Process of farmers participation and their reaction:**

OFT:3

1 **Title of Technology Assessed:**

Assessment of Tomato Var. ArkaRakshak with IPM Package for the management of tomato leaf curl virus, early blight and bacterial wilt

2 **Problem Definition :**

A survey of 20 tomato farmers was conducted during May 2015 in Shirur anantpal, chakur and Renapur tehsil, with the objectives to diagnose tomato leaf curl virus disease (ToLCVD) and early blight disease intensity. In recent years the occurrence of diseases such as Tomato leaf curl virus (ToLCV), and early blight (EB) has become very serious causing considerable yield loss in major tomato growing areas of Latur district. As per the survey yield losses due to ToLCV up to 50-60 % depending on the stage of attack. Whereas, early blight has become very serious on foliage and fruits causing yield loss up to 40-50%..

3 **Details of technologies selected for assessment :**

T1: Farmers practice: Cultivation of Tomato varieties (Alankar, Abhinav, US-434) susceptible to leaf curl virus, bacterial wilt and early blight diseases

T2: Technology Assessment:

Integrated Pest Management and Integrated Disease Management with Cultivation of High yielding and triple disease resistant (leaf curl virus, bacterial wilt and early blight) of Tomato F1 Hybrid Var. ArkaRakshak.

- Transplanted 20-25 day old tomato F1 Hybrid Var. ArkaRakshak and 45-50 day old marigold simultaneously in a pattern of one row of marigold for every 16 rows of tomato. However, the first and last row of the plots should be of marigold.
- Spraying of Thiomethoxam 25 WP @ 0.3g/l for leaf curl vector (whitefly) control 15 days after transplanting
- Application of neem cake @ 250 kg/ha to ridges at 20-25 DAP (at flowering) to reduce nematode, fruit borer and leaf miner incidence
- Spraying of Ha NPV (@250 LE/ha) with 1% jaggery as sunscreen at 28, 35 and 42 DAP in the evening.
- Red spider mite incidence was noticed and controlled by spraying of neem oil 1% and Ethion 50 EC (1.5 ml/l) etc. Spraying done on lower surface of the leaves.
- Mechanical collection and destruction of bored fruits at periodic interval (3-4 times after fruit set) to minimize fruit borer incidence to the minimum.

4 Source of technology : ICAR-IIHR, Bangalore

5 Production system and thematic area

Integrated Pest and Disease management

6 Performance of the Technology with performance indicators

The results of present assessment showed that the yield of crop by using farmers practice was 29.50 tons/ha as the yield by using Arakarashak variety with IPM showed 36.50 tons/ha which is 23.72 % increased over T₁. The incidence of leaf curl virus was 25.11% in farmers practice and it was 11.50 percentage in assessed technology which is 118.34 % less as farmer's practice. In case of disease early blight was observed 32.10% in farmers practice and 14.20 % incidence in assessed practice, whereas it was 126 % more in farmers practice. This results in decrease the losses due to incidence of diseases.

The IPM techniques Viz, cultivation of marigold trap crop reduces infestation fruit borer, mechanical collection and destruction of bored fruits at periodic interval reduces further spread of diseases, destroying leaf curl and other virus affected plants restrict spread of virus, erection insect net around plot, use of sticky traps and spraying of botanicals reduces indiscriminate use of pesticides and cost of production.

The overall impact of assed technology showed that reduction in incidence of disease complex increased the tomato yield by 23.72 percent. Net income and B: C ratio was also higher with the technology tested when compared with the farmers' practice.

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques

1. The improved cultivation practices and planting during November has fetched good market price.
2. The tomato variety is tolerance to early blight
3. The fruit quality attributes of variety are excellent like fruit shape, size, fruit firmness, colour, & shelf life
4. Most of the farmers reported that this variety was recovered fast from late blight infection
5. Farmers are observed that other commercial hybrids could with stand the recent rains and were not able to re-establish like ArkaRakshak.
6. In case of tomato leaf minor i.e. Tutaabsulata this variety not showed significant results, even adopting all IPM practices this pest has become giving more losses in later stage of crop period

8 Final recommendation for micro level situation

1. The Tomato var. Arka rakshak shows very significant results regarding quality attributes and incidence of major diseases at Latur conditions, So, need to recommend this variety for tomato growing clusters.

9 Constraints identified and feedback for research

1. The variety showed susceptibility to leaf minor i.e. Tutaabsulata, since the most of the farmers adopting IPM practices, even used different insecticides but not gives significant results, so need to develop strategy for management of tomato leaf minor,.
2. In case of light soils Arakarakshak have reported root knot nematode
3. Sucking pest complex is major issue in tomato as well as all vegetables, so need to develop sucking pest tolerant tomato varieties
4. The use of poly mulch gives significant results for sucking pest population and also gives better results on yield attributes
5. The seed availability of Arakarakshak is a big constraint, need to commercialize on large scale with help of private seed producing companies.

10 Process of farmers participation and their reaction

Farmers are participated through Group discussion, training demonstration

OFT: 4

1. Title of Technology Assessed:

Integrated Management of leaf eating caterpillars, girdle beetle and whitefly in soybean by using pre-mixed insecticidal formulation Betacyfluthrin

+ Imidacloprid

2. Problem Definition :

1. The main damage due to girdle beetle is caused by the larvae of the insect.
2. The attack of the pest initially begins in the last week of July to the first fortnight of August.
3. The insect remains active from July to October, damaging the crop most severely during August and September.
4. Heavy incidence may reduce the yield by up to 40%. Also the incidence of whitefly increasing and that causes spread of yellow mosaic virus.

3. Details of technologies selected for assessment :

T1: Farmers practice: Farmers are using various combinations of insecticides for management of girdle beetle and whitefly.

T2: Technology Assessment:

Integrated pest management with Spray of pre-mixed insecticidal formulation Betacyfluthrin + Imidacloprid @ 350ml/ha at pre flowering stage for management of girdle beetle and whitefly

4. Source of technology : ICAR-IISR, Indore

5. Production system and thematic area

6. Performance of the Technology with performance indicators

The results of present assessment showed that the yield of crop by using farmers practice was 18.5qtls/ha as the yield by using spray Betacyfluthrin+ Imidacloprid showed 20.5 qtls/ha which is 10.80 % increased over T1. The leaf eating caterpillar infested plants per meter row was 4.70 in farmers practice and it was 2.50 in assessed technology which is 88% less as farmer's practice. In case girdle beetle infested plants per meter row were observed 4.20 and whitefly infested plants per meter was 1.70 observed in farmers practice, whereas it was 1.45 and 0.50 in assessed technology. This results in decrease the losses due to infestation of leaf eating caterpillar, girdle beetle and whitefly.

The overall impact of assessed technology showed that reduction in incidence of disease complex increased the tomato yield by 10.80 percent. Net income and B: C ratio was also higher with the technology tested when compared with the farmers' practice.

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques

1. The recommendation of use of phorate 10 G at the time of sowing is very inconvenient, it can uniformly mix with the fertilizers.
2. The spray of betacyfluthrin + imidacloprid has significant for both leaf eating caterpillars and girdle beetles.
3. Most of the insecticides are not gives significant results for management of both defoliators and internal borers
4. Late i.e. pod filling stages sprayings gives no significant results as infestation is at peak stage.

Final recommendation for micro level situation

Do spraying at critical stages i.e. before flowering at that time girdle beetle infestation is just initiated and which is critical growth stage for management of internal borers

8. Constraints identified and feedback for research

The molecule recommended for management of leaf eating caterpillars and girdle beetles not included in label claim

9 Process of farmers participation and their reaction

Farmers are participated through Group discussion, training demonstration

OFT: 5

1. Title of Technology Assessed:

Assessment on use of growth hormone Seri more for increasing yield and quality of silkworm cocoon

2. Problem Definition :

1. Most of the sericulture farmers facing problems of low yields per 100 dfls due to less days required for maturity and low feeding by Silkworm larvae.
2. The low feeding of last instars larvae has direct relation on weight and quality of cocoon.
3. Also low quality of cocoon directly affects reeling percentage.

3. Details of technologies selected for assessment :

T1: Farmers practice:Regular feeding of Mulberry leaves

T2: Technology Assessment:

Spray of Seri more in a single dose at 48hr after 4th moult at concentrations of 0.1 µl/silkworm larvae i.e. 5 ml Seri more dissolved in 2.5 liters potable water and sprayed on to the silkworm.

4. Source of technology : CSTRI, Mysore

5. Production system and thematic area

Sericulture

6. Performance of the Technology with performance indicators

Serimore showed a significant positive response in larval and cocoon characters that 0.1 µl/silkworm larvae administered at 48hrs of 5th instar elicited a favorable response in silkworm in significantly improving the cocoon yield up to 14 %, cocoon shell weight 15 %.It makes the silkworms to build heavier cocoons with higher silk content. It increases the larval duration by one day, makes the silkworms to eat mulberry leaf more vigorously. The results in present assessment clearly pointed out that Serimore with bio active components can enhance the cocoon yield which can be exploited not only to maximize the profits of sericulturists but also to improve the quality.

Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques

1. The uniform spraying is big constrain, need to develop advanced spraying system

7. Final recommendation for micro level situation

9. Constraints identified and feedback for research

1. Need to develop organic miticides to manage mite infestation on mulberry leaves during high temperature and dry weather conditions

10. Process of farmers participation and their reaction

OFT: 6

1. **Title of Technology Assessed:** Assessment of low cost weaning food on infant health (9 to 12 months)
2. **Problem Definition:** Traditional home made infant food deficient in protein, energy, calcium and micronutrients
Unaware about proper feeding practices, hygienic preparation & storage of weaning food
3. **Details of technologies selected for assessment:** A weaning food (Sudhurudh) is prepared from rajkeera, lentin, rice, milk powder & water. which is rich in calcium, protein, energy and carotene
4. **Source of technology:** College of Home Science, VNMKV, Parbhani
5. **Production system and thematic area :** Designing and development of high nutrient efficiency diet
6. **Performance of the Technology with performance indicators:** The performance of feeding of Sudhrudh weaning food shows that by feeding of Sudhrudh weaning food of 25 to 30 gram/day/baby for months helped to gain in weight (1170 gm) which was 33% increased over traditional infant food (780 gm) due to increase in weight frequent infections such as cold, temperature, diarrhea and omitting are decreases untimely resulted in behavioral changes and physical activity.
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring**
Techniques: The mother farmer expressed that there is need to supplement the protein energy rich infant food to the baby for better nutrition of the infants
8. Final recommendation for micro level situation
9. **Feedback for research :**Supplementation of Sudhurudh weaning food increases infant weight by 33% in three months in comparison with traditional infant food. It is
a best supplementary weaning food to breast milk, well accepted by infants, low cost prepared from locally available food items.

- 10 Process of farmers participation and their reaction : Mother farm women responded positively & enthusiastically to low cost weaning food majority of them started preparing weaning food at home only and they are making popular among another families.

OFT:7

- 1 **Title of Technology Assessed:** Use of manual seedling transplanter and sapling carrier for vegetable seedling transplantation
- 2 **Problem Definition:** Time consuming and need maximum labour input
Drudgery prone activity
- 3 **Details of technologies selected for assessment:** T1 : Traditional method of seedling transplanting in bending position
T2: Manual seedling transplanter and sapling carrier for vegetable seedling transplantation
- 4 **Source of technology:** VNMKV, Parbhani
- 5 **Production system and thematic area :** Location specific drudgery reduction technologies
- 6 **Performance of the Technology with performance indicators:** Field performance results of manual seedling transplanter with the comparison to traditional method of transplanting number of seedling transplanted 780/hr by manual seedling transplanter while 480 by traditional method of vegetable seedling transplanting in bending position. The field capacity of manual seedling transplanter with sapling carrier is more than traditional method of seedling transplanting and also seedling survival rate is higher than traditional method. Cost of operation is less than traditional method.
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring**
Techniques: It is cheap and easily available drudgery reducing equipment useful for women worker.

- 8 **Final recommendation for micro level situation:** Use of such type of drudgery reducing equipments are necessary to overcome this problem which is easy to transplant the vegetable seedlings and also labour and time saving.
- 9 **Feedback for research:**
- 10 **Process of farmers participation and their reaction:** Most of the women farmers have small land holding so it is very useful equipment farm women easily adopted this advanced method of vegetable seedling transplanting.

OFT: 8

- 1 **Title of Technology Assessed:** To assess the efficiency of water wheel for collection of water
- 2 **Problem Definition:** Time-consuming activity
Due to heavy loads women facing many health problems like chronic back, neck pain etc
- 3 **Details of technologies selected for assessment:** T1 : Girls & women carrying heavy pot of water on their head
T2 : Rolling of water by water wheel
- 4 **Source of technology:** Nilkamal-Wello, Mumbai
- 5 **Production system and thematic area :** Location specific drudgery reduction technologies
- 6 **Performance of the Technology with performance indicators:** The use of water wheel for collection of water reduces the physical and health burdens on women workers.
It saves approximately 77% time spending on this activity. It is durable and easy to use.
7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring**
Techniques: Farm women experienced that it is easy to use, durable and it reduces health burden due to this activity.
- 8 **Final recommendation for micro level situation:** This technology need to adopt at village level for drudgery reduction of rural women.
- 9 **Feedback for research:**

- 10 **Process of farmers participation and their reaction:** Farm women positively responded to this activity and these women are using water wheel for water transportation. The saved time in this activity are using for another work.

OFT: 9

- | | |
|----|---|
| 1. | Title of Technology Assessed: Assessment on use of soybean roaster for making commercial soya nuts |
| 2 | Problem Definition: Unevenness and uncrispiness in traditional roasting
Unaware about low cost processing equipments |
| 3 | Details of technologies selected for assessment: T1 : Traditional method -Roasting of soybean in pan
T2 : Roasting of soybean in electric soybean roaster |
| 4 | Source of technology: VNMKV, Parbhani |
| 5 | Production system and thematic area: Income generating activity for farm women. |
| 6 | Performance of the Technology with performance indicators: Use of soybean roaster for commercial preparation of soy nuts requires 37.5% less time than the traditional method and also quality of nuts is more acceptable in crispiness and colour. |
| 7. | Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring
Techniques: Farm women are well aware about small scale processing of soya nuts by using electrically operated soybean roaster |
| 8 | Final recommendation for micro level situation: This technology need to adopt at village level as a income generating activity for farm women at soybean producing villages. |
| 9 | Feedback for research: |
| 10 | Process of farmers participation and their reaction: Farm women are eager to start commercial production of soya nuts through SHG members. |

OFT: 10

1. **Title of Technology Assessed** : Assessment of feeding of mineral mixture to crossbred cows

2. **Problem Definition** :

Farmers are rearing crossbred H.F. cows for milk production. Dairy cow require minerals in their diet for optimal milk production, reproduction performance and health. Farmers does not offer mineral supplement to their animals. Animal gets mineral from the feed and fodder offered to them i.e. not sufficient. Hence, the farmers facing problem of low milk yield, late conception, repeat breeding in the crossbred H. F. cow.

3. **Details of technologies selected for assessment:**

T1 – Farmers practice – No mineral mixture feeding

T2 – Technology Assessed- feeding of mineral mixture @50 gms/day/animal

4. **Source of technology** : NDRI,karnal

5. **Production system and thematic area** : Roughage based feeding system, nutritional management

6. **Performance of the Technology with performance indicators:**

In the present assessment, mineral mixture fed cow gives Avg. 11.0 lit. of milk per day with fat % 3.8, incidence of repeat breeding problem 3 % and net return of Rs. 14410 per lactation and in farmers practice (without mineral mixture feeding) cow gives 10.2 lit. Of milk per day with fat % 3.7, incidence of repeat breeding problem 30 % and net return of Rs. 9750. Also found hair coat improvement in the treated group.

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring Techniques:

- I. Milk production of the animal and fat % increased
- II. Animal comes on heat early compared to previous record
- III. Required only one insemination to achieve pregnancy
- IV. Improvement in the hair coat of the animals

8. Final recommendation for micro level situation:

This result indicates that, feeding of mineral mixture to the crossbred cow increased milk yield by 7 % and reduced the repeat breeding problem by 66 % as compared to the farmers practice. Also there is marked improvement in the skin coat and health of the animals

Hence, the present assessment showed that mineral mixture feeding to cows improved the production, reproduction performance of the animals. Hence, may be used as supplementary feeding with regular diet.

9. Constraints identified and feedback for research:-No constraint identified

10. Process of farmers participation and their reaction: Farmers are participated through Group discussion, training demonstration

OFT: 11

1. **Title of Technology Assessed** : Assessment of estrus synchronization by using indigenously developed progesterone sponges in goats
2. **Problem Definition** : Reproduction is the major factor impacting profitability in goat-kid operation. Farmers of Latur district do not follow the heat synchronization programme. Due to that reason goats do not come in heat at the same time. Individual does were mated with buck as per the heat detection. Hence, kids were born at different time. This makes difficult to the farmers to manage the kids of different age group at same time. In the goat farming, the control of estrous and ovulation is a valuable tool to improve and maintain the production throughout the year. It is also necessary that the maximum goat should exhibit estrous at same time. Due to exhibition of estrous at the same time maximum pregnancy and kidding will be achieved. Hence, the management of goats and new born kids will be easy for the farmers. Also the maximum no. of kids will be obtained as per the availability of good quality fodder with the farmers and grown kids will available for sell as per market demand. Therefore, estrous synchronization is extensively applied in the reproductive management of goat. Progesterone or a progestagen analogue is generally used to synchronize estrous in does during the breeding and non-breeding seasons. The most common route of progestagen application in goats is via the intra vaginal sponge. Hence, the present assessment was undertaken to assess the efficacy of indigenously developed progesterone sponges for oestrous synchronization in goats by using CSWRI, Avikanagar protocol, to achieve 100 % synchrony and good conception rate and to make management of goat easy.
3. **Details of technologies selected for assessment:**
 - i. **T₁ – Farmers practice –**
 1. No heat synchronization (Follows natural oestrous)
 - ii. **T₂ – Technology Assessed-**
 1. Oestrous synchronization
(Use of Progesterone indigenous vaginal sponges for 15 days with PMSG inj (200 IU) I/m at the time of sponge removal.

4. **Source of technology:** Central Sheep and Wool research Institute , Avikanagar
5. **Production system and thematic area:** Stall fed goat rearing system, reproduction management
6. **Performance of the Technology with performance indicators:**

In this assessment, out of 50 treated Does, 50 (100%) does shown sign of estrus and 47 (94 %) were conceived and in control group (non- synchronized i.e. natural estrus) out of 50 does, 27 (54%) does shown estrus sign and 24 (88%) were conceived. The sponge retention rate was about 98 %.

7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring Techniques:**

Feedback:

- I. The entire treated goat showed good and clear sign of oestrus within 48 hrs.
- II. Twinning % increased
- III. Due to simultaneous oestrous kidding will also occurs on same time. It became easy to rare kid of same age.
- IV. Technology is easy to adopt and method of sponge insertion is also easy.
- V. This technology made management of goat in stall fed system easy.

8. **Final recommendation for micro level situation:**

This result showed that use of Progesterone indigenous vaginal sponges for 15 days with PMSG inj @ 200 IU I/m at the time of sponge removal for heat synchronization in goat increased the females in estrus by 46 % and fertility by 63 % over the farmers practice i.e. use of natural oestrus.

Hence, to achieve tight synchrony and good conception rate indigenously prepared intra vaginal sponges may be used with PMSG injection at the time of sponge removal in goats.

9. Constraints identified and feedback for research :

- Assessment was followed as per the recommendation of the CSWRI, Avikanagar and achieved 100 % synchronization.
- Sponge causes irritation to the vaginal mucosa causing bleeding, discharge in some cases.
- Plunger supplied with kit is very big in size. Size of the plunger is essential to resize.
- If more goats show estrus, then there is difficulty in arrangement of bucks for does for natural service.

10. Process of farmers participation and their reaction: Farmers are participated through Group discussion and farmers took keen interest in the assessment.

OFT: 12

1. Title of Technology Assessed: Assessment of high yielding new hybrid Napier fodder variety CO-4

2. Problem Definition:

Green fodder is an essential component of the livestock ration; otherwise the productive, growth and reproductive performance of the animals is adversely affected. Therefore, farmers in the district cultivates PhuleYashwant (RBN-9) Napier fodder variety for the round the year fodder production for the animals. This is an old variety having less production potential and having problem of leaf drying and shattering as growth progresses. Oxalic acid content is also high. Leaf of this variety is having hairs which makes difficult for the labour that cuts and transport the fodder at site.

3. Details of technologies selected for assessment:

1. T₁ – Farmers practice –

Planting of PhuleYashwant (RBN-9)

2. T₂ – Technology Assessed-Planting ofCO-4

4. Source of technology: TNAU, Coimbatore

5. Production system and thematic area: Irrigated cereal based system, varietal evaluation

6. Performance of the Technology with performance indicators:

Results of assessment showed that planting of CO-4 fodder variety gives green fodder yield 1450 q/ha in 4 cutting, tillers per clump were 30-40, no. Of leafs per stem were 11-13. While in control PhuleYashwant gives 1140 q/ha green fodder yield in 4 cutting, tillers per clump were 15-25 and no. of leaves per stem were 09-12.

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring Techniques :

- I. High green fodder yield
- II. Broader leaves and succulent stems
- III. More no. of tillers per plant
- IV. Quick regeneration capacity.

8. Final recommendation for micro level situation:

Results showed that planting of CO-4 fodder variety gives 21 % more green fodder yield than the PhuleYashwant fodder crop variety. Hence, may be cultivated for the round the year fodder production in the district.

9. Constraints identified and feedback for research:

- Fast growing with very good yield
- It has more tillers and leaves
- Mature rapidly so, regular cuttings requires
- Require more irrigations than the farmers practice.
- Sometime flowering occur without attaining the height.

10. Process of farmer's participation and their reaction: All the farmers took active part in all the steps of assessment.

D1. Results of Technologies Refined

Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology refined	Parameters of refined t	Data on the parameter	Results of refinement	Feedback from the farmer	Details of refinement done
1	2	3	4	5	6	7	8	9	10	11

Contd..

Technology Refined	Source of Technology for Technology Option1 / Justification for modification of assessed Technology Option 1	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
12	13	14	15	16	17
Technology Option 1 (best performing Technology Option in assessment)					
Technology Option 2 (Modification over Technology Option 1)					
Technology Option 3 (Another Modification over Technology Option 1)					

D.2. Details of each On Farm Trial for refinement to be furnished in the following format separately as per the following details:

1. Title of Technology refined
- 2 Problem Definition
- 3 Details of technologies selected for refinement
- 4 Source of technology
- 5 Production system and thematic area
- 6 Performance of the Technology with performance indicators
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring Techniques
- 8 Final recommendation for micro level situation
- 9 Constraints identified and feedback for research
- 10 Process of farmers participation and their reaction

3.3. FRONTLINE DEMONSTRATION

A. Follow-up for results of FLDs implemented during previous years

List of technologies demonstrated during previous year and popularized during 2017-18 and recommended for large scale adoption in the district

S. No	Crop/ Enterprise	Thematic Area*	Technology demonstrated	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
					No. of villages	No. of farmers	Area in ha
1.	Green gram	VE	Varietal Demonstration	Popular article, SMS, pomplet, Group discussion, training, field day and demonstration	15	45	25
2.	Black gram	VE	Varietal Demonstration	Popular article, SMS, pomplet, Group discussion, training, field day and demonstration	19	55	29
3.	Pigeon pea	VE	Varietal Demonstration	Popular article, SMS, pomplet, Group discussion, training, field day and demonstration	15	75	19
4.	Bengalgram	VE	Varietal Demonstration	Popular article, SMS, pomplet, Group discussion, training, field day and demonstration	12	45	30
5.	Soybean	VE	Varietal Demonstration	Popular article, SMS, pomplet, Group discussion, training, field day and demonstration	12	95	35
6.	Safflower	VE	Varietal Demonstration	Popular article, SMS, pomplet, Group discussion, training, field day and demonstration	19	75	35
7.	Linseed	VE	Varietal Demonstration	Popular article, SMS, pomplet, Group discussion, training, field day and demonstration	25	69	19
8.	Groundnut	INM	INM	Popular article, SMS, pomplet, Group discussion, training, field day and demonstration	18	54	25
9.	Soybean	IPM	Integrated Pest Management in Soybean	Popular article, SMS, pomplet, Group discussion, training, field day and demonstration	52	225	180

10.	Chilli	IPDM	Integrated Pest and Disease Management in Chilli	Popular article, SMS, pomplet, Group discussion, training, field day and demonstration	48	530	105
11.	Sericulture	Sericulture	Phytoecdysteroid – Sampoorna hormone for Synchronized Maturation of Silkworms	Popular article, SMS, pomplet, Group discussion, training, field day and demonstration	35	175	29
12.	Bengal gram	IPM	Integrated Pest Management in Bengal gram	Popular article, SMS, pomplet, Group discussion, training, field day and demonstration	14	250	175
13	Poultry	Poultry management	Improved poultry birds	Large scale demonstration Making availability of birds Use of extension media	23	45	-
14	Fodder	Fodder production	DHN-6	Large scale demonstration and supply of planting material	33	84	16
15	Fodder	Fodder management	Silage making in bags	Large scale demonstration preparation and distribution of folder	08	15	-

B. Details of FLDs implemented during 2017-18 (Information is to be furnished in the following **three tables** for **each category** i.e. **cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops.**)

Sl. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1.	Green gram	VE	Varietal Demonstration	Kharif 2017	10	10	01	14	15	-
2.	Black gram	VE	Varietal Demonstration	Kharif 2017	10	10	02	23	25	-
3.	Pigeon pea	VE	Varietal Demonstration	Kharif 2017	30	30	01	56	57	-
4.	Bengalgram	VE	Varietal Demonstration	Rabi 2018	50	50	02	113	115	-
5.	Soybean	VE	Varietal Demonstration	Kharif 2017	40	40	01	52	53	-
6.	Safflower	VE	Varietal Demonstration	Rabi 2018	20	20	02	45	47	-
7.	Linseed	VE	Varietal Demonstration	Rabi 2018	10	10	01	24	25	-

8.	Groundnut	INM	INM	Rabi 2018	20	20	02	27	29	-
9.	Pigeonpea	IPM	Integrated Pest Management in Pigeonpea	Kharif 2017	08	08	02	23	25	-
10.	Chilli	IPDM	Integrated Pest and Disease Management in Chilli	Kharif 2017	05	05	-	12	12	-
11.	Okra	IPDM	Integrated Pest and Disease Management in Okra	Kharif 2017	08	08	02	23	25	-
12.	Bengal gram	IPM	Integrated Pest Management in Bengal gram	Rabi 2018	08	08	02	23	25	-
13.	Napier Fodder crop	Fodder production	DHN-6	Kharif 2017	0.5	0.5	-	10	10	-

Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P	K					
Green gram	Kharif 2017	Rainfed	Medium	Medium	Low	Medium	Bengal gram	15 June	15 Sep	780	
Black gram	Kharif 2017	Rainfed	Medium	Medium	Low	Medium	Bengal gram	15 June	15 Sep	780	
Pigeon pea	Kharif 2017	Rainfed	Medium	Medium	Low	Medium	Bengal gram	15 June- 15 July	1-10 Jan 2017	780	
Bengalgram	Rabi 2018	Rainfed	Medium	Medium	Low	Medium	Soybean	Oct – 15 Nov	1-10 Feb. 2018	780	
Soybean	Kharif 2017	Rainfed	Medium	Medium	Low	Medium	Bengal gram	15 June	1-10 Oct 2017		
Safflower	2 Rabi 2018	Rainfed	Medium	Medium	Low	Medium	Soybean	Oct – 15 Nov	1-10 Feb. 2018	-	
Linseed	Rabi 2018	Rainfed	Medium	Medium	Low	Medium	Soybean	Oct – 15 Nov	1-10 Feb. 2018	-	

Groundnut	Rabi 2018	Rainfed	Medium	Medium	Low	Medium	Bengal gram	1-10 Feb. 2018	May 2018	-	
Pigeon pea	Kharif 2017	Rainfed	Medium	Medium	Low	Medium	Bengal gram	15 June- 15 July	1-10 Oct 2017	780	-
Chilli	Kharif 2017	Irrigated	Medium	Medium	Low	Medium	Bengal gram	Last wk of july to first wk of aug	1-Nov. 2017 – 30 Dec 17	780	-
Okra	Kharif 2017	Irrigated	Medium	Medium	Low	Medium	Bengal gram	Last wk of july to first wk of aug	1-Nov. 2017 – 30 Dec 17	780	-
Bengal gram	Rabi 2018	Rainfed	Medium	Medium	Low	Medium	Soybean	Oct – 15 Nov	1-10 Feb. 2018	-	-
Fodder crop	Kharif	Irrigated	Medium	Medium	Low	High	Bengal gram	10-15 Dec.	Perennial fodder crop	-	-

Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	IPM technology in soybean is effective but there is no significant management of girdle beetle and stem fly pod fly and wilt
2	In chili the nutrient management through organic manures and good irrigation management gives reduction in leaf curl disease complex The thrips and mite population is gives reduction after use of micro sprinkler
3	In Okra the nutrient management through organic manures and good irrigation management gives reduction in powdery mildew and yellow vein mosaic
4	IPDM technology in bengal gram is effective but wilting disease problem is not effectively managed
5	Planting of DHN-6 fodder crop yielded 17 % more fodder yield as compared to PhuleYashwant Flowering at maturity

Farmers' reactions on specific technologies

S. No	Feed Back
1	Pigeonpea- variety-BDN-711 is registrant to wilt & sterility mosaic Seeds of BDN-711 are bolder in size and synchronized maturity is obtain
2	Need to develop wilt and sterility resistant variety
3	IPM is effective against pest complex of chili and reduces cost on plant protection. In most of the chilli crop getting infested with thrips and mites during October heat this is root cause of leaf curl virus
4	The powdery mildew infection mostly at higher level during frost conditions
5	Need to develop wilt disease resistant variety in Bengal gram
6	Variety DHN-6 leaf blade and surface of leaf is without hairs. So, it is easy to cut and handle Stem is more juicy and soft as compared to other fodder varieties and all the animals like the taste of this fodder Fast re growth

Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organized	Date	Number of participants	Remarks
1	Field days				Production technology of oilseed and pulses crop
	1.Groundnut (TAG-24) at village Ankoli	1	22.5.17	33	
	2.Green gram (Utkarsh) at village Akarwai	1	18.8.17	40	
	3.Black gram (AKU-15) at village Dawatpur	1	19.8.17	45	
	4.Soybean (MAUS-162) under CFLD at village Chincholirao	1	18.9.17	30	
	5.Soybean (MAUS-162) under FLD at village Ramegaon	1	12.10.17	24	
	6.Pigeonpea (BDN-711) at village Akarwai	1	9.12.17	27	
	7.Linseed (LSL-93) at village Yakatpur	1	8.1.18	18	
	8.Bengal gram (Akash) at village Bhada	1	3.2.18	37	
	9.Safflower (SSF-748) at village Ramwadi	1	3.3.18	31	
	Total	9		285	
2	Farmers Training	5	-	106	Production technology of oilseed and pulses crop
3	Media coverage	7	-	-	
4	Training for extension functionaries	-	-	-	-

C. Performance of Frontline demonstrations

Frontline demonstrations on oilseed crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Groundnut	INM	Integrated nutrient Management	TAG-24	29	20	23.12	11.25	14.56	11.50	21	34500	65520	31020	1.8:1	34500	51750	17250	1.5:1
Sesamum																		
Mustard																		
Toria																		
Linseed	VE	Varietal demonstration	LSL-93	25	10	5.25	3.50	4.50	3.60	20	14850	24750	9900	1.6:1	14850	19800	4950	1.3:1
Safflower	VE	Varietal demonstration	SSF-748	47	20	11.87	7.25	8.77	7.25	17	17200	26310	9110	1.5:1	17200	21750	4550	1.2:1
Soybean	VE	Varietal demonstration	MAUS-162	53	40	30	21.25	26.26	22.52	14	31925	91910	59985	1.8:1	31925	78820	46895	1.6:1

Frontline demonstration on pulse crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Pigeonpea	VE	Varietal demonstration	BDN-711	57	30	12.25	7.3	9.5	8.10	14.7	24825	39900	15075	1.6:1	22950	34050	11070	1.4:1
	IPM	Integrated Pest Management in Pigeonpea	BSMR-853	25	8	13.5	7.5	10.5	8.5	23.52	23550	36750	14350	1.65	22400	22500	6200	1.26
Blackgram	VE	Varietal demonstration	AKU-15	25	10	9.35	5	6.9	5.70	17	15275	22080	6805	1.4:1	13500	18240	4740	1.3:1
Greengram	VE	Varietal demonstration	Utkarsha	15	10	7.25	3	4.4	3.5	20	15275	20680	5405	1.3:1	13600	16450	2856	1.2:1
Chickpea	VE	Varietal demonstration	Akash	115	50	13.75	8.75	10.57	8.75	17	23000	36995	13995	1.6:1	23000	20625	7625	1.3:1
	IPM	Integrated Pest Management in Bengal gram	JACKY-9218	25	8	13.9	9.6	12.21	10.15	20.29	25,300	42735	17,435	1.69	24200	35,525	11,325	1.47
Fieldpea																		
Lentil																		
Horsegram																		

FLD on Other crops

Category & Crop	Thematic Area	Name of the technology	No. of Farmers	Area (ha)	Yield (q/ha)			Check	% Change in Yield	Other Parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					High	Low	Average			Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Cereals																			
Paddy																			
Waterlogged Situation																			
Coarse Rice																			
Scented Rice																			
Wheat																			
Wheat Timely sown																			
Wheat Late Sown																			
Mandua																			
Barley																			
Maize																			

Amaranth																		
Millets																		
Jowar																		
Bajra																		
Barnyard millet																		
Finger millet																		
Vegetables																		
Bottlegourd																		
Bittergourd																		
Cowpea																		
Spongegourd																		
d																		
Petha																		
Tomato																		
Frenchbean																		

Capsicum																			
Chilli																			
	IPM	Integrated Pest and disease Management in Chilli	12	5	510.2	350.1	430.1	360.3	19.38	No. of thrips /leaf - 2.9 Leaf curl affected plant % - 14.50 No. of sprays- 07 Cost on plant protection/h a-17500 Yield Qtls/ha – 430.10	No. of thrips /leaf – 4.8 Leaf curl affected plant % - 25.10 No. of sprays- 12 Cost on plant protection/h a-24500 Yield Qtls/ha – 360.30	46500	210993	164493	4.54	49500	176552	127052	3.57
Brinjal																			
Vegetable pea																			
Softgourd																			
Okra																			
	IPM	Integrated Pest and Disease Management in Okra	25	10	750	470.2	610.1	520.3	17.25	No. of whiteflies /leaf – 4.5 YMV affected plant % -6.9 No. of sprays- 08 Cost on plant protection/ha- 16300 Yield Qtls/ha – 610.10	No. of whiteflies /leaf -7.6 YMV affected plant % - 13.50 No. of sprays- 14 Cost on plant protection/ha- 17900 Yield Qtls/ha – 520.30	135500	610020	474520	4.5	130100	520380	390280	4
Colocasia (Arvi)																			

Broccoli																	
Cucumber																	
Onion																	
Coriender																	
Lettuce																	
Cabbage																	
Cauliflower																	
Elephant fruit																	
Flower crops																	
Marigold																	
Bela																	
Tuberose																	
Gladiolus																	
Fruit crops																	
Mango																	

Strawberry																		
Guava																		
Banana																		
Papaya																		
Muskmelon																		
Watermelon																		
Spices & condiments																		
Ginger																		
Garlic																		
Turmeric																		
Commercial Crops																		
Sugarcane																		
Potato																		
Medicinal & aromatic plants																		
Mentholment																		

Kalmegh																			
Ashwagandha																			
Fodder Crops																			
Naiper fodder crops																			
	Fodder production	Demonstration of DHN-6 fodder variety	10	0.5	1300	1100	1200	1000	17.0			68000	130000	62000	1.91	68000	100000	32000	1.47
Cowpea (F)																			
Maize (F)																			
Lucern																			
Berseem																			
Oat (F)																			

FLD on Livestock

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units (Animal/ Poultry/ Birds, etc)	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.)				Economics of check (Rs.)			
					Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Cattle																	
Buffalo																	

Buffalo Calf																	
Dairy	Fodder management	Silage making in bags and feeding to cows during lean period	10	10	12.50 Milk production lit/day	11.25 Milk production lit/day	10.00	3.9 fat %	3.7 fat %	70000	87000	17000	1.24	68000	78000	10000	1.14
Poultry	Poultry management	Improved poultry birds- Vanaraja	10	200	125 (Egg production/bird)	50 (Egg Production/bird)	60.00	165 first egg laid, day	210 first egg laid, day	8400	19700	11300	2.34	4400	7700	3300	1.75
					2.3 (Avg. body weight in kg at maturity /bird)	1.2 (Avg. body weight in kg /bird)	48.00	53 Gms. Avg. egg weight	35 Gms. Avg. egg weight								
Sheep & Goat																	
Vaccination																	

FLD on Fisheries

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.)				Economics of check (Rs.)			
					Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Common Carps																	
Composite fish culture																	
Feed Management																	

FLD on Other enterprises

Category	Name of the technology demonstrated	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.) or Rs./unit				Economics of check (Rs.) or Rs./unit			
				Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Oyster Mushroom																
Button Mushroom																
Apiculture																
Maize Sheller																

Value Addition																
Vermi Compost																

FLD on Women Empowerment

Category	Name of technology	No. of demonstrations	Name of observations	Demonstration		Check	
Drudgery reduction activity	Use of soybean harvesting mittens for soybean harvesting	10	Cutting of soybean plants with sickle Work done(area)/hr /woman	0.73 R		0.62 R	
			Collecting and bunding of soybean plants Min/25kg	5		7	
			Body discomfort when harvesting soybean	35%		90%	
Drudgery reduction activity	Use of revolving stand and stool for milking activity	10	Time taken for milking Minute/5 ltr milk	8		11	
			Complaints about body pain Pain in knee, low back and ankles	50%		80%	
Post harvest management	Use of zero energy cool chamber to maintain quality and extend post harvest life of vegetables	5	Storage life	Days	Weight loss (%)	Days	Weight loss (%)
			Okra (March)	3	5.0	1	10.0
			Spinach (March)	2	14.0	1	40.0
			Tomato (April)	10	4.3	4	18

FLD on Farm Implements and Machinery

Name of the implement	Crop	Technology demonstrated	No. of Farmer	Area (ha)	Major parameters	Filed observation (output/man hour)		% change in major parameter	Labor reduction (man days)				Cost reduction (Rs./ha or Rs./Unit etc.)			
						Demo	Check		Land preparation	Sowing	Weeding	Total	Land preparation	Labour	Irrigation	Total
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FLD on Other Enterprise: Kitchen Gardening

Category and Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units	Yield (Kg)		% change in yield	Other parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demonstration	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FLD on Demonstration details on crop hybrids

Crop	technology demonstrated	Hybrid Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)			
					Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)
					High	Low	Average						
Oilseed crop													
Pulse crop													
Cereal crop													
Vegetable crop													
Fruit crop													
Other (specify)													

FLD Photos



CFLD on linseed variety LSL-93



CFLD on Bengalgram variety Akash



CFLD on Safflower variety SSF-748



CFLD on Blackgram variety AKU-15



CFLD on pigeonpea variety BDN-711



CFLD on Soybean variety MAUS-162



CFLD on Greengram variety –Utkarsh



CFLD input distribution



CFLD on Groundnut



FLD on Integrated Pest and Disease Management in Okra



FLD on Integrated Pest and Disease Management in Chilli



FLD on Soybean harvesting mittens



FLD on use of revolving stand & stool at the time of milking



FLD on Use of zero energy cool chamber to maintain quality and extend post harvest life of vegetables



Demonstration of improved fodder DHN-6





Demonstration of improved Poultry bird Vanaraja



FLD on Silage making in bags

3.4. Training Programmes

Farmers' Training including sponsored training programmes (on campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems	1	0	15	15	0	15	15	0	30	30
Crop Diversification										
Integrated Farming	1	99	-	99	9	-	9	108	-	108
Micro Irrigation/irrigation										
Seed production	1	25	0	25	2	0	2	27	0	27
Nursery management										
Integrated Crop Management	5	318	-	318	43	-	43	361	-	361
Soil & water conservatioin										
Integrated nutrient management	1	16	0	16	2	0	2	18	0	18
Production of organic inputs	1	41	-	41	5	-	5	46	-	46
Others (pl specify)										
Total	10	499	15	514	61	15	76	560	30	590
II Horticulture										
a) Vegetable Crops										
Production of low value and high value crops										
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl specify)										
Total (a)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl specify)										
Total (b)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl specify)										
Total (c)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (d)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (e)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (f)										

g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl specify)										
Total (g)										
GT (a-g)										
III Soil Health and Fertility Management										
Soil fertility management										
Integrated water management										
Integrated Nutrient Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing										
Others (pl specify)										
Total										
IV Livestock Production and Management										
Dairy Management	01	93	-	93	3	-	3	96	-	96
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Disease Management										
Feed & fodder technology	01	14	-	14	01	-	01	15	-	15
Production of quality animal products										
Others (pl specify)										
Total	2	107		107	4		4	111		111
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	1	-	48	48	-	3	3	-	51	51
Women empowerment										
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care										
Others (pl specify)										
Total	1	-	48	48	-	3	3	-	51	51
VI Agril. Engineering										
Farm Machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl specify)										
Total										
VII Plant Protection										
Integrated Pest Management	6	148	10	158	16	2	18	164	12	176
Integrated Disease Management	01	30	04	34	03	0	03	33	04	37
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides	3	69	8	77	13	0	13	82	8	90
Others (pl specify) Sericulture and insecticide	3	96	9	101	22	0	22	118	9	127

and seedact										
Total	13	343	31	370	54	2	56	397	33	430
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl specify)										
Total										
IX Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom Production										
Apiculture										
Others (pl specify) Sericulture										
Total										
X CapacityBuilding and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others (pl specify)										
Total										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	26	949	94	1039	119	20	139	1068	114	1182

Farmers' Training including sponsored training programmes (off campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management	1	19	0	19	0	0	0	19	0	19
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/irrigation										
Seed production										
Nursery management										

Integrated Crop Management	4	232	50	282	73	-	73	305	50	355
Soil & water conservation										
Integrated nutrient management										
Production of organic inputs	1	-	19	19	-	-	-	-	19	19
Others (pl specify)										
Total	6	251	69	320	73	0	73	324	69	393
II Horticulture										
a) Vegetable Crops										
Production of low value and high volume crops										
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl specify)										
Total (a)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl specify)										
Total (b)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl specify)										
Total (c)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (d)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (e)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (f)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl specify)										
Total (g)										
GT (a-g)										
III Soil Health and Fertility Management										
Soil fertility management										
Integrated water management										
Integrated Nutrient Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing										

Others (pl specify)										
Total										
IV Livestock Production and Management										
Dairy Management	1	-	34	34	-	20	20	-	54	54
Poultry Management	01	24	-	24	3	-	3	27	-	27
Piggery Management										
Rabbit Management										
Animal Nutrition Management	02	29	3	32	1	-	1	30	3	33
Disease Management										
Feed & fodder technology										
Production of quality animal products										
Others (pl specify)										
Total	4	53	37	90	4	20	24	57	57	114
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	1	-	32	32	-	-	-	-	32	32
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet	1	-	17	17	-	6	6	-	23	23
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	4	-	117	117	-	26	26	-	143	143
Women empowerment										
Location specific drudgery reduction technologies	2	-	45	45	-	-	-	-	45	45
Rural Crafts										
Women and child care										
Others (pl specify)										
Total	8		211	211		32	32		243	243
VI Agril. Engineering										
Farm Machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl specify)										
Total										
VII Plant Protection										
Integrated Pest Management	4	88	18	106	18	1	19	106	19	125
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (pl specify)										
Total	4	88	18	106	18	1	19	106	19	125
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl specify)										
Total										

IX Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom Production										
Apiculture										
Others (pl specify)										
Total										
X Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others (pl specify)										
Total										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	22	392	335	727	95	53	148	487	388	875

Farmers' Training including sponsored training programmes – CONSOLIDATED (On + Off campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management	1	19	0	19	0	0	0	19	0	19
Resource Conservation Technologies										
Cropping Systems	1	0	15	15	0	15	15	0	30	30
Crop Diversification										
Integrated Farming	1	99	-	99	9	-	9	108	-	108
Micro Irrigation/irrigation										
Seed production	1	25	0	25	2	0	2	27	0	27
Nursery management										
Integrated Crop Management	9	550	50	600	116	-	116	666	50	716
Soil & water conservation										
Integrated nutrient management	1	16	0	16	2	0	2	18	0	18
Production of organic inputs	2	41	19	60	5	-	5	46	19	65
Others (pl specify)										
Total	16	750	84	834	134	15	149	884	99	983
II Horticulture										
a) Vegetable Crops										
Production of low value and high volume crops										
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										

Others (pl specify)										
Total (a)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl specify)										
Total (b)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl specify)										
Total (c)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (d)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (e)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (f)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl specify)										
Total (g)										
GT (a-g)										
III Soil Health and Fertility Management										
Soil fertility management										
Integrated water management										
Integrated Nutrient Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing										
Others (pl specify)										
Total										
IV Livestock Production and Management										
Dairy Management	2	93	34	127	3	20	23	96	54	150
Poultry Management	1	24	-	24	3	-	3	27	-	27
Piggery Management										
Rabbit Management										
Animal Nutrition Management	2	29	3	32	1	-	1	30	3	33
Disease Management										
Feed & fodder technology	1	14	-	14	1	-	1	15	0	15
Production of quality animal products										
Others (pl specify)										
Total	6	160	37	197	8	20	28	168	57	225
V Home Science/Women empowerment										
Household food security by kitchen gardening	1	-	32	32	-	-	-	-	32	32

and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet	1	-	17	17	-	6	6	-	23	23
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	5	0	165	165		29	29	0	194	194
Women empowerment										
Location specific drudgery reduction technologies	2	-	45	45	-	-	-	-	45	45
Rural Crafts										
Women and child care										
Others (pl specify)										
Total	9	0	259	259		35	35	0	294	294
VI Agril. Engineering										
Farm Machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl specify)										
Total										
VII Plant Protection										
Integrated Pest Management	10	236	28	264	34	3	37	270	31	301
Integrated Disease Management	1	30	4	34	3	0	3	33	4	37
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides	3	69	8	77	13	0	13	82	8	90
Others (pl specify) Sericulture	3	96	9	101	22	0	22	118	9	127
Total	17	431	49	476	72	3	75	503	52	555
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl specify)										
Total										
IX Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom Production										
Apiculture										

Others (pl specify)										
Total										
X CapacityBuilding and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others (pl specify)										
Total										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	48	1341	429	1766	214	73	287	1555	502	2057

Training for Rural Youths including sponsored training programmes (On campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	1	13	-	13	4	-	4	17	-	17
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production										
Bee-keeping										
Sericulture	01	12	00	12	02	00	02	14	00	14
Repair and maintenance of farm machinery and implements										
Value addition	1	24	1	25	3	-	3	27	1	28
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing	02	55	-	55	5	-	5	60	-	60
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
TOTAL	5	104	1	105	14	-	14	118	01	119

Training for Rural Youths including sponsored training programmes (Off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
TOTAL										

Training for Rural Youths including sponsored training programmes – CONSOLIDATED (On + Off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	1	13	-	13	4	-	4	17	-	17
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										

Vermi-culture										
Mushroom Production										
Bee-keeping										
Sericulture	01	12	00	12	02	00	02	14	00	14
Repair and maintenance of farm machinery and implements										
Value addition	1	24	1	25	3	-	3	27	1	28
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing	02	55	-	55	5	-	5	60	-	60
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
TOTAL	5	104	1	105	14	-	14	118	01	119

Training programmes for Extension Personnel including sponsored training (on campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	1	35	-	35	4	-	4	39	-	39
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
TOTAL	1	35	-	35	4	-	4	39	-	39

Training programmes for Extension Personnel including sponsored training (off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										

Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs	1	-	17	17	-	3	3	-	20	20
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
TOTAL	1	-	17	17	-	3	3	-	20	20

Training programmes for Extension Personnel including sponsored training – CONSOLIDATED (On + Off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	1	35	-	35	4	-	4	39	-	39
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs	1	-	17	17	-	3	3	-	20	20
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
TOTAL	2	35	17	52	4	3	7	39	20	59

Sponsored training programmes

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop production and management										
Increasing production and productivity of crops	8	523	50	573	116	-	116	639	50	689
Commercial production of vegetables										
Production and value addition										
Fruit Plants										
Ornamental plants										
Spices crops										
Soil health and fertility management										
Production of Inputs at site										
Methods of protective cultivation										
Others (pl. specify)										
Total										
Post harvest technology and value addition										
Processing and value addition	1	-	48	48	-	3	3	-	51	51
Others (pl. specify)										

Total										
Farm machinery										
Farm machinery, tools and implements										
Others (pl. specify)										
Total										
Livestock and fisheries										
Livestock production and management										
Animal Nutrition Management										
Animal Disease Management										
Fisheries Nutrition										
Fisheries Management										
Others (pl. specify)										
Total										
Home Science										
Household nutritional security										
Economic empowerment of women										
Drudgery reduction of women										
Others (pl. specify)										
Total										
Agricultural Extension										
CapacityBuilding and Group Dynamics										
Others (ACABC course)	1	24	1	25	3	-	3	27	1	28
Total										
GRAND TOTAL	10	547	99	646	119	3	122	666	102	768

Details of vocational training programmes carried out by KVKs for rural youth

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop production and management										
Commercial floriculture										
Commercial fruit production										
Commercial vegetable production										
Integrated crop management										
Organic farming										
Others (pl. specify)										
Total										
Post harvest technology and value addition										
Value addition										
Others (pl. specify)										
Total										
Livestock and fisheries										
Dairy farming										
Composite fish culture										
Sheep and goat rearing	01	40	-	40	02	-	02	42	-	42
Piggery										
Poultry farming										
Others (pl. specify)										
Total										
Income generation activities										
Vermicomposting										
Production of bio-agents, bio-pesticides, bio-fertilizers etc.										
Repair and maintenance of farm machinery and implements										
Rural Crafts										
Seed production										
Sericulture										
Mushroom cultivation										
Nursery, grafting etc.										
Tailoring, stitching, embroidery, dyeing etc.										
Agril. para-workers, para-vet training										
Others (pl. specify)										
Total										
Agricultural Extension										
Capacity building and group										

dynamics										
Others (pl. specify)										
Total										
Grand Total	01	40	-	40	02	-	02	42	-	42

Photographs of Training Programmes



Training for practicing farmers



Training for extension personals

Training for practicing farmers



Training for unemployed rural youths

Training for input dealers



Training for female practicing farmers

3.5. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	12	1142	-	1142
Diagnostic visits	25	91	15	106
Field Day	9	265	20	285
Group discussions	20	311	14	325
KisanGhoshthi	-	-	-	-
Film Show	8	135	11	146
Self -help groups	5	76	-	76
KisanMela	2	412	100	512
Exhibition	3	1756	-	1756
Scientists' visit to farmers field	76	283	31	314
Plant/animal health camps	-	-	-	-
Farm Science Club	-	-	-	-
Ex-trainees Sammelan	-	-	-	-
Farmers' seminar/workshop	5	1278	95	1373
Method Demonstrations	5	187	22	209
Celebration of important days	1	259	11	270
Special day celebration	2	352	28	380
Exposure visits	5	82	14	96
Others				
Swachta Pakwada	2	44	2	46
Lecture delivered as a resource person	25	1304	65	1369
Total	205	7977	428	8405

Details of other extension programmes

Particulars	Number
Electronic Media (CD./DVD)	-
Extension Literature	-
Newspaper coverage	21
Popular articles	-
Radio Talks	-
TV Talks	1
Animal health camps (Number of animals treated)	-
Others (pl. specify)	-
Total	22

Photographs of Extension Programmes



Field day on soybean MAUS-162



Field visit to CFLD plot Groundnut



Diagnostic Visit



Group discussion on importance of soil analysis



Method demonstration on use of safety kit



Method demonstration on soil sample collection



Exposure visit (Interstate) at IIHR, Bangalore



Exposure visit to Mini Dal mill unit

Photographs of celebration of Specific Days



Celebration of World Soil Day



Webcasting of PM's speech during programme on water management in scarcity period



Celebrations of International Womens Day



Celebration of Kisan Mahila Divas

Celebration of National Nutritional Week

3.6.PRODUCTION OF SEED/PLANTING MATERIAL AND BIO-PRODUCTS

Production of seeds by the KVKs

Crop	Name of the crop	Name of the variety	Name of the hybrid	Quantity of seed (q)	Value (Rs)	Number of farmers
Cereals						
Oilseeds	Soybean	MAUS-162,KDS-344, MACS-1188, DSB-21	-	9.9	72600	3
Pulses						
Commercial crops						
Vegetables						
Flower crops						
Spices						
Fodder crop seeds						
Fiber crops						
Forest Species						
Others						
	Sugarcane	Co-86032, MS-10001, Co-VSI-8005		236890	592225	71
Total					664825	74

Production of planting materials by the KVK

Crop	Name of the crop	Name of the variety	Name of the hybrid	Number	Value (Rs.)	Number of farmers
Commercial						
Vegetable seedlings						

Fruits	Pomegranate	Bhagwa	-	824	24720	9
Ornamental plants						
Medicinal and Aromatic						
Plantation						
Spices						
Tuber						
Fodder crop saplings						
	Fodder crop	DHN-6	Bajra Napier Hybrid	14325	14325	28
	Fodder crop	CO-4	Bajra Napier Hybrid	11325	11325	22
	Fodder crop	CO (BN)-5	Bajra Napier Hybrid	1000	1000	10
	Azolla	Pinnata	-	28.5 kg	2850	23
Forest Species						
Others						
Total				27502.5	54220	92

Photographs of instructional farm of KVK



KVK farm mango variety - Keshar



KVK farm Pomegranate variety –Bhagwa



Nursery Pomegranate seedlings



Nursery Sugarcane seedling



Hybrid Napier DHN-6



Soybean MAUS-158



KVK farm Guava variety L-49



Bengalgram intercrop in mango



KVK farm Watermelon variety - Sugar queen



KVK farm Sugarcane plantation- variety CO-86032



Nursery Pomegranate seedlings



KVK farm Fodder Cafeteria



KVK farm Jasmine variety- Singal Mogra



Nursery Mango Variety –Kehsar

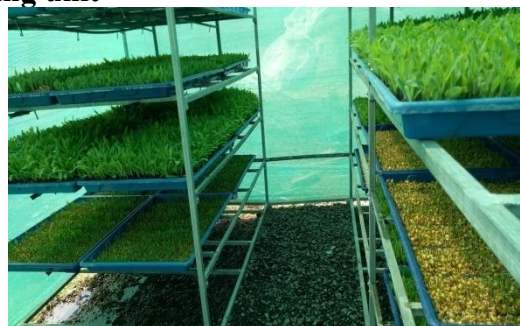
Demonstration units at KVK, Latur



Goat Rearing Unit



Poultry rearing unit



Hydroponics fodder production unit



Azolla production Unit



Biofertilizer production Lab



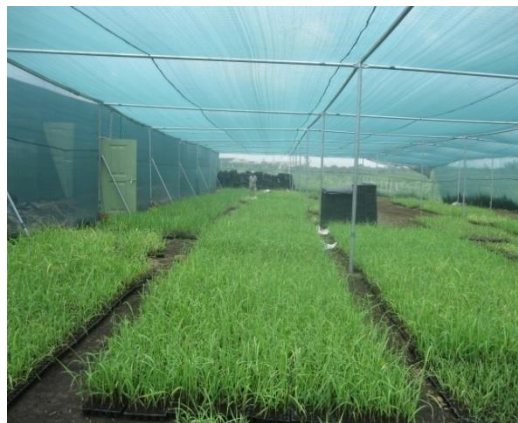
Shade net Unit



Capsicum plantation in shadenet



Soil testing lab



Sugarcane seedling in shadenet

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity	Value (Rs.)	No. of Farmers
		Kg		
Bio Fertilizers	Rhizobium	435	130500	210
	PSB	530	159000	278
	Acetobactor	151	45300	79
Bio-pesticide	Trichoderma	353	44125	177
Bio-fungicide				
Bio Agents				
Others				
Total		1469	378925	744

Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
Poultry				
Broilers				
Layers				
Duals (broiler and layer)	Vanaraja	1334	106720	25
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl. specify)				
Fisheries				
Indian carp				
Exotic carp				
Goat				
Goat kids	Osmanabadi	17	-	-
Total				

4. Literature Developed/Published (with full title, author & reference)

A. KVK News Letter ((Date of start, Periodicity, number of copies distributed etc.)

B. Literature developed/published

Item	Title	Authors name	Number
Research papers			
Technical reports	Annual Progress Report	KVK ,Latur	03
	Monthly Progress Report	KVK ,Latur	12
	Quarterly Report	KVK, Latur	04
	ATMA Reports	KVK, Latur	04
	Agri. Technology Park Report	KVK, Latur	01
News letters			
Technical bulletins			
Popular articles			
Extension literature			,
Others (Pl. specify)			
TOTAL			24

C. Details of Electronic Media Produced

S. No.	Type of media (CD / VCD / DVD/ Audio-Cassette)	Title of the programme	Number
	-	-	-

D. Success Stories / Case studies, if any (two or three pages write-up on each case with suitable action photographs. The Success Stories / Case Studies need not be restricted to the reporting period).

Title : Adoption of climate smart Agriculture through organic production

Background :

Mrs. Maruti Mangal Waghmare is a marginal farm women from village Bhoisamudraga Tq. Dist Latur. She has 1.5 acre land for cultivation. She is a house wife and always worried about families income and requirement. One day She known about Swayam Shikshan Prayog NGO and joined this NGO by making women SHG in her village.

Interventions

Process & Technology:

Mrs. Mangal attended various programmes organized by Krishi Vigyan Kendra, Latur through Swayam Shikshan Prayog.: Mrs Mangal attended training programme on establishment of nutritional gardens for household food security & processing of fruits & vegetables. From this day she known about importance of nutrition in life and also production of organic vegetables. She developed nutritional garden and small vegetable processing unit under the supervision of KVK scientist.

Apart from nutritional garden she produced field crops i.e. soybean, bengalgram, sorghum, maize, linseed and napier fodder in her 1.0 acre land. In 0.5 acre nutritional garden she produced ladies finger, cabbage, brinjal, chilli, carrot, spinach, Fenugree, coriander, onion, raddish, bittergourd etc. She also take technical knowledge of small farm equipments under FLD and OFT programme and adopted at her own field. She develop vermiculture and vermicompost production unit. She prepares Jeevaamrut, dashpariark she has zero energy cool chamber for storage of vegetables before selling. She is rearing buffalo for milk production.

Impact

Horizontal Spread : After completion of training that Mangal decided to start nutritional garden at her own for the first time mean while in the group meeting of SHG's she always shared her experiences about organic vegetable/crop production, its profitability and its importance of family health and economic gain from this activity .Therefore other group members from villages and nearby villages are well acquainted and started organic production at her own village and nearby villages. Now she act as a Master Trainer for KVK Latur for organic vegetable/ crop production. She shared her knowledge to visitors came at her field from own and nearby districts. Her success stories were published in daily news papers and TV channels so other farm women were motivated and started same activity on their own field.

Economic gains:

Mrs. Mangal Waghmare has earned approximately Rs. net income 25000/- from selling of field crops at APMC market Latur. Organically produced vegetables sale at fixed consumers from Govt and industrial sector employees purchase from on farm and at their door and earned net income from vegetable selling Rs. 63800/-. She got net income Rs. 41300/- from one lactation of buffalo (Desi/Marathwadi breed) . The produced vermicompost is applied her own field and vermiculture of Rs. 15000 p.a. was sold. She makes chili pickle, linseed chutney from produced at her own field and sold about Rs. 5000/- p.a. She has one farm machinery i.e. thresher it works on rent and earned nearly Rs.70000/- P.a. Mrs Mangal spent money only on purchasing of seeds and other labour work and marketing of vegetables done by both mangal and her husband. All pesticides and fertilizers are prepared at farm from the material available in the field. Mrs. Mangal Waghmare is awarded as a progressive farm women at State level Agri exhibition – Maha Agro on dated 5th January 2018 and state level Sakhi Ratan award by NGO

Mrs. Mangal made a model for the villages who look up to her for cost effective farming method and also she does not use any chemical fertilizer and has gone organic to enhance soil health.

Employment Generation:

Mrs Mangal spent money only on purchasing of seeds and other labour work and marketing of vegetables done by both mangal and her husband. All pesticides and fertilizers are prepared at farm from the material available in the field.



Organically grown vegetables in nutritional garden



Expertise on organic farming through own experience



Use of improved farm equipments for drudgery reduction



Participated in fruits and vegetable training programme



Awarded by state level farmer award



Sharing of knowledge through exposure visits at her own field



Improved poultry birds increased profitability of backyard poultry farming

Background

Poultry rearing in backyard, is an age old practice adopted by resource poor farmers. It involves rearing of improved/desi chickens under free range, semi intensive or intensive conditions. Backyard poultry is a means of livelihood for a fairly large number of small and marginal farmers and requires less capital as it does not requires any big infrastructure. It is a potential tool for up-liftment of the marginal and deprived section of the society. Backyard poultry provides cheap, readily available protein rich eggs and meat for domestic consumption and sale of surplus for additional income. It also provides income and employment opportunities, particularly for rural people, women and unemployed rural youths.

The farmers of Latur district keeps local desi chickens in backyard system along with livestock of different species as a supplementary source of income. However the egg and meat production potential of these desi chickens is very low (annual 60-70 eggs). Also these birds are most susceptible to diseases.

Technology, implementation

Introduction of improved chicken varieties especially Grampriya, vanarajaetc. greatly helps in increasing the availability of poultry meat and eggs in rural areas. These improved chickens are dual purpose birds especially developed for rural/backyard/free range poultry farming by Directorate of Poultry Research, Hyderabad. The performance of these birds is very good as compared to desi chickens.

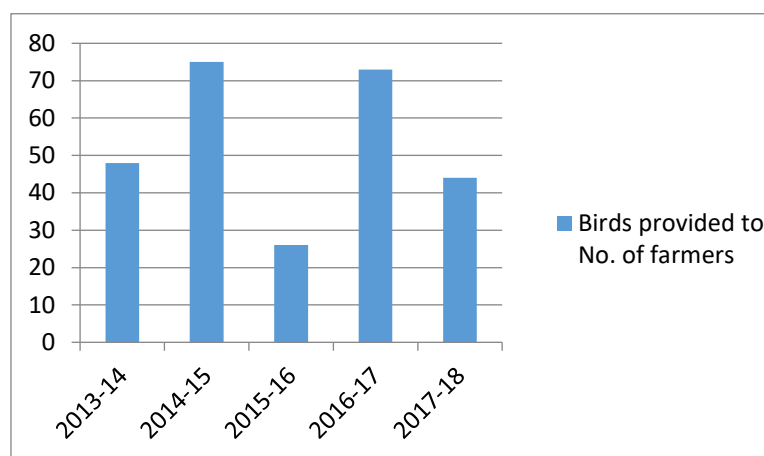
To overcome the problems in backyard poultry farming with deshi birds and to provide employment opportunities to the rural people KVK, Latur assessed and demonstrated improved poultry birds Grampriya and Vanaraja in the district.

Characteristics of improved birds

- Attractive multicolored plumage
- High general immune competence
- Low cost of production
- Perform on low plane of nutrition
- Grow faster and produce more eggs than desichikens
- Produce brown eggs like desi hens

Selected farmers were trained for grow these birds. After training, one month old birds were supplied to the farmers. Performance of these birds was monitored on regular visits and technological backstopping is provided to these farmers by KVK.

Breed	Improved Poultry Birds (Vanaraja and Grampriya)
Programme	
OFT conducted (farmers)	40
FLD conducted (farmers)	36
Trainings provided to No. of farmers	220
No. of birds provided	23823
Provided to no. of farmers	266



Year wise one month's birds supplied to the farmers through KVK

Uptake and benefits

Farmers kept these birds in a house made from local material at low cost. During day time the birds were made loose in the open field for feeding. This bird utilizes the natural feed resources like fallen grains, insects, earthworms, green grass, kitchen waste etc. and grains were offered during morning and evening time. Plenty of clean and fresh water was made available at farm site. KVK maintained regular contact with them and suitable suggestions and recommendations were given to solve location specific problems. At maturity (4-5 months) farmers sold extra male birds for meat purpose and the hens are kept for egg purpose. Egg laying started after 155 to 165 days rearing period. After egg laying period (72 wks) the hens also sold for meat purpose.

The performance of Grampriya and Vanaraja poultry birds along with other component compare with local birds is shown in table. The egg production of demonstrated improved poultry birds (Grampriya and Vanaraja) 157 eggs/hen compared to 60 eggs/hen in the local check (deshi birds). This resulted in net return with selling eggs and birds for chicken of Rs. 13750 per 20 birds unit of improved poultry birds (

Grampriya and Vanaraja) which was Rs. 8250 more than local check (Rs.5500/20 birds unit). On an average egg production of improved poultry birds was 62 percent higher over the local check.

Table. Performance of improved birds VsDesi birds

Parameters	Improved poultry birds (Vanaraja/Grampriya)	Local birds(Deshi birds)
Egg production/hen/annum, (No.)	157	60
Body weight at maturity, (kg)	3.0 kg/bird	1.35/birds
Avg. Egg weight(gms)	55	35
Laying started at, (Day)	160	220
Cost of production for 20 birds unit, (Rs.)	8000	5500
Gross income from 20 birds unit, (Rs.)	21750	11000
B:C ratio	2.71:1	2.0

Horizontal dissemination/spread of technology

The taste of eggs and chicken is very much similar to the deshi birds and liked by the consumer. This intervention not only fetched good income due to higher egg production and weight gain and taste, but also made fertile eggs available to keep under deshi birds to hatch chicks. Some beneficiary farmers started hatching eggs under desi hen and sells chicks to other farmers thus making a horizontal dissemination of the technology. Besides, beneficiary farmers get eggs and meat for their family consumption without any extra cost. There is good market for egg and meat of these birds at local level due to having attractive multi-colored feather pattern and brown colored eggs just like desi birds. Looking to these benefits other farmers are in process to develop such type of backyard poultry units. After seeing the performance and benefits of these birds more and more farmers are approaching towards the KVK for the birds. KVK provided more than 11000 one month birds of improved breed from KVK shed to the farmers for backyard poultry farming.

Depending upon the unit size (20 birds to 100 birds) beneficiary farmers gets additional net income of Rs. 12000 to 60000 (Rs. 1100 to 5000 per month) by selling eggs and birds for chicken. Farmers are continuing this activity by taking new birds. Thus the backyard poultry farming technology disseminated by KVK, Latur with active participation of all beneficiary farmers is economically viable, easy to operate, feasible, having potential to create employment and additional source of income.

Titled photo showing situation



Brooding of day old chicks at KVK farm



1 month birds ready to supply for backyard poultry



Training on backyard poultry farming



Close view of Grampriya birds



Close view of Vanaraja birds





Different backyard poultry units under demonstration



Scavenging of birds in cow shed

Eggs of imroved poultry birds



Hatched chicks under desi hen from fertile eggs of improved birds

Case study

Integrated farming system to overcome drought situation in Latur district

Background information:

ShriShrimantTrimbakKadam is an art graduate from village Akharwaie, Taluka and District- Latur, having 08 ha land. He started farming with in 1988. He had been practicing traditional agriculture in his land as only means of livelihood. He takes traditional crops like soybean, Bengal gram, Pigeon pea, Black gram, Green gram etc. on his field. Despite hard labour and irregular rainfall, drought like condition the farm productivity was low and income was not satisfactory and cannot fulfill his family requirements. All these condition forced him to think about how to increase the income from agriculture and he shifted towards the integrated farming system. Also interventions during last seven years from KrishiVigyan Kendra and state line departments of Maharashtra have transformed his socio-economic status. ShriShrimantTrimbakKadam is earning a net annual income of 12-13 lakh by adopting Integrated Farming Practices could well be the right signal for farmers of Latur district facing the scenario of low yield and income coupled with unpredictable rainfall and drought situation.

Process, technology:

To increase the family M. Kadam identified the need of agri allied enterprises and integrated farming system. The IFS model consist of 1 Ha horticulture crops i.e. Mango + tamarind and rose, 02 ha area of sugarcane as cash crop with intercropping system, 01 ha area of fodder crops having maize and hybrid Napier, 04 ha. area under agronomical crops, mulberry plantation on 01 ha area and different enterprises like Sericulture (300 cocoons) and chalky rearing centre (100 eggs), dairy farming with H.F. crossbred cows (08) and backyard poultry farming with improved birds (40 birds). Besides Mr.Kadam adopted best practices of farming i.e Drip and sprinkler irrigation, use of improved seeds, following IPM practices, soil testing, improved technologies,, reducing chemical fertilizers by using cow dung and urine, silage making, azolla feeding to animals.

Economics:

The farm became the training centre for IFS. More than 300 farmers from adjacent villages and farmers from KVK programmes have visited the farm. He has developed his own marketing strategies for direct sale of horticulture crops in nearby Latur city with better price realization. Mr.Kadam says that some of the best practices from KVK have given success to sustainable model in drought situation. Adoption of all modern technologies has leadedthis IFS as an sustainable income generating source at the village level.

Precisely, from 08 ha. of land presently he earns annual net profit of Rs. 12.90 lakh [(Agronomical crops- Soybean, bengal gram, pigeon pea sorghum, wheat, green gram= 3.55 lakh; sugarcane=2.75 laks, horticulture crops mango, tamarind, rose =1.30 laks, dairy farming 3.10 laks, sericulture= 2.10 laks, poultry farming 0.10 lakh).

Employment generation:

Mr.kadam has employed his own son and other two families on monthly payment basis and due to his cropping system and small units provided continuous work on his farm for the labours in the village.

Horizontal dissemination of technology:

He is now a role model not only in his village but also for the entire farming community of Latur district. Farmers from other villages are motivated by the success of this farmer. He has inspired more than 100 agricultural families for sericulture, dairy farming. These interventions have the potential to create positive impact on the agriculture of drought prone area.

Titled photo showing situation



Mulberry plantation



Visit of Dr. Lakhan Singh, Director, ATARI, Pune to sericulture unit



Showing produced caccons



chalky rearing unit



Dairy Farming with Cossbred H.F cows



Backyard poultry farming with Vanaraja birds



Backyard poultry farming with Kadaknath birds



Mango+ tamarind+ Sugarcane production system



Sugarcane+ Bengal Gram Intercropping



Tamarind+ Mango+ Fodder crop production system



Soybean crop



Rose cultivation



Tamarind orchards



Mango orchards



Chalky rearing



Guiding to the farmers



Guiding rural youths on sericulture



Guiding rural youths on mulberry plantation

E. Give details of innovative methodology or innovative technology of Transfer of Technology developed and used during the year

F. Give details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photographs)

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
	Nil	Nil	Nil

5.1. Indicate the specific training need analysis tools/methodology followed for

A. Practicing Farmers

- a) Group discussion
- b) PRA survey
- c) Field level observations

B. Rural Youth

- a) Group discussion
- b) PRA survey
- c) Field level observations

C. In-service personnel

- a) As per their demand

5.2. Indicate the methodology for identifying OFTs/FLDs

For OFT:

- i) PRA
- ii) Problem identified from Matrix
- iii) Field level observations
- iv) Farmer group discussions

For FLD:

- i) New variety/technology
- ii) Poor yield at farmers level
- iii) Existing cropping system
- iv) Farmers group discussions

5.3. Field activities

- i. Name of villages identified/adopted with block name (from which year) - 1. Chata Tq. Latur – 2013-14
2. Ankoli Tq. Latur- 2013-14
3. Chincholirao Tq. Latur- 2013-14
- ii. No. of farm families selected per village : 50
- iii. No. of survey/PRA conducted : 1
- iv. No. of technologies taken to the adopted villages : 4
- v. Name of the technologies found suitable by the farmers of the adopted villages:
 - 1. Heavy infestation of girdle beetle, leaf-eating caterpillar, soybean mosaic
 - 2. High residue problem, heavy infestation of pod borer complex in pigeonpea
 - 3. Less egg production and income from backyard poultry farming
 - 4. Uncontrolled breeding
- vi. Impact (production, income, employment, area/technological– horizontal/vertical)
- vii. Constraints if any in the continued application of these improved technologies

6. LINKAGES

A. Functional linkage with different organizations

Name of organization	Nature of linkage
State Department of Agriculture, Latur	Conducting training programs, Joint field visit, Diagnostic team visit, Training Programmes, Monthly district workshop, Field Visit. Agriculture Technology Park
VNMKV, Parbhani, College of Agri., Latur.	Joint diagnostic team visit, Supply of seed material
Agricultural Development Office. Zilla Parishad, Latur	Joint visits, trainings
Dept. of Animal husbandry , Latur	Joint Implementation of vaccination camp, Conducting training programmes and source for data regarding animals
MPKV, Rahuri	Source for seeds and root cuttings of Phule Jaywant fodder crop
Mahabeej	Supply of seed material
CRIDA, Hyderabad	Source for improved technology in farm implements and machinery's
Oilseeds Research Station, Latur	Weather data collection
KRIBHCO – Latur	conducting demonstration and training programme
BAIF, Pune	Source of fodder seeds
ATMA	Preparation of SREP report, Conducting researchable activities, demonstrations, Participation in extension programmes
NABARD	Training programme, Farmers club formation
VSI, Manjri, Pune	Source for seeds and biofertilizers
Vikas, Manjara, Rena Cooperative Sugar Factories, Jagruti sugar factory	Conducting demonstrations on sugarcane
AIR, Osmanabad	For delivering radio talks
PCI , Pune	As a source of pest monitoring devices
District Statistical Officer, Latur	As a source of district statistical data
District Animal husbandry office ,Latur	For conducting training programmes
Project Directorate on poultry , Hyderabad	As a source of poultry breeds
YCMOU, Nashik	Agri. Study Center
MANAGE, Hyderabad	ACABC Nodal training institute, daesi course
DOGR, Rajgurunagar, Pune	Demonstrations on newly released onion crops

B. List special programmes undertaken by the KVK and operational now, which have been financed by State Govt./Other Agencies

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Demonstration on newly released soybean variety MAUS-162 of hydroponic green fodder production & feeding to dairy animals	July 2016	ATMA, Latur	3,00,000/-
Agriculture Technology Week	March 2018	ATMA, Latur	1,00,000/-
Exposure Visit (Interstate)	February 2018	ATMA, Latur	60,000/-
Farmers Scientist Interaction	December 2017	ATMA, Latur	20,000/-

C. Details of linkage with ATMA

a) Is ATMA implemented in your district : Yes

Coordination activities between KVK and ATMA

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	Meetings	AMC & GB meetings	9	-	-
02	Research projects	-	-	-	-
03	Training programmes	-	-	-	-
04	Demonstrations	Demonstration on newly released soybean variety	1	-	-
05	Extension Programmes				
	Kisan Mela				
	Technology Week	District level exhibition	-	1	-
	Exposure visit	Interstate	-	1	-
	Exhibition				
	Soil health camps				
	Animal Health Campaigns				
	Others (Pl. specify)				
06	Publications				
	Video Films				
	Books				
	Extension Literature				
	Pamphlets				
	Others (Pl. specify)				
07	Other Activities (Pl. specify)				
	Watershed approach				
	Integrated Farm Development				
	Agripreneurs development				

D. Give details of programmes implemented under National Horticultural Mission

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Constraints if any
	Nil	Nil	Nil	Nil	Nil

E. Nature of linkage with National Fisheries Development Board

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks
	Nil	Nil	Nil	Nil	Nil

F. Details of linkage with RKVY

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks
	Nil	Nil	Nil	Nil	Nil

7. Convergence with other agencies and departments:**8. Innovator Farmer's Meet**

Sl.No.	Particulars	Details
	Have you conducted Farm Innovators meet in your district?	Yes/ No
	Brief report in this regard	

9. Farmers Field School (FFS)

S. No	Thematic area	Title of the FFS	Budget proposed in Rs.	Brief report
	Nil	Nil	Nil	Nil

10.1. Technical Feedback of the farmers about the technologies demonstrated and assessed:**10.2. Technical Feedback from the KVK Scientists (Subject wise) to the research institutions/universities:****11. Technology Week celebration during 2017-18 Yes/No, If Yes**

Period of observing Technology Week: From 25.3.2018 to 27.3.2018

Total number of farmers visited : 2156

Total number of agencies involved : 05

Number of demonstrations visited by the farmers within KVK campus: Nil

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Gosthies	-	-	-
Lectures organized	8	1811	Marketing management, organic farming, livestock management, water management
Exhibition	3	1756	
Film show	4	950	
Fair			
Farm Visit			

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Diagnostic Practicals	3	98	Sugarcane, pomegranate & vegetables
Supply of Literature (No.)	4	1000	Poultry, Azolla, Pomegranate & Sugarcane management
Supply of Seed (q)			
Supply of Planting materials (No.)			
Bio Product supply (Kg)			
Bio Fertilizers (q)			
Supply of fingerlings			
Supply of Livestock specimen (No.)			
Total number of farmers visited the technology week		2156	

12. Interventions on drought mitigation (if the KVK included in this special programme)

A. Introduction of alternate crops/varieties

State	Crops/cultivars	Area (ha)	Number of beneficiaries

B. Major area coverage under alternate crops/varieties

Crops	Area (ha)	Number of beneficiaries
Oilseeds		
Pulses		
Cereals		
Vegetable crops		
Tuber crops		
Total		

C. Farmers-scientists interaction on livestock management

State	Livestock components	Number of interactions	No. of participants
Total			

D. Animal health camps organized

State	Number of camps	No. of animals	No. of farmers
Total			

E. Seed distribution in drought hit states

State	Crops	Quantity (qtl)	Coverage of area (ha)	Number of farmers
Total				

F. Large scale adoption of resource conservation technologies

State	Crops/cultivars and gist of resource conservation technologies introduced	Area (ha)	Number of farmers
-	-	-	-
Total			

G. Awareness campaign

State	Meetings		Gosthies		Field days		Farmers fair		Exhibition		Film show	
	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers
Maharashtra	5	650			9	285			4	3500	4	551
Total	5	650			9	285			4	3500	4	551

13. IMPACT

A. Impact of KVK activities (Not to be restricted for reporting period).

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)

B. Cases of large scale adoption
(Please furnish detailed information for each case)

C. Details of impact analysis of KVK activities carried out during the reporting period

14. Kisan Mobile Advisory Services

Month	No. of SMS sent	No. of farmers to which SMS was sent	No. of feedback / query on SMS sent
April 2017	1	84013	
May	3	199671	
June	6	441674	
July	5	326460	
August	4	285841	
September	4	302994	
October	6	459143	
November	4	326128	
December	1	108275	
January 2018	5	386047	
February	1	108330	
March	1	108385	

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	
LATUR	Text only	28	8	-	-	5	-	41
	Voice only							
	Voice & Text both							
	Total Messages	28	8	-	-	5	-	41
	Total farmers Benefitted	108330	84013	-	-	84013	-	

15. PERFORMANCE OF INFRASTRUCTURE IN KVK

A. Performance of demonstration units (other than instructional farm)

Sl. No.	Demo Unit	Year of establishment	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	

B. Performance of instructional farm (Crops) including seed production

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.	Cost of inputs	Gross income	
Cereals									
Pulses									
Redgram	23.6.2017	29.12.2017	0.20	BDN-711	Bulk	2.00	1500	Yet to be sold	
Bengalgram	10.11.2017	25.02.2018	0.20	Akash, Janki, Jacky-9218 , Harit	Bulk	1.50	2000	Yet to be sold	
Oilseeds									
Soybean	21.6.2017	5.10.2017	2	MAUS-158,162	Bulk	20.0	20300	Yet to be sold	
Fibers									
Spices & Plantation crops									
Floriculture									
Jasmine	20.9.2017	31.03.2018							
Marigold	10.8.2017	30.10.2017	0.20	Pink, yellow	Bulk	6.60	9800	32890	
Fruits									
Pomegranate	10.01.2017	10.8.2017	0.40	Bhagwa	Bulk	15.82	17500	39255	
Vegetables									
Others (specify)									
Sugarcane	25.1.2017	30.10.2017	0.80	Co-86032	Seed	47.856 ton	40600	119640	
				MS-10001,		6 ton		15000	
				COVSI-8005		6 ton		15000	
				VSI-434,265,3102		9.9 ton		20000	
Sugarcane	11.2.2018	Awaited	1.00	CO-86032, MS-10001, COVSI-8005	Seed	-	43410	-	-
Sugarcane (Ratton)	25.1.2018	Awaited	0.40	CO-86032	Bulk	-	3500	-	-

C. Performance of production Units (bio-agents / bio pesticides/ bio fertilizers etc.)

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	

D. Performance of instructional farm (livestock and fisheries production)

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1	Goat	Osmanabadi	Kids	17	62192	-	Started in August 2017 kids still not sold
2	Poultry birds	Vanaraja	One month birds	1334	80313	106720	Day old chicks reared up to 1 month and given to farmers for backyard poultry farming

E. Utilization of hostel facilities

Accommodation available (No. of beds):

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
April 2017	-	-	-
May 2017	-	-	-
June 2017	-	-	-
July 2017	-	-	-
August 2017	39	4	-
September 2017	73	5	-
October 2017	37	3	-
November 2017	35	3	-
December 2017	30	3	-
11 December 2017	28	60	-
January 2018			
11 February 2018			
January 2018	82	3	-
February 2018	129	8	-
March 2018	68	2	-

F. Database management

S. No	Database target	Database created
	-	-

G. Details on Rain Water Harvesting Structure and micro-irrigation system

Amount sanction (Rs.)	Expenditure (Rs.)	Details of infrastructure created / micro irrigation system etc.	Activities conducted					Quantity of water harvested in '000 litres	Area irrigated / utilization pattern
			No. of Training programmes	No. of Demonstration s	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)		
-	-	-	-	-	-	-	-	-	-

16.FINANCIAL PERFORMANCE

A. Details of KVK Bank accounts

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
With Host Institute	LDCC Bank	Tilak Nagar, Latur	1002	Manjara Charitable Trust, Latur	100210005013825	413801052	IBKL0497LDC
With KVK	SBI Bank	Adarsh Colony, Ausa Road, Latur	6303	Manjara Krishi Vigyan Kendra, Latur	30029035891	413002972	SBIN0006303

B. Utilization of KVK funds during the year 2017-18 (Rs. in lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	88.38	88.38	87.75
2	Traveling allowances	0.63	0.63	0.63
3	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	6.63	6.63	3.05
B	POL, repair of vehicles, tractor and equipments			3.57
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	10.85	10.85	1.86
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)			0.69
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)			3.89
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)			3.10
G	Training of extension functionaries			0.00
H	Maintenance of buildings/farm			1.23
I	Establishment of Soil, Plant & Water Testing Laboratory			0.00
J	Library			0.08
TOTAL (A)		106.49	106.49	105.85
B. Non-Recurring Contingencies				
1	Works	-	-	-
2	Equipments including SWTL & Furniture	-	-	-
3	Vehicle (Four wheeler/Two wheeler, please specify)	-	-	-
4	Library (Purchase of assets like books & journals)	-	-	-
TOTAL (B)		0.00	0.00	0.00
C. REVOLVING FUND		-	-	-
GRAND TOTAL (A+B+C)		106.49	106.49	105.85

C. Status of revolving fund (Rs. in lakh) for the three years

Year	Opening balance as on 1 st April	Income during the year	Expenditure during the year	Net balance in hand as on 1 st April of each year
April 2015 to March 2016	23.17	11.48	3.27	31.38
April 2016 to March 2017	31.38	9.44	10.47	30.35
April 2017 to March 2018	30.35	9.89	12.28	27.96

17. Details of HRD activities attended by KVK staff during year

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Kokate S.L.	Farm Manager	Workshop cum training on CFLD's oilseeds & pulses	KVK, Solapur	16 to 18.01.2018
Kokate S.L.	Farm Manager	Workshop on use of bullock power in implements	VNMKV, Parbhani	30.01.2018
Kokate S.L.	Farm Manager	State level stake holder meeting on weather forecast	Agriculture college of Pune	14.03.2018
Bedre S.B.	Scientist (Agril Extension)	Workshop on DAESI course	VANAMATI, Nagpur	28.02.2017
Bedre S.B.	Scientist (Agril Extension)	Workshop on formation of FPO's	MRO, NABARD, Pune	18.07.2017
Bedre S.B.	Scientist (Agril Extension)	Training on PFMS & DPR preparation	MANAGE, Hyderabad	27 to 28.10.2017
Bedre S.B. & Anjali A. Gunjal	Scientist (Agril Extension) Scientist (Home Science)	Training on TISPRI,	KVK Latur	1 to 4.11.2017
Bedre S.B.	Scientist (Agril Extension)	Workshop on STRY-Skilled Training Rural Youths	VANAMATI, Nagpur	30.01.2018
Anjali A. Gunjal	Scientist (Home Science)	Capacity Building of Home Science Experts in KVKs of Maharashtra	KVK, Jalana	27 to 29.11 2017.
Deshmukh S. B.	Scientist (Plant Protection)	Training of Trainers Program on Skill Development	Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior	10-13 Dec. 2017

18. Please include any other important and relevant information which has not been reflected above (write in detail).

Annexure I

Newspaper Coverages

APR SUMMARY

1. Training Programmes

Clientele	No. of Courses	Male	Female	Total participants
Farmers & farm women	37	847	400	1247
Rural youths	5	118	1	119
Extension functionaries	2	39	20	59
Sponsored Training	10	666	102	768
Vocational Training	1	42	-	42
Total	55	1712	523	2235

2. Frontline demonstrations

Enterprise	No. of Farmers	Area(ha)	Units/Animals
Oilseeds	154	90	-
Pulses	262	116	-
Cereals	-	-	-
Vegetables	37	15	-
Other crops	-	-	-
Hybrid crops	10	0.5	-
Total	463	221.5	
Livestock & Fisheries	20	-	300
Other enterprises	25	-	25
Total	45	-	325
Grand Total	508	221.5	325

3. Technology Assessment & Refinement

Category	No. of Technology Assessed & Refined	No. of Trials	No. of Farmers
Technology Assessed			
Crops	4	43	43
Livestock	4	80	35
Various enterprises	4	40	40
Total	12	163	118
Technology Refined			
Crops	-	-	-
Livestock	-	-	-
Various enterprises	-	-	-
Total	-	-	-
Grand Total	12	163	118

4. Extension Programmes

Category	No. of Programmes	Total Participants
Extension activities	205	8405
Other extension activities	22	-
Total	227	8405

5. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	
	Text only	28	8	-	-	5	-	41
	Voice only							
	Voice & Text both							
	Total Messages	28	8	-	-	5	-	41
	Total farmers Benefitted	108330	84013	-	-	84013	-	

6. Seed & Planting Material Production

	Quintal/Number	Value Rs.
Seed (q)	9.9	72,600/-
Planting material (No.)	257714	24720/-
Bio-Products (kg)	744 litres	3,78,925/-
Livestock Production (No.)	-	-
Fishery production (No.)	-	-

7. Soil, water & plant Analysis

Samples	No. of Beneficiaries	Value Rs.
Soil - 18013	18013	6,52,000.00
Water	-	-
Plant	-	-
Total	18013	6,52,000/-

8. HRD and Publications

Sr. No.	Category	Number
1	Workshops	05
2	Conferences	-
3	Meetings	01
4	Trainings for KVK officials	06
5	Visits of KVK officials	04
6	Book published	-
7	Training Manual	-
8	Book chapters	-
9	Research papers	-
10	Lead papers	-
11	Seminar papers	-
12	Extension folder	-
13	Proceedings	-
14	Award & recognition	-
15	Ongoing research projects	-