

## ANNUAL REPORT – April 2010 – March 2011

### 1. GENERAL INFORMATION ABOUT THE KVK

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

Address	Telephone		E mail
KVK Yisemyong Post Box No-23 Mokokchung Nagaland	OFFICE 0369-2226537	FAX 0369-2227627	<a href="mailto:kvkmokokchung@gmail.com">kvkmokokchung@gmail.com</a> <a href="mailto:kvkyisemyong@rediffmail.com">kvkyisemyong@rediffmail.com</a>

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

Address	Telephone		E mail
	Office	FAX	
Directorate of Agriculture Nagaland Kohima	0370-2243116	0370-2243970	<a href="mailto:agrilan@rediffmail.com">agrilan@rediffmail.com</a>

#### 1.3. Name of the Programme Coordinator with phone & mobile No

Name	Telephone / Contact		
	Residence	Mobile	Email
S. SOSANG JAMIR	0369/2228567	9436006351	<a href="mailto:sosangjamir@yahoo.in">sosangjamir@yahoo.in</a>

1.4. Year of sanction : 2003

#### 1.5. Staff Position (as on 31<sup>st</sup> March 2011)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale (Rs.)	Present basic (Rs.)	Date of joining	Permanent /Temporary	Category (SC/ST/OBC/ Others)
1	Programme Coordinator	S. Sosang Jamir	I/C Programme Coordinator	Agronomy	-	-	18.06.03	Temporary	ST
2	Subject Matter Specialist	Renbomo Ngullie	SMS (Horticulture)	Horticulture	15600 + 5400	18240+ 5400	24.05.06	Temporary	ST
3	Subject Matter Specialist	Akangtemjen	SMS (Entomology)	Entomology	15600 + 5400	18240+ 5400	24.05.06	Temporary	ST
4	Subject Matter Specialist	Dr. Rongsensusang	SMS (Vety. &AH)	Vety & AH	16380 + 5400	18240+ 5400	24.05.06	Temporary	ST
5	Subject Matter Specialist	Samuel Sangtam	SMS (Agronomy)	Agronomy	15600 + 5400	18240+ 5400	24.05.06	Temporary	ST
6	Subject Matter Specialist	Bendangjungla	SMS (PB &G)	PB &G	15600 + 5400	18240+ 5400	24.05.06	Temporary	ST
7	Subject Matter Specialist	Royuso Nakhro	SMS (Extension)	Agri. Extension	15600 + 5400	17550 + 5400	13.11.07	Temporary	ST
8	Programme Assistant	Moainla	Programme Assstt		10230 + 4200	12060 + 4200	24.05.06	Temporary	ST
9	Computer Programmer	I.Tangitla	Programme Assstt (Computer)		10230 + 4200	12060 + 4200	24.05.06	Temporary	ST
10	Farm Manager	Jweni Semp	Programme Assstt (Farm)		10230 + 4200	11580 + 4200	07.11.07	Temporary	ST
11	Accountant / Superintendent	Meyatula	Office Supt-cum-Accountant		10230 + 4200	12060 + 4200	01.06.06	Temporary	ST
12	Stenographer	Imosangla	Jr. Steno-cum-Computer Operator		7440 + 2400	8700 + 2400	01.06.06	Temporary	ST
13	Driver-cum-Mechanic	Supongmeren	Driver		5680 + 1900	6650 + 1900	01.06.06	Temporary	ST
14	Driver-cum-Mechanic	Jongpongyanger	Driver		5680 + 1900	5680 + 1900	01.03.10	Temporary	ST
15	Supporting staff	Imkonglemla	Peon		4750 + 1300	5530 + 1300	01.06.06	Temporary	ST
16	Supporting staff	Aotoshi	Chowkidar		4750 + 1300	4750 + 1300	01.03.10	Temporary	ST

## 1.6. Total land with KVK (in ha)

S. No.	Item	Area (ha)
1.	Under Buildings	1
2.	Under Demonstration Units	0.4
3.	Under Crops	3 (Instructional Farm)
4.	Orchard/Agro-forestry	1.42 ha
5.	Others (specify)	17.4

## 1.7. Infrastructural Development:

## A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	20.06.09	400	53.5 lakhs	28.09.07	400	completed
2.	Farmers Hostel	NA	NA	NA	NA	NA	NA	NA
3.	Staff Quarters (5)	ICAR	NA	200		2011	100	On going
4.	Demonstration Units (2)	Host & ATMA	2008 & 2010	40	0.90 lakh	2008 & 2010	40	Completed
5.	Fencing	ICAR	NA	800mtr	17.0 lakhs	2011	250 mtrs	On going
6.	Rain Water harvesting system	- do -	2011	4210.5	6.0 lakhs	2011	-	Completed
7.	Threshing floor		NA	NA	NA	NA	NA	NA
8.	Farm godown	Host	5.2.2010	18.56	0.75 lakhs	15.1.2010	-	Completed

## B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Mahindra Marshall	2004	5.4 lakhs	87,500 km	Need replacement

## C) Equipments &amp; AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
1. Computer	2004	70000	Good
2. Sound system	2005	60000	Good
3. Digital camera	2004	70000	Unserviceable
4. OHP	2004	5000	Good
5. Laptop	2008	37,000	Good
6. Handycam	2008	16,000	Good
7. Photocopier	2010	1,20,000	Good
8. Handycam	2010	18,000	Good
9. Computer	2010	45,000	Good
10. LCD projector	2010	55,000	Good

## 1.8. A). Details SAC meeting\* conducted in the year

Sl.No.	Date	Name and Designation of Participants	Salient Recommendations	Action taken
1.	27/08/10	1. A.Y. Ovung, Director(Agri), & SNO 2. T.V. Holo, Jt. Director (Agri) 3. Dr. Deepak Chetri, Dy. Director (Agri) 4. T.Achim Yim, PEX AIR Mokokchung 5. Tsuknungtemjen, HO, DHO 6. Dr. meren, DVO 7. Imrong, DHO Mokokchung 8. Yashi Jamir, DFO 9. N. Tekatushi Ao, Jt.Dir. SARS 10. Dr. I. Amenla, LTO, Agri 11. S.Bendangtems, DAO Mkg 12. T. Marchiba Jamir, Nagaland Banana chips, Changtongya 13. Bendang T. Jamir, DSO(Seri) 14. Lily Tep, SDO (Soil) 15. T. Wathy Jamir, Junior Engineer 16. K.V. Rajendranath, Project Officer 17. All KVK staffs	✓ Approval of all the publications ✓ Name of local check varieties to be indicated. ✓ Attention to be focused on sericulture ✓ Presentation of activities report and action plan	All the recommendations were refined and finalized for implementation of the programmes

\* Attach a copy of SAC proceedings along with list of participants

## 2. DETAILS OF DISTRICT (2010-2011)

### 2.1 Major farming systems/enterprises (based on the analysis made by the KVK)

S. No	Farming system/enterprise
1	Agriculture + Horticulture
2	Agriculture + Veterinary
3	Agriculture + Fishery
4	Agriculture + Horticulture + Veterinary + Fishery

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

Sl. No	Agro-climatic Zone	Characteristics
1	Mid Tropical hill Zone	i. Hot and humid in the foot hills to moderate in the mid and high with heavy rainfall during summer ii. Moderate to extreme cold and dry in higher altitude during winter

Sl. No	Major agro ecological situations	Characteristics
1	AES – I (Below 500 msl)	Hot & Humid with sub tropical climate
2	AES – II (500-1000 msl)	Moderate, sub-montane hill zone
3	AES – III (1000-1500 msl)	Moderate to extreme cold and dry during winter
4	AES – IV (Above 1500 msl)	Moderate to extreme cold and dry during winter

### 2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
1	Sandy clay loam	20-35% clay 28% silt 45% more sand pH 4-5	1,20,000
2	Clay Loam	27-40% clay 20-45% sand Medium organic matter pH 4-5	40,000
3	Forest Soil	Broad leaves rain forest, evergreen, temperate climate, high organic matter, dark brown soil with pH 4	50

### 2.4. Area, Production and Productivity of major crops cultivated in the district

Sl.No.	Crop	Area (ha)	Production (Qtl)	Productivity(Qtl/ha)
1	Jhum paddy	11450	21880	19.10
2	TRC paddy	4935	15360	31.12
3	Maize	1130	1140	37.53
4	Tapioca	1050	308910	294.2
5	Mustard	270	187	6.92
6	Tomato	28	7600	271.4
7	Potato	125	9375	75
8	Colocassia	1500	1,80,000	120
9	Passion fruit	908	63560	70
10	Orange	460	20700	215
11	Banana	270	3888	144.4
12	Pineapple	340	238000	700
13	Pear	16	3500	218.7
14	Tea	520	3120	6 (made tea)
15	Arecanut	44	600	15

### 2.5. Weather data

Month	Rainfall (mm)	Temperature °C		Relative Humidity (%)
		Maximum	Minimum	
April 2010	276.9	25.9	17.1	48
May	239.7	27.2	18.3	78
June	472.3	24.8	17.5	84
July	364.6	28.1	20.2	84
August	396.6	28.5	20.3	86
Sept	399.7	27.6	19.4	80
Oct	390.7	26.3	17.3	74
Nov	Nil	23.7	13.3	65
Dec	77.5	21.1	9.6	62
Jan 2011	221.6	19.1	7.6	63
Feb	48.3	22.5	10.6	60
March	103.5	25.6	14.1	60

Category	Area	Production	Productivity
Fish			
Marine			
Inland	208.50 ha	434 MT	2081.5 kg/ha
Prawn			
Scampi			
Shrimp			

## 2.6 Details of Operational area / Villages (2010-11)

No	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1		Ongpangkong (N)	Ungma, Mokokchung village, Longsa	Paddy, Maize, Tapioca, Ginger, Passion fruit, Tea, Piggery, Poultry, weaving	Low productivity due to non adoption of improved technology, Majority of the farmers involved in cultivation of mix crops, lack of awareness on potentialities of floriculture, lack of irrigation facilities, unavailability of HYV seeds, post harvest management problem, lack of proper infrastructure and marketing network	Create awareness on fallow management and jhum intensification, Cultivation of both kharif and rabi vegetables, production of passion fruit, ginger, tapioca, tea on commercial scale, popularization of floriculture, handloom and handicraft, promotion of infrastructures and marketing network
2		Opangkong (s)	Chungtia, Aliba, Mangmetong	Paddy, Maize, Tapioca, Cucumber, Passion fruit, Ginger, Orange	Low productivity due to non adoption of improved technology, Indiscriminate use of inorganic products in cucumber cultivation, lack of awareness on INM, lack of upgrade dairy breeds, inadequate availability of fodder, insect pest problem, lack of extension activities	Create awareness on fallow management and jhum intensification, Organic Off season cucumber cultivation, development of dairy and fodder crops, production of orange.
3		Kobulong	Mopungchuket Sungratsü	Paddy, Tapioca, Maize, Passion fruit, ginger, Banana, Piggery, Poultry, Dairy, Sericulture	Low productivity due to non adoption of improved technology, lack of irrigation facilities, unavailability of HYV seeds, post harvest management problem, pest /disease problem in crops and silkworm, lack of processing unit and marketing, lack of spinning & weaving centers, lack of awareness on citronella cultivation, Inbreeding, disease and nutrition in piggery	Create awareness on fallow management and jhum intensification, To increase productivity of passion fruit, ginger and vegetables, promotion on spinning and weaving centre of sericulture, popularization of citronella cultivation, awareness on breeding programme, prevention and control of disease, scientific feeding management
4		Changtongya	Chuchuyimlang, Mongsenyimti	Paddy, Tapioca, Maize, Colocasia, banana, Orange, Pineapple, Tea, piggery, Poultry, Fishery	Low productivity due to non adoption of improved technology, lack of awareness on value addition products, insect pest and disease problem, poor transportation and marketing facilities, lack of upgraded breeds and health centre	Create awareness on fallow management and jhum intensification, To increase production of banana, tapioca, orange, pineapple, development of tea, arecanut, betel vine, improvement of piggery, fishery and sericulture,
5		Mangkolemba	Chungtia Yimsen Longnak, Longpayimsen	Paddy, Maize, Tapioca, Orange, Pineapple, Arecanut, Tea, betel vine, fishery, cattle, piggery	Unavailability of HYV ( lowland paddy), Lack of knowledge on improved method of cultivation, lack of processing unit, insect pest and disease problem, lack of awareness on INM, poor skill in fishery pond management, financial constraint to take up in commercial scale, inadequate availability of ploughing bullock, swine diseases	Promotion of HYV (paddy), production of oilseed and pulses, production of orange, pineapple, arecanut, tea and fish. Breeding programme for cattle and training of draught animals, prevention & control of swine diseases
6		Longchem	Yachang (C) Aonokpo	Paddy, Tapioca, Maize, colocassia, Arecanut, betel vine, cattle, piggery	Unavailability of HYV ( lowland paddy), Lack of knowledge and awareness on improved method of cultivation on plantation crops, lack of processing unit, lack of awareness on INM, financial constraint for commercial cultivation, inadequate availability of ploughing bullock, swine diseases	Promotion of HYV (paddy), Commercial cultivation of arecanut, tea, rubber, betel vine, colocassia, orange, production of oilseeds and pulses, Breeding programme for cattle and training of draught animals, prevention & control of swine diseases

## 2.7 Priority/thrust areas

Crop/Enterprise	Thrust area
Paddy	Crop production
Oilseeds	Crop production and management
Pulses	Crop production and management
Passion fruit	Increase productivity
Orange	Orchard management
Arecanut	Increase production
Tapioca	Soil and water conservation
Piggery	Breed and health management
Poultry	Feed and housing management
Goatery	Awareness, introduction and popularization
Apiculture	Honey bee production

## 3. TECHNICAL ACHIEVEMENTS

## 3.A. Details of target and achievements of mandatory activities by KVK during April 2010-Mar.2011

OFT (Technology Assessment and Refinement)				FLD (Oilseeds, Pulses, Cotton, Other Crops/Enterprises)			
1		2		3		4	
Number of OFTs		Number of Farmers		Number of FLDs		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
7	7	21	21	7	10	44	78

Training (including sponsored, vocational and other trainings carried under Rainwater Harvesting Unit)					Extension Activities			
3			4		5		6	
Number of Courses			Number of Participants		Number of activities		Number of participants	
Clientele	Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
Farmers								
Rural youth								
Extn. Functionaries								

Seed Production (Qtl.)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
46.02	32	6500	5000

## 3.B. Abstract of interventions undertaken

S. No	Thrust area	Crop/Enterprise	Identified Problem	Interventions					
				Title of OFT if any	Title of FLD if any	Title of Training if any	Title of training for extension personnel if any	Extension activities	Supply of seeds, planting materials etc.
1	Introduction of QPM	Maize	Low production in local var.	Trial on optimum date of sowing	-	Cultivation of QPM	-	Field day, method demo.	Seeds
2	Increase production oilseeds	Toria	Low production due to moisture stress and late sown condition	Trial on late sown toria variety	-	Cultivation of late sown toria	-	Field day, demonstration	Seed
3	Promotion of lime application	Paddy	Low production due high pH level	Effect of different doses of lime on growth and yield paddy	-		-	Field day	seed





**A.3. Abstract of the number of technologies assessed in respect of livestock / enterprises :**

Thematic areas	Cattle	Poultry	Sheep	Goat	Piggery	Rabbitry	Fisheries	TOTAL
Evaluation of Breeds		1						1
Nutrition Management								
Disease of Management								
Value Addition								
Production and Management								
Feed and Fodder								
Small Scale income generating enterprises								
<b>TOTAL</b>		1						1

**A.4. Abstract on the number of technologies refined in respect of livestock / enterprises: NA**

Thematic areas	Cattle	Poultry	Sheep	Goat	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								
<b>TOTAL</b>								

**B. Details of each On Farm Trial to be furnished in the following format****A. Technology Assessment****Trial 1**

- 1) Title : Effect of different doses of Agri. lime on growth and yield of upland paddy
- 2) Problem diagnose/defined : Low yield due to low pH (below 4.5)
- 3) Details of technologies selected for assessment :
  - a) 200gm lime mixed with 100 gm seed
  - b) 400gm lime applied in 7.5sqm area
  - c) 300gm lime applied in 7.5sqm area
  - d) 200 gm lime applied in 7.5sqm area
  - e) Control
- 4) Source of technology : SARS, Yisemyong
- 5) Production system : Rainfed paddy based system
- 6) Thematic area : Upland paddy production
- 7) Performance of the Technology with performance indicators : Application of lime @ 400gm in 7.5 sqm area gives the highest yield (42.66q/ha) which increased in production by 24.71%
- 8) Final recommendation for micro level situation : Application of 5 qtls. agri. lime per hectare is recommended
- 9) Constraints identified and feedback for research : Scarcity of agri. lime, lack of awareness, more refinement and validation works need to be taken up.
- 10) Process of farmers participation and their reaction : Farmers has shown keen interest and took active part during the process. They are willing to take up the technology if agri. lime is made available.



## 11). Results of On Farm Trials

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Upland paddy	Rainfed	Low yield due to low pH	Effect of different doses of Agri. lime on growth and yield of upland paddy	3	Different doses of lime application	a)200gm lime mixed with 100 gm seed b) 400gm lime applied in 7.5sqm area c)300gm lime applied in 7.5sqm area d)200 gm lime applied in 7.5sqm area e) Control	37.24 42.6 38.1 34.84 29.86	Application of lime @ 400gm in 7.5 sqm area gives the highest yield (42.66q/ha) which increased in production by 24.71%	Farmers has shown keen interest and took active part during the process. They are willing to take up the technology if agri. lime is made available.

Technology Assessed	*Production per unit (Kg/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
200gm lime mixed with 100 gm seed	3724	25188	1:2
400gm lime applied in 7.5sqm area	4260	31620	1:3
300gm lime applied in 7.5sqm area	3810	26220	1:2
200 gm lime applied in 7.5sqm area	3484	22308	1:2
Control	2986	16332	1:2

## Trial 2

- 1) Title : Effect of pruning on growth and yield of tomato
- 2) Problem diagnose/defined : poor fruit size
- 3) Details of technologies selected for assessment :  
1) control (no pruning )  
2) Treated a) Single stem maintained  
b) Double stem maintained
- 4) Source of technology : AAU, Jorhat
- 5) Production system : Rainfed
- 6) Thematic area : Tomato production
- 7) Performance of the Technology with performance indicators : The growth was better in double stem pruned plants (plant height =50 cm, No. of flowers/ truss = 9.17 ) than the single stem and control. However, the yield was higher in control (302 qt./ha ) but net return was low in control due to poor fruit size.
- 8) Final recommendation for micro level situation : Maintaining of double stem can be promoted for achieving better fruit size and returns.
- 9) Constraints identified and feedback for research : Labourious, cost involvement is high and requires skilled labour.
- 10) Process of farmers participation and their reaction : Farmers actively participated throughout the cultivation period but commented that it is labourious and requires a skill person.

**11). Results of On Farm Trials**

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Tomato	Rainfed	Low production	Effect of pruning on growth and yield of tomato	3	Pruning	Plant height, No of flower/truss, fruit volume, yield	50cm, 9.17 58.97cc/ml, 281q/ha	Highest yield was obtained from control however market value was low	labourious and requires skilled labour

Technology Assessed	*Production per unit (Kg/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
Single stem maintained	26000	1,66000	1:4
Double stem maintained	28100	1,82800	1:5
Control	30200	1,11000	1:3

**Trial 3**

- 1) Title : Performance trial on passion fruit
- 2) Problem diagnose/defined : Low production
- 3) Details of technologies selected for assessment : Yellow type
- 4) Source of technology : SASRD
- 5) Production system : Rainfed
- 6) Thematic area : Fruit production
- 7) Performance of the Technology with performance indicators : On going
- 8) Final recommendation for micro level situation : On going
- 9) Constraints identified and feedback for research : On going
- 10) Process of farmers participation and their reaction : On going

**11) Results of On Farm Trials**

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Passion fruit	Rainfed	Low production	Performance trial	3	Yellow type	Survival %, growth, resistance to wilt, yield	On going	On going	On going

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
Purple type	On going	On going	On going
Yellow type	On going	On going	On going

#### Trial 4

- 1) Title : Performance of vanaraja birds under different AES
- 2) Problem diagnose/defined : Poor performance of local/desi birds
- 3) Details of technologies selected for assessment : Vanaraja
- 4) Source of technology : Project Directorate on Poultry, (PDP), Hyderabad
- 5) Production system : Backyard
- 6) Thematic area : Poultry improvement
- 7) Performance of the Technology with performance indicators : On going
- 8) Final recommendation for micro level situation : On going
- 9) Constraints identified and feedback for research : On going
- 10) Process of farmers participation and their reaction : On going

#### 11). Results of On Farm Trials

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Poultry	Backyard	Poor performance of local/desi birds	Performance of vanaraja birds under different AES	20	Vanaraja	Growth rate, Mortality rate, Survivability rate, Egg laying capacity, Incidences of diseases	Ongoing	On going	

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
Vanaraja	Ongoing	Ongoing	Ongoing
Local bird	Ongoing	Ongoing	Ongoing

## Trial 5

- 1) Title : Bio-efficacy of botanical on okra shoot and fruit borer
- 2) Problem diagnose/defined : Low production due to incidence of shoot and fruit borer
- 3) Details of technologies selected for assessed : NSKE 5%, Neem oil 3%, Control
- 4) Source of technology : PJNC of Agriculture and Research Institute Karaikal, Pondicherry
- 5) Production system : Rainfed
- 6) Thematic area : Pest management
- 7) Performance of the Technology with performance indicators : Among the treatments, lowest shoot (9.76%) and fruit (12.15 %) damaged was observed from application of NSKE 5%.
- 8) Final recommendation for micro level situation : Application of NSKE 5% at weekly interval
- 9) Constraints identified and feedback for research : Bio agents are not available in time.
- 10) Process of farmers participation and their reaction : The farmers were cooperative in carrying out the management programme and were convinced to learn about eco-friendly management strategy . Though the bio agent performed well, non availability of agent at right time is a problem for the farmers

### 11). Results of On Farm Trials

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Okra	Rainfed	Low production due to incidence of shoot and fruit borer	Bioefficacy of botanical on okra shoot and fruit borer	3	NSKE 5%, Neem oil 3%, Control	Shoot damage Fruit damage Yield Shoot damage Fruit damage Yield Shoot damage Fruit damage Yield	9.76 % 12.15 % 86.45 q/ha 10.28 % 13.83 % 83.12 q/ha 24.33% 37.89 % 42.16 q/ha	Among the treatments, lowest shoot (9.76%) and fruit (12.15 %) damaged was observed from application of NSKE 5%.	Though the bio agent performed well, non availability of agent at right time is a problem for the farmers

Technology assessed	*Production per unit(Kg/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
NSKE 5%	8645	50450	1:2.6
Neem oil 3%	8312	51120	1:2.5
Control	4216	16160	1:1.6

## B. Technology Refinement

### Trial 1:

- 1) Title : Performance trial on optimum date of sowing
- 2) Problem diagnose/defined : Low production in local cultivars
- 3) Details of technologies selected for refinement : HQPM-1
- 4) Source of technology : CCSHAU, Karnal, 2005
- 5) Production system : Rainfed
- 6) Thematic area : Cereal production
- 7) Performance of the Technology with performance indicators : As per the record, seed sown on 7<sup>th</sup> April resulted the highest yield (42.6 q/ha) where as lowest yield (36.2q/ha) was obtained from 21<sup>st</sup> April sowing
- 8) Final recommendation for micro level situation : The optimum time for sowing is 1<sup>st</sup> week of April under rainfed condition
- 9) Constraints identified and feedback for research : Non availability of seeds, research on seed production to maintain parental line should be taken up.
- 10) Process of farmers participation and their reaction : Farmers participated through the trial period maintaining all necessary record. Though the yield was high the farmers have less preference for consumption due poor taste.

### 11). Results of On Farm Trials

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology refined	Parameters of refinement	Data on the parameter	Results of refinement	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Maize	Rainfed	Low production in local varieties	Performance trial on optimum date of sowing	3	HQP M-1	Plant height No. of cob/pl 1000grain wt Grain Yield	<ul style="list-style-type: none"> <li>▪ 198 cm</li> <li>▪ 1.25</li> <li>▪ 301.1 gm</li> <li>▪ 42.6 q/ha</li> </ul>	7 <sup>th</sup> April sowing resulted the highest yield (42.6 q/ha) while lowest yield (36.2q/ha) was obtained from 21 <sup>st</sup> April sowing	Though the yield was high the farmers have less preference for consumption due poor taste.

Technology refined	*Production per unit (Kg/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
25 <sup>th</sup> March	3850	38750	1:3
31 <sup>st</sup> march	4010	41150	1:3.2
7 <sup>th</sup> April	4260	44900	1:3.4
14 <sup>th</sup> April	4180	43700	1:3.3
21 <sup>st</sup> April	3620	35300	1:2.8

### Trial 2:

1. Title : Multi-locational Trial on late sown Toria
2. Problem diagnose/defined : Low production due to moisture stress and late sown condition
3. Details of technologies selected for refinement : TS - 36
4. Source of technology : RARS, Shillongani
5. Production system : Rainfed

6. Thematic area : Oilseed production
7. Performance of the Technology with performance indicators : AES –I recorded the highest yield ( 8q/h) while the yield was obtained from AES-IV TS-36 yield (6.1 q/ha)
8. Final recommendation for micro level situation : As per the result, AES –I has more potentiality for oilseed production. Therefore, TS -36 should be taken up in large scale in this AES
9. Constraints identified and feedback for research : Less popular among farmers due to non availability of irrigation facilities and lack of managerial knowledge. Create awareness on improved cultivation practices
10. Process of farmers participation and their reaction : Farmers shown their active participation with much enthusiasm and since the variety is good and tolerant to moisture stress farmers are willing to take up this crop.

11). Results of On Farm Trials

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology refined	Parameters of refinement	Data on the parameter	Results of refinement	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Toria	Rainfed	Low productivity of local varieties due to moisture stress	Multilocational Trial on late sown Toria	4	TS -36	Plant height No. of Branches Yield	<ul style="list-style-type: none"> <li>▪ 38 cm</li> <li>▪ 14</li> <li>▪ 8 qt.</li> </ul>	AES-I resulted the highest yield (8 q/ha) while lowest yield (6.1q/ha) was obtained from AES-IV	Since the variety is good and tolerant to moisture stress farmers are willing to take up this crop

Technology refined	*Production per unit (Kg/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
AES –I (Av. of 3 farmers)	8000	155000	1:4.4
AES –II (Av. of 3 farmers)	7400	140000	1:4.1
AES –III (Av. of 3 farmers)	6800	125000	1:3.8
AES –IV (Av. of 3 farmers)	6100	107500	1:3.4

### 3.2 Achievements of Frontline Demonstrations

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

List of technologies demonstrated during previous year and popularized during 2010-11 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	Soybean	Pulses production	JS -335	Higher yield, economic potential	4	8	2
1	Toria	Production and management	TS-38	Withstand more moisture stress compared to local varieties and gave high yield	3	8	2
2	Tomato	Vegetable production	Megha-1	High yield, economic potential	2	4	1

- b. Details of FLDs implemented during 2010-11 (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	Paddy	Increase production and productivity	SRI	Kharif, 2010	2	1.5	6		6	Lack of confidence to take of new technique of cultivation
2	Tomato	Increase vegetable production	Megha -1	Rabi, 2010	2	1	6		6	Unavailable of adequate seeds
3	Broccoli	High value vegetable production	Pushpa	Rabi, 2010	1	0.5	4		4	Irrigation problem
4	Soybean	Integrated crop management	JS- 335	Kharif 2010	2	2	4		4	-
5	French bean	Crop production and management	Local (mutre)	Kharif, 2010	3	2	8		8	Unavailability of cultivable jhum area
6	Toria	Crop production and management	TS-38	Rabi 2010	4	2	8		8	Irrigation problem
7	Rice bean	Integrated crop management	Chakhesa local dwarf	Kharif 2010	4	2	8		8	unavailability of cultivable land
8	Pea	Pulses production	Arkel	Rabi 2010	3	2	6		6	Irrigation problem
9	Groundnut	Oilseed production	JL-24	Kharif, 2010	4	2	8		8	Less popular among farming community

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					
Paddy	Kharif	Rainfed	Clay loam	2.2%	8.6 kg/ha	127 kg/ha	Paddy	June 2010	Nov, 2010	1990	122
Tomato	Rabi	Rainfed	Clay loam	1.67 %	10.2 kg/ha	129 kg/ha	Paddy	Sep. 2010	-	1247	50
Broccoli	Rabi	Rainfed	Silt loam	1.81 %	9.7 kg/ha	133 kg/ha	Paddy	Oct 2010	-	856.3	37
Soybean	Kharif	Rainfed	Silt loam	-	8.2 kg/ha	58.2 kg/ha	Paddy	June 2010	Oct. 2010	1960.8	112
French bean	Kharif	Rainfed	Silt loam	-	11.03 kg/ha	130 kg/ha	Paddy	March 2010	Oct. 2010	2330.9	148
Toria	Rabi	Rainfed	Silt loam	-	9.5 kg/ha	155 kg/ha	Paddy, maize	Oct. 2010	Feb. 2011	738.1	21
Rice bean	Rabi	Rainfed	Silt loam	-	10.89 kg/ha	152 kg/ha	Paddy	July 2010	Dec. 2010	1629.1	87
Pea	Rabi	Rainfed	Silt loam	-	8.0 kg/ha	64.6 kg/ha	Paddy, tapioca	Oct. 2010	-	846.6	31
Groundnut	Kharif	Rainfed	Silt loam	-	14 kg/ha	160 kg/ha	Paddy	May 2010	Oct. 2010	2200.5	133

## Performance of FLD

Sl.	Crop	Technology demonstrated	Variety	No. of farmers	Area (ha)	Demonstrated			Local check	Increase in yield (%)	Data in relation to technology	Local check
						Highest	Lowest	Average			Demonstrated	
1	Paddy	SRI	IR-64	6	1.5	42.5	37	40	31	29.03 %	No. of effective tillers- 14, No. of grains/panicle - 154	No. of effective tillers- 10, No. of grains/panicle - 126
2	Tomato	Megha 1	Megha 1	6	1	349	273	311	214	31.2	Plant ht. : 51.4 cm Fruit wt : 48.7 gm Yield: 349q/ha	Plant ht. : 44.9 cm Fruit wt. : 17.2 gm Yield: 214q/ha
3	Broccoli	Pushba	Pushba	4	0.5	75	51	61	46	24.6	Plant ht. : 34.3 cm Head wt. : 365 gm Yield: 75q/ha	Plant ht. : 31.5 cm Head wt. : 249 gm Yield: 46q/ha
4	Soybean	JS-335	JS-335	4	2	14.41	11.25	12.83	10.62	20.24	Pods/plant :52 Yield: 14.41q/ha	Pods/plant :44 Yield: 10.62q/ha
5	French bean	Mutre	Mutre	8	2	21.9	18.92	20.41	18.23	11.95	Pods/plant :48 Yield: 21.9 q/ha	Pods/plant :39 Yield: 18.23 q/ha
6	Toria	TS-38	TS-38	8	2	4.68	3.97	6.82	5.68	17.39	Plant ht. : 38 cm Yield: 4.69q/ha	Plant ht. : 36 cm Yield: 3.68q/ha
7	Rice bean	Chakhesang local dwarf	Chakhesang local dwarf	8	2	9.16	8.55	8.86	7.92	11.87	Pods/plant :58 Yield: 9.16 q/ha	Pods/plant :47 Yield: 7.92 q/ha
8	Pea	Azad	Azad	6	2	14.11	12.98	13.55	11.86	14.25	Pods/plant : 34 Yield: 14.11 q/ha	Pods/plant :24 Yield: 11.86 q/ha
9	Groundnut	JL-24	JL-24	8	2	10.65	8.55	9.6	8.4	14.48	Yield: 9.6 q/ha	Yield: 8.4 q/ha

## Economic Impact (continuation of previous table)

Average Cost of cultivation (Rs./ha)		Average Gross Return (Rs./ha)		Average Net Return (Profit) (Rs./ha)		Benefit-Cost Ratio (Gross Return / Gross Cost)
Demonstration	Local Check	Demonstration	Local Check	Demonstration	Local Check	
14	15	16	17	18	19	20
21000	17500	48000	31540	27000	14040	1:3.3
63500	48200	349000	214000	285000	165800	1:5
52450	47750	112500	69000	60050	21250	1:2
10500	9500	38490	31860	27990	22360	1:4
11000	10000	40820	36460	29820	26460	1:4
10000	8800	20304	17296	10304	8496	1:2
10500	10000	26850	23760	16080	13760	1:2
10800	9000	37940	33208	27140	24208	1:3
11000	10000	38400	33600	27400	23600	1:3

## Technical Feedback on the demonstrated technologies

Crop	Season	Component	Farming situation	Average yield (q/ha)	Local check (q/ha)	Percentage increase in productivity over local check
Paddy	Kharif	1. Seed/Variety- IR-64	Rainfed	40	31	29.03
		2. Bio-fertilizer				
		2. Fertilizer management – 120:80:60 (NPK kg/ha)				
		4. Plant Protection -				
		5. Combination of components				



Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	Water use efficiency
2	Higher yield

Farmers' reactions on specific technologies

S. No	Feed Back
1	Requires skill and more labour for weeding
2	Withstand lodging and give higher yield

Crop	Season	Component	Farming situation	Average yield (q/ha)	Local check (q/ha)	Percentage increase in productivity over local check
Tomato	Rabi	Variety: Megha 1	Rainfed	311	214	31.2
		Biofertilizer				
		Fertilizer: 100:70:60 (NPK kg/ha)				
		Plant protection : Indofil M-45				
		Combination				

Feedback

1	Megha -1 is a good variety for the district giving a high yield but due to irrigation problem large scale cultivation cannot be taken up
2	Very low pest/disease problem and results in good return

Feedback

1	Pulpy and more juice but Less seed content for seed preservation
2	If irrigation facility is assured they want to take up on commercial scale
3	Minimum wastage due to less pest infestations.

Crop	Season	Component	Farming situation	Average yield (q/ha)	Local check (q/ha)	Percentage increase in productivity over local check
Broccoli	Rabi	Variety: Pushba	Rainfed	75	46	24.6
		Biofertilizer				
		Fertilizer: 90:80:60 (NPK kg/ha)				
		Plant protection:				
		Combination				

Feedback

1	New crop but farmers are aware about its value.
2	Requires more and better managerial practices.

Feedback

1	Fetches good price in the local market
2	Want to take up in commercial scale but shelf life is short

Crop	Season	Component	Farming situation	Average yield (q/ha)	Local check (q/ha)	Percentage increase in productivity over local check
Soybean	Kharif	1. Seed/Variety- JS- 335	Rainfed	11.2	8.5	
		2. Bio-fertilizer				
		3. Fertilizer management – 20:40:20 (NPK kg/ha)				
		4. Plant Protection -				
		5. Combination of components				

Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	Plant height is much shorter than the local varieties with higher yield
2	Can be grown as intercrop along with paddy, less insect pest problem

Farmers' reactions on specific technologies

S. No	Feed Back
1	Withstand lodging problem
2	Crop duration is shorter than the local varieties

Crop	Season	Component	Farming situation	Average yield (q/ha)	Local check (q/ha)	Percentage increase in productivity over local check
French bean	Spring	1. Seed/Variety- local Mutre	Rainfed	13.3	11.2	
		2. Bio-fertilizer				
		3. Fertilizer management				
		4. Plant Protection				
		5. Combination of components				

Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	To get additional income before the kharif paddy sown
2	To reclaim soil fertility

Farmers' reactions on specific technologies

S. No	Feed Back
1	Within a short period, good extra income generate
2	Next crop (paddy) is not effect by taken up the crop

Crop	Season	Component	Farming situation	Average yield (q/ha)	Local check (q/ha)	Percentage increase in productivity over local check
Toria	Rabi	1. Seed/Variety- TS - 38	Rainfed	6.82	5.65	
		2. Bio-fertilizer				
		3. Fertilizer management – 25:30:15 (NPK kg/ha)				
		4. Plant Protection – Rogor @ 1ml/lit of water against aphid				
		5. Combination of components				

Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	Can withstand more moisture stress compared to local
2	Late sown variety and suitably suit crop rotation

Farmers' reactions on specific technologies

S. No	Feed Back
1	Can be sown after paddy since it can tolerate late sown condition
2	Higher yield than local cultivars

Crop	Season	Component	Farming situation	Average yield (q/ha)	Local check (q/ha)	Percentage increase in productivity over local check
Rice bean	Rabi	1. Seed/Variety- Chakesang local dwarf	Rainfed	8.86	7.9	11.9
		2. Bio-fertilizer				
		3. Fertilizer management				
		4. Plant Protection				
		5. Combination of components				

Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	Can be grown as rally crop with Jhum paddy
2	Enhance soil fertility for next crop

Farmers' reactions on specific technologies

S. No	Feed Back
1	Farmers prefer its bushy character as it reduce labour for weeding and cost of staking
2	Pod size are bigger and yield is more with the local cultivars

Crop	Season	Component	Farming situation	Average yield (q/ha)	Local check (q/ha)	Percentage increase in productivity over local check
Pea	Rabi	1. Seed/Variety- Arkel	Rainfed	13.55	11.9	14.25
		2. Bio-fertilizer				
		3. Fertilizer management – 20:40:20 (NPK kg/ha)				
		4. Plant Protection - Bavistin				
		5. Combination of components				

Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	As crop rotation after paddy instead of leaving the field fallow
2	High yielding

Farmers' reactions on specific technologies

S. No	Feed Back
1	Fetch good return
2	Require staking for better yield

Crop	Season	Component	Farming situation	Average yield (q/ha)	Local check (q/ha)	Percentage increase in productivity over local check
Groundnut	Rabi	1. Seed/Variety- JL-24	Rainfed	9.6	8.4	14.48
		2. Bio-fertilizer				
		4. Fertilizer management – 20:40:20 (NPK kg/ha)				
		4. Plant Protection - Bavistin				
		5. Combination of components				

Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	Can be grown as intercrop along with maize
2	Require less managerial practices and improve soil fertility

Farmers' reactions on specific technologies

S. No	Feed Back
1	Earn additional return
2	Supply of seed and market linkage improvement is required

Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	9	27/11/10, 12/03/11, 06/12/10, 30/11/10, 28/02/11, 24/02/11, 16/12/10, 05/01/11, 16/11/10	320	Farmers are willing to take up the new and improved technologies on a larger scale. But are apprehensive on sufficient availability of inputs and seeds.
2	Farmers Training	9	17/03/10, 07/09/10, 17/09/10, 27/05/10, 08/01/11, 01/11/10, 15/06/10, 06/10/10, 31/05/10	210	Provided proper platform for helping the farmers develop required skills and knowledge
3	Media coverage	6			News paper coverage, Radio talk
4	Training for extension functionaries	2	06/10/10, 29/10/10	37	Facilitates update knowledge on new improved technologies

c. Details of FLD on Enterprises: NA

(i) Farm Implements

Name of the implement	crop	No. of farmers	Area (ha)	Performance parameters / indicators	* Data on parameter in relation to technology demonstrated		% change in the parameter	Remarks
					Demon.	Local check		

(ii) Livestock Enterprises:

Enterprise	Breed	No. of farmers	No. of animals, poultry birds etc.	Performance parameters / indicators	* Data on parameter in relation to technology demonstrated		% change in the parameter	Remarks
					Demon.	Local check		
Pig	Local upgraded	20	158	Body weight at weaning (2 Months)	7.7 Kg	7 kg	10% more in body weight at weaning	Altogether 158 piglets were involved of which 79 piglets were given iron supplementation (injection) and the other half 79 were not given the iron supplementation. Of the 79 piglets that were not given iron supplementation 32 numbers suffered from piglet anemia of which two died









Integrated Pest Management	1				8	7	15	8	7	15
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Formation and Management of SHGs	1				9	9	18	9	9	18
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application	1				9	8	17	9	8	17
Care and maintenance of farm machinery and implements										
WTO and IPR issues										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Women and Child care										
Low cost and nutrient efficient diet designing										
Production and use of organic inputs										
Gender mainstreaming through SHGs										
<b>TOTAL</b>	<b>3</b>				<b>26</b>	<b>24</b>	<b>50</b>	<b>26</b>	<b>24</b>	<b>50</b>

#### B: OFF Campus

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
(A) Farmers & Farm Women										
I Crop Production										
Weed Management										
Resource Conservation Technologies	1				11	14	25	11	14	25
Cropping Systems										
Crop Diversification										
Integrated Farming										
Water management	1				12	13	25	12	13	25
Seed production										
Nursery management										
Integrated Crop Management										
Fodder production										
Production of organic inputs										
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops										
Off-season vegetables										
Nursery raising	1				10	15	25	10	15	25
Exotic vegetables like Broccoli										
Export potential vegetables										
Grading and standardization										
Protective cultivation (Green Houses, Shade Net etc.)										
b) Fruits										
Training and Pruning										
Layout and	1				13	12	25	13	12	25

















Repair and maintenance of farm machinery and implements										
Nursery Management of Horticulture crops	1				14	11	25	14	11	25
Training and pruning of orchards										
Value addition	1				13	19	32	13	19	32
Production of quality animal products										
Dairying	1				14	11	25	14	11	25
Sheep and goat rearing										
Quail farming										
Piggery	1				14	11	25	14	11	25
Rabbit farming										
Poultry production										
Ornamental fisheries										
Para vets										
Para extension workers										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Small scale processing										
Post Harvest Technology	2				26	24	50	26	24	50
Tailoring and Stitching										
Rural Crafts										
TOTAL	11				148	138	286	148	138	286
(C) Extension Personnel										
Productivity enhancement in field crops										
Integrated Pest Management	1				8	7	15	8	7	15
Integrated Nutrient management	1				9	6	15	9	6	15
Rejuvenation of old orchards										
Protected cultivation technology										
Formation and Management of SHGs	1				9	9	18	9	9	18
Group Dynamics and farmers organization										
Information networking among farmers	1				11	9	20	11	9	20
Capacity building for ICT application	1				9	8	17	9	8	17
Care and maintenance of farm machinery and implements										
WTO and IPR issues										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Women and Child care										
Low cost and nutrient efficient diet designing										
Production and use of organic inputs										
Gender mainstreaming through SHGs										
TOTAL	5				46	39	85	46	39	85



Note: Please furnish the details of above training programmes as Annexure in the proforma given below

Date	Clientele	Title of the training programme	Discipline	Thematic area	Duration in days	Venue (Off / On Campuses)	Number of other participants			Number of SC/ST			Total number of participants				
							Male	Female	Total	Male	Female	Total	Male	Female	Total		

**D) Vocational training programmes for Rural Youth**

Crop / Enterprise	Date	Training title*	Identified Thrust Area	Duration (days)	No. of Participants			Self employed after training			Number of persons employed elsewhere
					Male	Female	Total	Type of units	Number of units	Number of persons employed	
Vermicompost	5/7/10 to 9/7/10	Vermicompost as enterprise	Income generation	5	10	15	25	Compost tank	12	12	-

**(E) Sponsored Training Programmes**

Sl. No	Date	Title	Discipline	Thematic area	Duration (days)	Client (PF/R/Y/EF)	No. of courses	No. of Participants									Sponsoring Agency	Amount of fund received (Rs.)
								Others			SC/ST			Total				
								M	F	T	M	F	Tot	M	F	Tot		
1	08/12/10	Processing of fruits	Hor.	Fruit preservation	2	RY	2	-	-	-	13	19	32	13	19	32	ATMA	20,000
2	11/05/10	Composite fish farming	Fishery	Fish farming	1	PF	1	-	-	-	14	13	27	14	13	27	ATMA	10,000
3	15/02/11	Management of Eri worm	Seri	Silkworm production	2	RY	2	-	-	-	12	17	29	12	17	29	ATMA	15,000
4	11/03/11	IPM on paddy	Ent	Pest management	1	EF	1	-	-	-	11	9	20	11	9	20	Host Inst.	30,000
5	19/03/10	Paddy-cum-fish culture	Agr	Integrated farming system	2	PF	1				18	8	26	18	8	26	DAO	15,000
6	16/02/10	Cultivation of tapioca	Agri.	Tuber crop production	2	PF	1				26	24	50	26	24	50	ATMA	12,000
<b>Total</b>					<b>10</b>		<b>8</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>94</b>	<b>90</b>	<b>184</b>	<b>94</b>	<b>90</b>	<b>184</b>		

## 3.4. Extension Activities (including activities of FLD programmes)

Sl. No.	Nature of Extension Activity	Purpose/ topic and Date	No. of activities	Participants											
				Farmers (Others)(I)			SC/ST (Farmers)(II)			Extension Officials(III)			Grand Total (I+II+III)		
				Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1.	Field Day	27/11/10, 12/03/11, 06/12/10, 30/11/10, 28/02/11, 24/02/11, 16/12/10, 05/01/11, 16/11/10	9	-	-	-	120	184	304	12	4	16	132	188	320
2.	Kisan Ghosthi		1				15	25	40				15	25	40
3.	Exhibition		2												
4.	Film Show		4												
5.	Farmers Seminar		1				8	11	19				8	11	19
6.	Workshop														
7.	Group meetings		6				82	103	185				82	103	185
8.	Lectures delivered as resource persons		15												
9.	Newspaper coverage		2												
10.	Radio talks		8												
11.	Advisory Services		6				17	11	28				17	11	28
12.	Scientific visit to farmers field		12				28	44	72				28	44	72
13.	Farmers visit to KVK		25				158	212	370				158	212	370
14.	Diagnostic visits		5				9	6	15				9	6	15
15.	Animal Health Camp		2				88	90	178				88	90	178
16.	Self Help Group Conveners meetings		11				85	47	132				85	47	132
	<b>Grand Total</b>		<b>109</b>				<b>610</b>	<b>733</b>	<b>1343</b>	<b>12</b>	<b>4</b>	<b>16</b>	<b>622</b>	<b>737</b>	<b>1359</b>

## 3.5 Production and supply of Technological products

## SEED MATERIALS

Major group/class	Crop	Variety	Quantity (qtl.)	Value (Rs.)	Provided to No. of Farmers
CEREALS	Paddy	SARS-1 & 2	6	6000	24
<b>OILSEEDS</b>					
	Toria	TS-38	1	4500	35
<b>PULSES</b>					
	Pea	Arkel	1.5	3000	10
<b>VEGETABLES</b>					
	Tomato	Megha-1 & 10	0.01	16000	25
<b>FLOWER CROPS</b>					
<b>OTHERS (Specify)</b>					

## SUMMARY

Sl. No.	Major group/class	Quantity (qtl.)	Value (Rs.)	Provided to No. of Farmers
1	CEREALS	6	6000	24
2	OILSEEDS	1	4500	35
3	PULSES	1.5	3000	10
4	VEGETABLES	0.01	16000	25
5	FLOWER CROPS			
6	OTHERS			
	<b>TOTAL</b>	<b>8.51</b>	<b>29500</b>	<b>94</b>

**PLANTING MATERIALS**

Major group/class	Crop	Variety	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
<b>FRUITS</b>					
<b>SPICES</b>					
<b>VEGETABLES</b>	Banana	Grand naine	1500	7500	25
<b>FOREST SPECIES</b>					
	Alder	Local	500	2500	10
<b>ORNAMENTAL CROPS</b>					
<b>PLANTATION CROPS</b>					
<b>Others (specify)</b>					

**SUMMARY**

Sl. No.	Major group/class	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
1	FRUITS			
2	VEGETABLES	1500	7500	25
3	SPICES			
4	FOREST SPECIES	500	2500	10
5	ORNAMENTAL CROPS			
6	PLANTATION CROPS			
7				
	<b>TOTAL</b>	<b>2000</b>	<b>10000</b>	<b>35</b>

**BIO PRODUCTS :**

Major group/class	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			No	(kg)		
<b>BIOAGENTS</b>						
<b>BIOFERTILIZERS</b>						
<b>BIO PESTICIDES</b>						
<b>Other</b>	Vermicompost	<i>Easinia foedita</i>		500	5000	20

**SUMMARY**

Sl. No.	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			Nos	(kg)		
1	BIOAGENTS	<i>Easinia foedita</i>		500	5000	20
2	BIO FERTILIZERS					
3	BIO PESTICIDE					
	<b>TOTAL</b>					

**LIVESTOCK :**

Sl. No.	Type	Breed	Quantity		Value (Rs.)	Provided to No. of Farmers
			(Nos)	Kgs		
<b>Cattle</b>						
<b>SHEEP AND GOAT</b>						
<b>POULTRY</b>	30 days old Chicks	Vanaraja	400		22000	20
<b>FISHERIES</b>						
<b>Others (Specify)</b>						

**Summary**

Sl. No.	Type	Breed	Quantity		Value (Rs.)	Provided to No. of Farmers
			Nos	Kgs		
1	CATTLE					
2	SHEEP & GOAT					
3	POULTRY	Vanaraja	4000		22,000	20
4	FISHERIES					
5	OTHERS					
	<b>TOTAL</b>					

**3.6. 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 of copies
Technical reports			
News letter	KVK Mokokchung, News letter	KVK Mokokchung	500
Popular articles			
Leaflets/folders	<ul style="list-style-type: none"> <li>• Package &amp; practices of Broccoli</li> <li>• Importance of book keeping and their usage for SHG</li> <li>• Package &amp; practices of Groundnut</li> <li>• IPM on Citrus</li> <li>• Package of common management practices recommended for Goat rearing</li> <li>• Banana orchard management</li> </ul>	KVK Mokokchung	1200
Total	6		
<b>Grand total</b>	<b>7</b>		<b>1700</b>

N.B. Please enclose a copy of each. In case of literature prepared in local language please indicate the title in English

**(C) Details of Electronic Media Produced :NA**

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

**3.8 Give details of innovative methodology/technology developed and used for Transfer of Technology during the year : NA**

**3.9 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):NA**

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

**3.10 Indicate the specific training need analysis tools/methodology followed for**

**3.11 Field activities**

- i. Number of villages adopted : 3
- ii. No. of farm families selected : 18
- iii. No. of survey/PRA conducted : 3

**3.12. Activities of Soil and Water Testing Laboratory :NA**

Status of establishment of Lab :

- 1. Year of establishment :
- 2. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost
1			
Total			

3. Details of samples analyzed so far :

Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized
Soil Samples				
Water Samples				
Plant Samples				
Petiole Samples				
Total				

**4.0 IMPACT**

**4.1. 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)
Cultivation of Broccoli (Pushpa)	5	60	-	60,050/ ha
Cultivation of tomato (Megha -1)	6	45	-	2,85,000/ha
Cultivation of pea (Arkel)	4	65	12,500/ha	27,140/ha
Cultivation of Toria (TS-38)	6	45	-	10,304/ha

**4.2. Cases of large scale adoption: NA**  
(Please furnish detailed information for each case)

**4.3 Details of impact analysis of KVK activities carried out during the reporting period**

**IMPACT STUDY REPORT**

In spite of concerted effort to make the farmers adopt new and improved technologies the farmers mindset is still cling to the existing traditional system of farming. For the farmers of the Mokokchung district diversity in the farming system is fundamental, this is manifested by the fact that jhum still dominates the farming system. In a typical jhum field many different crops are found – cereals, pulses, tuber crops and a wide variety of vegetables. These crops present the diversity in the existing farming system. Diversity remains to be unsystematic and the overall income from agriculture remains low. Thus with a view to streamline the diverse farming activities and to enhance the income of the farmers for ensuring livelihood security KVK Mokokchung undertook different mandated programmes in the operational villages.

Some of the major interventions were System of Rice Intensification (SRI) in the WRC/TRC fields. This is a new rice production system which provides efficient use of water and gives much higher yield than the traditional system. It is anticipated that this system will ensure food security and withstand effects of climate change on agriculture. FLD on SRI was conducted very successfully and many farmers are adopting this system and more areas are being brought under this system of cultivation. Tomato is already a popular crop among the farmers but the local varieties are low yielding. Introduction and demonstration of Megha-1 Variety which is well known for its better fruit size, production and less susceptibility to fruit borer has already become popular among the farmers.

Vegetable cultivation in the district occupies a significant position but there is still deficit in production. Broccoli a high value nutritionally superior vegetable has been widely been accepted by the farmers. This crop which is new to the district of Mokokchung district is doing well and is fetching good economic returns to the farmers. It has been well accepted even by urban dwellers and has started growing in every available space.

Oil seed production in the district is very minimal due to a variety of reasons- such as food habits, lack of processing facilities, lack of irrigation facilities and dependence on rainfed agriculture. In addition non availability of vacant fields during sowing seasons due to standing crops has been a hurdle. A cultivation practice has hampered the cultivation of other oilseeds which are sown in the month of Oct. during which crops are still on the field for harvesting. However with the introduction of Toria (TS-38) which is a late sown and more moisture stress tolerant, the farmers has gradually taking interest in cultivation of toria. Demonstration on cultivation of pea and ricebean is getting more popular due to the advantages and the additional income that is generated.

Among the livestock, Swine production is the most popular enterprise. One of the significant problems encountered in swine production is the losses incurred by sow breeder due to piglet anemia. Losses due to mortality and poor growth of the piglets have been a major problem. Demonstration of supplementing piglets with iron injections has shown that piglet anemia can be prevented thus ensuring better economic returns. Farmers are now aware of piglet anemia and its preventive measures that can be initiated.

**Constrains and Future Strategies**

Some of the constrains observed and encountered are- lack of availability of farm implements like weeders ( in case of SRI), sometimes seeds are not available at the right time and in other cases the farmers are reluctant and apprehensive for adopting the new technologies. Constant, regular updating of knowledge of the technical staffs will be essential for further advise and support the farmers. At the same time developing linkages with input/seeds suppliers and ensuring their availability will play a critical role for the farmers to adopt and continue practicing new and improved technologies.

**5.0 LINKAGES**

**5.1 Functional linkage with different organizations**

Name of organization	Nature of linkage
State Agricultural Research Station (SARS) Yisemyong, AICRIP	Joint implementation in conducting training, demonstration, meeting, trials etc.
DAO, DHO, DVO, DSCO, DFO,LRD in the district	Conducting training, demonstration programmes
ICAR, Jharnapani, Nagaland University	Consultation, meeting and exchange of technologies
AIR Doordashan Mokokchung	Technology dissemination through broadcasting (AIR )
NABARD, NSCB, SBI	Joint implementation in forming farmers ' clubs



### 6.5 Rainwater Harvesting:

#### Training programmes conducted by using Rainwater Harvesting Demonstration Unit :

Date	Title of the training course	Client (PF/R/Y/EF)	No. of Courses	No. of Participants including SC/ST			No. of SC/ST Participants		
				Male	Female	Total	Male	Female	Total
23/03/10	Low cost rain water harvesting structure	PF	2	32	18	50	32	18	50

### 6.5 Utilization of hostel facilities: NA

Accommodation available (No. of beds) :

Months	Title of the training course/Purpose of stay	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)

## 7. FINANCIAL PERFORMANCE

### 7.1 Details of KVK Bank accounts

Bank account	Name of the bank	Location	Account Number
With Host Institute	SBI	Lerie , Kohima	01000050059
With KVK	SBI	Mokokchung	01000050913

### 7.2 Utilization of funds under FLD on Oilseed (Rs. In Lakhs):NA

Item	Released by ICAR		Expenditure		Unspent balance as on 1 <sup>st</sup> April 2009
	Kharif 2008	Rabi 2009 -10	Kharif 2008	Rabi 2009-10	

### 7.3 Utilization of funds under FLD on Pulses (Rs. In Lakhs):NA

Item	Released by ICAR		Expenditure		Unspent balance as on 1 <sup>st</sup> April 2009
	Kharif 2008	Rabi 2008 -09	Kharif 2008	Rabi 2008-09	

### 7.4 Utilization of funds under FLD on Cotton (Rs. In Lakhs): NA

Item	Released by ICAR	Expenditure	Unspent balance as on 1 <sup>st</sup> April 2008
	Kharif 2007	Kharif 2007	
Inputs			
Extension activities			
TA/DA/POL etc.			
TOTAL			

### 7.5 Utilization of KVK funds during the year 2010 -11

S. No.	Particulars	Sanctioned	Released	Expenditure
<b>A. Recurring Contingencies</b>				
1	Pay & Allowances	50	55	55
2	Traveling allowances	2.0	2.0	2
3	Contingencies	8	8	8
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	1.6	1.6	1.6
B	POL, repair of vehicles, tractor and equipments			
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	6.4	6.4	6.4
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)			
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)			
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)			
G	Training of extension functionaries			
H	Maintenance of buildings			
I	Establishment of Soil, Plant & Water Testing Laboratory			
J	Library			
<b>TOTAL (A)</b>		<b>60.00</b>	<b>65.00</b>	<b>65.00</b>

<b>B. Non-Recurring Contingencies</b>				
1	<b>Works</b>	76.51		
	a) Staff quarter (new)	49.37	15	15
	b) Boundary fencing (new)	17.26	12	12
	c) Rain water harvesting structure	9.88	5	5
2	<b>Equipments including SWTL &amp; Furniture</b>			
3	<b>Vehicle</b> (Four wheeler/Two wheeler, please specify)			
4	<b>Library</b> (Purchase of assets like books & journals)	0.10	0.10	0.10
5	<b>Soil and water testing lab</b>	14.00	Nil	Nil
<b>TOTAL (B)</b>		<b>90.61</b>	<b>32.1</b>	<b>32.1</b>
<b>C. REVOLVING FUND</b>				
<b>GRAND TOTAL (A+B+C)</b>		<b>150.61</b>	<b>97.1</b>	<b>97.1</b>

#### 7.5 Status of revolving fund (Rs. in lakhs) for the three years

Year	Opening balance as on 1 <sup>st</sup> April	Income during the year	Expenditure during the year	Net balance in hand as on 1 <sup>st</sup> April of each year
31/7/2009	100000	15000	20000	95000
2010	95000	45000	15000	1,25,000
2011	1,25,000	35000	15000	1,45,000

#### 8.0 Please include information which has not been reflected above (write in detail).

##### 8.1 Constraints

- |                     |   |
|---------------------|---|
| (a) Administrative: | Construction of Farmers hostel, Demonstration unit (2), Development of instructional farm |
| (b) Financial :     | Shortage of fund ie. Meals/farmer@ Rs. 75 per trainee is too less.                        |
| (c) Technical:      | Lack of farm machineries like power tiller, pumping set, e-connectivity etc.              |

Annexures

#### District Profile - I

##### Include the details of

General census

##### Basic information about Mokokchung district:

- Population Census (2001)
  - Total Population - 2,27,230
  - Rural Population - 1,96,026
  - Cultivators - 1,33,020
  - % of farming population - 58.54%
- Total geographical area - 1,615 Sq km.
- Average Jhum Cycle - 10.5 yrs
- Food grain Production - 36731 MT
- Commercial Crops Production - 52726 MT
- Oilseed production - 1013 MT

Agricultural and allied census

Area, Production and Productivity of major crops cultivated in the district

Sl.No.	Crop	Area (ha)	Production (Qtl)	Productivity(Qtl/ha)
1	Jhum paddy	11390	246400	21.63
2	TRC paddy	4960	153000	30.84
3	Maize	1028	16345.2	15.9
4	Tapioca	1050	308910	294.2
5	Mustard	795	5000	06.3
6	Tomato	28	7600	271.4
7	Potato	125	9375	75
8	Colocassia	1500	180000	120
9	Passion fruit	908	63560	70
10	Orange	460	20700	45
11	Banana	270	3888	144.4
12	Pineapple	340	238000	700
13	Pear	16	3500	218.7
14	Tea	520	3120	6 (made tea)
15	Arecanut	44	600	15



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

Category	Population	Production	Productivity
Cattle			
<i>Crossbred</i>	2125	29.87 tons milk	6 litres/day
<i>Indigenous</i>	1437	-	-
Buffalo	250	-	-
Goats	3278	14.75 tons	9 kg/year
Pigs			
<i>Crossbred</i>	81,345	2870 tons	110 kg/year
Hens	1,01,287	3000	20 eggs/year
<i>Desi</i>	20,12,325	1042 tons	1.1 kg/8 months
Ducks	491	290 kg	1 kg/6 months
Turkey and others			

Category	Area	Production	Productivity
<i>Inland</i>	5,00,000	10 tons	1 kg/year
Prawn			

Agro-climatic zones

No	Agro-climatic Zone	Characteristics
1	Mid Tropical hill Zone	1. Hot and humid in the foot hills to moderate in the mid and high with heavy rainfall during summer 2. Moderate to extreme cold and dry during winter

Agro-ecosystems

**Description of major agro ecological situations (based on altitude)**

No	Agro ecological situation	Characteristics
1	AES – I (Below 500 msl)	Hot & Humid with sub tropical climate
2	AES – II (500-1000 msl)	Moderate, sub-montane hill zone
3	AES – III (1000-1500 MSL)	Moderate to extreme cold and dry during winter
4	AES – IV (Above 1500 msl)	Moderate to extreme cold and dry during winter

Major and micro-farming systems

**Major farming systems existing in the district\* (based on the study made by the KVK)**

No	Farming systems identified
1	Agriculture + Horticulture
2	Agriculture + Veterinary
3	Agriculture + Fishery
4	Agriculture + Horticulture + Veterinary + Fishery

Major production systems like rice based (rice-rice, rice-green gram, etc.), cotton based, etc.

- ✓ Jhum paddy based mixed cropping system like jhum paddy-colocassia-beans-maize
- ✓ Low land paddy based followed by oilseed and vegetable

Major agriculture and allied enterprises

- ✓ Agriculture + Horticulture
- ✓ Agriculture + Animal Husbandry
- ✓ Agriculture + Horticulture + Fishery

**Agro-ecosystem Analysis of the focus/target area - II**

**Include**

**Names of villages, focus area, target area etc.**

S.No	Target area	Agro- ecosystem	Survey method
1	Kobulong	AES – III	PRA, transect walk, matrix ranking, bio resource flow model
2	Longkhum	AES-IV	
3	Merangkong	AES-II	
4	Longpayimsen	AES-I	
5	Aliba	AES-III	

**Survey methods used (survey by questionnaire, PRA, RRA, etc.)**

- ✓ PRA

**Various techniques used and brief documentation of process involved in applying the techniques used like release transect, resource map, etc.**

- ✓ Participatory method of resource mapping on the ground using leaves, stones, twigs and other materials. Major enterprises were displayed on a chart and the participants were asked to rank the enterprises as per their preference

### Analysis and conclusions

- ✓ Along with the participants the results were compiled in a fresh chart paper and the major enterprises were displayed in accordance to their ranking. With the compiled results, discussion and interaction among the participants was conducted and a list of priority wise was jot out.

### List of location specific problems and brief description of frequency and extent/ intensity/severity of each problem

Problem	Frequency and extend	Intensity	severity
Deforestation	Cutting down of forest area for Jhum every year covering a large area	Approx. 5000ha. were effect due to deforestation	High – Jhum cycle isdecreasing year by year
Marketing	Lack of organised market system	Throughout the year	High
Indigenous germplasm	Indigenous germplasm is disappearing rapidly	75% in crops, 40% in livestock	High
Livestock feeds	During dry season	Covered all livestock	High
Post harvest	Seasonal, whole district	All crops especially perishable items	High
Processing	Seasonal, whole district	Horticulture crops	High

### Matrix ranking of problems

1. Deforestation
2. Marketing
3. Post harvest and processing
4. Indigenous germplasm
5. Livestock feed

### List of location specific thrust areas

- Appropriate monitoring, evaluation and information systems to facilitate proper planning and effective implementation in Agri & allied sectors.
- Co-ordination & synchronizing in various activities of small farmers with those of the large and medium farmers so as to improve the prospects of growth for the small farmers.
- Shaping agriculture and allied sectors to commercial enterprise through individual ownership and joint cultivation.
- Implementation of IPM. INM and identification of botanical and other bio control measures for insect pest management.
- Popularization of low cost and high efficiency farm machinery tools and implements.
- Production of certified seeds/ quality planting materials and popularizing newer HYV.
- Collaboration with multi-disciplinary departments/institutions/organizations/ agencies such as ICAR, SAU and CAV, NABARD, ZSI, BSI, NRC on Mithun, NEPED, State Deptts, ATMA, knowledge partnership for NEH Region etc.
- Promotion of suitable crop rotations and integrated plant nutrient management for better soil productivity.
- Strengthening the marketing channels and credit linkage.
- Identification, characterization, documentation and conservation of indigenous local cultivars in agriculture and allied sectors.
- Strengthening and streamlining the data recording system for better traceability, assistance in efficient implementation of breeding policies and avoid flock of mixed unknown genome with poor productivity.
- Infrastructure development.
- HRD programmes for capacity building.
- Promotion of horticulture and floriculture as well as of medicinal and aromatic plants and herbs, including organic farming and post harvest technology and value addition of different produces.
- Promotion of all forms of animal husbandry, fisheries, dairying and bird life accompanied by promotion of fodder cultivation and sustained availability of animal feed and identification analysis of indigenous fodder crop.
- Documentation, validation and promotion of ITKs in livestock and poultry production system.
- Developing modules to strengthen service delivery in Agri and Allied sectors.
- Promoting knowledge and skill transfer and application of ICT.

### List of location specific technology needs for OFT and FLD

Crop/enterprise	Technology	OFT	FLD
Toria	TS -36	INM on toria	-
	TS- 38		Late sowing with 25% higher seed rate
Broccoli	Pushpa	-	Promotion of high value crop
Tomato	Megha-1 &10	-	Popularization of high yielding varieties
King Chilli	Naga chilli	Mixed cropping with Jhum paddy	-
Rice	SARS-2	-	Application of lime
Piggery	Hampshire	Upgrade local pigs with Hampshire inheritance	-

### Matrix ranking of technologies

1. SARS-2
2. Megha -1&10
3. Hampshire
4. TS-36 &38
5. Pushpa
6. Naga chilli

### List of location specific training needs

1. Planning for early vegetables to get higher returns, resource conservation technologies, nutrition garden, soil fertility management, scope for farm mechanization and management of livestock's
2. Proper management of spices and tuber crops, integrated plant nutrient management, Introduction of high yielding breeds of pig, poultry etc. and their management.
3. Processing of fruits and vegetables, propagation of fruits and vegetables and lay out and management of orchards
4. Production of low volume high value crops
5. Soil conservation, soil fertility management and introduction of improved farm tools and implements
6. Training and pruning of fruit plants, organic cultivation of fruits and vegetables, Bio control of pests and diseases, IPM, location specific drudgery reduction technologies, soil water testing and vaccination and health care for animals
7. Rejuvenation of declining orchards, management of medicinal and aromatic plants, soil nutrient management, vaccination and health care for animals, mother and child care
8. Short duration HYV paddy , SRI method, Vermi-compost and vermin-wash making technique, Production of hybrid maize, QPM and baby corn, Water management, Improved jhuming and fallow management, Seed production in oilseed
9. Production of off-season vegetables, Production of cole crops, INM in vegetable crops, Training and pruning of fruit trees, Layout and management of orchard, Nursery raising and management, INM in fruit crops
10. Swine fever – Prevention, Treatment and control, Promotion of pig breeding farm, balance feeding for economic livestock production
11. IPM on paddy and maize, Rodent control/ management, Pesticide formulation and safe handling, Care and up-keepment of PP equipment, Care and management of apiary
12. Production of quality seeds and planting materials, Selection and hybridization, Bio-diversity conservation of endangered species
13. Gender sensitization, Development of women entrepreneurs in agri and allied sectors, Use of PRA tools, mobilization of social capital in villages, Formation and management of SHGs/ CIGs

### Focus areas of KVK

- Replacing the long duration Kharif TRC Paddy Varieties with short duration HYV
- Promotion of SRI
- Collection, selection and screening of the local variety of crops
- Creation and recognition of role models amongst farming community
- Post harvest processing and value addition in important agri-horti commodities.
- Conducting OFT and FLD with their critical evaluation for feed back or feed forward
- Development and publication of need based literatures, newsletters, leaflets, pamphlets, manual etc.
- Optimization of crop nutrient requirement through organic and IFS.
- Identification and use of microbes for fast decomposition of organic/crop residues and promotion of organic fertility.
- Rain water harvesting, in-situ conservation of water and their judicious use through micro irrigation.
- Promoting feed and fodder resources including locally available fodder for livestock, upgradation of local breeds, management and health care.
- Formation of SHG and promotion of storage, processing and value addition.
- Socio-economic viability approaches.
- Problem identification of the area with community participation approach (PRA) etc.
- Conduction, seminar, trainings, exhibition, conference and workshop etc.
- Development of farmers database.
- HRD, Monitoring evaluation, impact analysis and follow up reporting.
- Documentation on lesser known wild edibles of the district.
- Development of Integrated Farming System Model in the district

### Technology Inventory and Activity Chart – III

#### Include

1. Names of research institutes, research stations, regional centres of NARS (SAU and ICAR) and other public and private bodies having relevance to location specific technology needs
  - ICAR, SARS, AAU, NU, SASRD
2. Inventory of latest technology available

Sl. No	Technology	Crop/enterprise	Year of release or recommendation of technology	Source of technology	Reference/citation
1.	TS -36 & 38	Toria	2006	RARS, Shillongani, NRC on Rapeseed – Mustard, Bharatpur	NA
2.	Megha-1&10	Tomato	2005	ICAR, Barapani	NA
3	Vanaraja	Poultry	2005	PDP	NA
4	HQPM-1	Maize	2005	CCSHAU, Karnal	NA

### 3. Activity Chart

Crop/Animal/Enterprise	Problem	Cause	Solution	Activity	Reference of Technology
Toria	Low production under rainfed condition	1. Use of old aged local cultivars 2. Non adoption of water conservation	1.Introduction of HYV and moisture stress Tolerant varieties 2.Practice of mulching using paddy straw	1.Single component FLD to demonstrate effect of paddy straw as mulch material 2.OFT on HYV	NA
Tomato	Low production	1. use of local varieties 2.non adoption of recommended practices 3. non availability of improved seeds	1. Introduction of high yielding varieties, 2. adoption of recommended practices	1. training and FLD programme on recommended practices 2. OFT on HYV	NA
Pea	Low production	use of local varieties 2.non adoption of recommended practices 3. non availability of improved seeds	1. Introduction of high yielding varieties, 2. adoption of recommended practices	Training and FLD programme on recommended practices Introduction of HYV	NA
Piggery	Piglet anaemia	Iron deficiency	Iron supplementation	Training, Demonstration	NA

#### 1. Details of each of the technology under Assessment, Refinement and demonstration

##### Include

- a. Detailed account on varietal/breed characters for each of the variety/breed selected for FLD and OFT

Sl. No	OFT	FLD
1	Maize	Paddy
2	Toria	Tomato
3	Paddy	Broccoli
4	Tomato	Soybean
5	Passion fruit	French bean
6	Poultry	Rice bean
7	Okra	Pea
8	-	Toria
9	-	Groundnut
10	-	Piggery

- b. Details of technologies that may include formulation, quantity, time, methods of application of nutrients, pesticides, fungicides etc., for technologies selected under FLD and OFTs
- c. Details of location/area specificity of recommended technology viz., for each of the variety/breed/technology selected for FLD and OFT
1. Toria (TS -38) (FLD)
  2. Vanaraja (OFT)