ANNUAL REPORT – Oct. 2009 – March 2010

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	kvkmokokchung@gmail.com kvkyisemyong@rediffmail.com

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	agrilandkvk@rediffmail.com

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

Name	Telephone / Contact		
	Residence	Mobile	Email
S. SOSANG JAMIR	0369/2228567	9436006351	sosangjamir@yahoo.in

1.4. Year of sanction : 2003

1.5. Staff Position (as on 30th September 2007)

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	17550 + 5400	24.05.06	Temporary	ST
3	Subject Matter Specialist	Akangtemjen	SMS (Entomology)	Entomology	15600 + 5400	17550 + 5400	24.05.06	Temporary	ST
4	Subject Matter Specialist	Dr. Rongsensusang	SMS (Vety. &AH)	Vety & AH	16380 + 5400	18420 + 5400	24.05.06	Temporary	ST
5	Subject Matter Specialist	Samuel Sangtam	SMS (Agronomy)	Agronomy	15600 + 5400	17550 + 5400	24.05.06	Temporary	ST
6	Subject Matter Specialist	Bendangjungla	SMS (PB &G)	PB &G	15600 + 5400	17550 + 5400	24.05.06	Temporary	ST
7	Subject Matter Specialist	Royuso Nakhro	SMS (Extension)	Agri. Extension	15600 + 5400	16880 + 5400	13.11.07	Temporary	ST
8	Programme Assistant	Moainla	Programme Asstt		10230 + 4200	11580 + 4200	24.05.06	Temporary	ST
9	Computer Programmer	I.Tangitla	Programme Asstt (Computer)		10230 + 4200	11580 + 4200	24.05.06	Temporary	ST
10	Farm Manager	Jweni Semp	Programme Asstt	-	10230 + 4200	11120 + 4200	07.11.07	Temporary	ST
11	Accountant / Superintendent	Meyatula	Office Supt-cum-Accountant		10230 + 4200	11580 + 4200	01.06.03	Temporary	ST
12	Stenographer	Imosangla	Jr. Steno-cum-Computer Operator		7440 + 2400	8370 + 2400	01.06.03	Temporary	ST
13	Driver-cum-Mechanic	Supongmeren	Driver		5680 + 1900	6400 + 1900	01.01.05	Temporary	ST
14	Driver-cum-Mechanic	Bejamin Rai	Driver		5680 + 1900	6400 + 1900	01.01.05	Temporary	SC
15	Supporting staff	Imkonglemla	Supporting staff		4750 + 1300	5330 + 1300	01.04.04	Temporary	ST
16	Supporting staff	Wati Ao	Supporting staff		4750 + 1300	5330 + 1300	01.06.03	Temporary	ST

1.6. Total land with KVK (in ha) :

S. No.	Item	Area (ha)
1	Under Buildings	0.2
2.	Under Demonstration Units	0.2
3.	Under Crops	3 (Instructional Farm)
4.	Orchard/Agro-forestry	1 ha
5.	Others (specify)	18.6

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	- do -	NA			NA	200	NA
3.	Staff Quarters (6)	- do -	NA			NA	100	NA
4.	Demonstration Units (2)	- do -	NA			NA	20	NA
5	Fencing	- do -	NA			NA	177	NA
6	Rain Water harvesting system		NA			NA		
7	Threshing floor		NA			NA		
8	Farm godown		NA			NA		

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Mahindra Marshall	2005	5.4 lakhs	76,000 km	Need replacement

C) Equipments & 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. Video Camera	2008	16,000	Good
7. Photocopier	2010	1,20,000	Good
8. Video camera	2010	18,000	Good
9. Computer	2010	45,000	Good

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

Sl.No.	Date	Name and Designation of Participants	Salient Recommendations	Action taken
1.	27/08/09	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.Bendangtemsu, 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 1. All KVK staffs	✓ Approval of all the publications ✓ Name of local check varieties to be indicated. ✓ Attention to be focused on sericulture ✓ Presentation of Annual Report 2009-10 and Action Plan 20010-11	All the recommendations were finalized and will be implemented during 2011-12

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

2. DETAILS OF DISTRICT (2006-07)

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 – 1 (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	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	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 ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
Oct	298	26.4	16.8	76.4
Nov	15.3	22.83	12.83	69.73
Dec	nil	19.3	9.2	69
Jan	nil	20.3	9.1	52.1
Feb	**3.5**	**21.9**	**10.6**	**45.3**
March	**453.5**	**25.6**	**15**	**62.5**

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

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

Category	Area	Production	Productivity
Fish			
Marine			
Inland		10 tons	1 kg/year
Prawn			
Scampi			
Shrimp			

2.6 Details of Operational area / Villages (2008-09)

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,	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	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, Collocasia, 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	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
Apiculture	Honey and wax sheets production

3. TECHNICAL ACHIEVEMENTS

3.A. Details of target and achievements of mandatory activities by KVK during Oct 2009-March 2010

OFT (Technology Assessment and Refinement)				FLD (Oilseeds, Pulses, Cotton, Other Crops/Enterprises)			
1				2			
Number of OFTs		Number of Farmers		Number of FLDs		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
4	3	12	9	2	3	14	17

Training (including sponsored, vocational and other trainings carried under Rainwater Harvesting Unit)					Extension Activities			
3					4			
Number of Courses			Number of Participants		Number of activities		Number of participants	
Clientele	Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
Farmers					32	27	810	755
Rural youth					11	9	270	250
Extn. Functionaries					6	5	121	76

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	Use of moisture stress tolerant and HYV oilseed crop	Toria	Poor yield performance of traditional var. and poor managemental practice	Performance trial on paddy straw Mulching		Cultivation of high yielding Toria crop		Field day	Seeds
2	Increase production of vegetable	Broccoli	Poor production and less aware about high value vegetables	Effect of different mulching materials		Cultivation of HYV variety		Field day	Seed
3	Promote use of local feed	Piggery	High cost of concentrate feeds	Incorporation of Dried Tapioca in the ration of Growers and Finishers					Piglets
4	Increase Production and productivity	Tomato	Poor management and low production		Cultivation of high yielding variety			Field day	Seed
5	Increase production of pulse crop	Pea	Low production and productivity		Cultivation of HYV			Field day	Seed
6	Increase production and productivity	Toria	Use of poor traditional var. leads low yield		Cultivation of high yielding and late sow variety			Field day	Seed

3.1 Achievements on technologies assessed and refined

A.1 Abstract of the number of technologies **assessed*** in respect of crops/enterprises

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Varietal Evaluation										
Seed / Plant production										
Weed Management					1					1
Integrated Crop Management										
Integrated Nutrient Management										
Integrated Farming System										
Mushroom cultivation										
Drudgery reduction										
Farm machineries										
Value addition										
Integrated Pest Management										
Integrated Disease Management										
Resource conservation technology										
Small Scale income generating enterprises										
TOTAL					1					1

A.2. Abstract of the number of technologies **refined*** in respect of crops/enterprises

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Varietal Evaluation										
Seed / Plant production										
Weed Management		1								1
Integrated Crop Management										
Integrated Nutrient Management										
Integrated Farming System										
Mushroom cultivation										
Drudgery reduction										
Farm machineries										
Post Harvest Technology										
Integrated Pest Management										
Integrated Disease Management										
Resource conservation technology										
Small Scale income generating enterprises										
TOTAL		1								1

A.3. Abstract of the number of technologies **assessed** 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					1			1
Small Scale income generating enterprises								
TOTAL					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								
TOTAL								

B. Details of each On Farm Trial to be furnished in the following format

A. Technology Assessment

Trial 1

1) Title : Performance trial on use of paddy straw as Mulch material

2) Problem diagnose/defined : Low production and poor managemental practices

3) Details of technologies selected for refinement : TS - 36
Local (farmers practice)

4) Source of technology : RARS, Shillongani

5) Production system thematic area : Rainfed paddy based system (Jhum and lowland paddy)

6) Thematic area : Resource conservation

7) Performance of the Technology with performance indicators : As per the record, TS-36 yield 7.9 qt/ha, with 36% increase in yield over traditional variety

8) Final recommendation for micro level situation : TS -36 may be grown in place of local varieties after paddy under rainfed condition

9) Constraints identified and feedback for research : Less popular among farmers due to non availability of irrigation facilities and lack of managemental knowledge. Introduction of HYV and create awareness on improved cultivation practices

10) Process of farmers participation and their reaction : Farmers shown their active participation with much enthusiasm and know the importance of mulching

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
Toria	Rainfed	Low productivity of local varieties	Performance trial on use of paddy straw as Mulch material	3	TS -36 Local (farmers practice)	- Plant height - No. of Branches - Yield	▪ Ave.36 cm ▪ Ave. 14 nos. ▪7.9 qt. (36% increased)	Better than the local (checked 5.8 qt).	Though the season was very dry compared to other years, the yield performance was satisfactory

Technology Assessed	*Production per unit (Kg/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
TS -36	790	19500	1:3
Local (farmers practice)	580	13400	1:2.2

Trial 2

1)	Title	:	Effect of different mulching on growth and yield of Broccoli
2)	Problem diagnose/defined	:	Low yield due to moisture stress and weed infestation
3)	Details of technologies selected for assessment	:	White polythene sheet, thatch, paddy, straw black polythene sheet, jute cloth, control
4)	Source of technology	:	AAU, Jorhat
5)	Production system : thematic area	Rainfed paddy based system	
6)	Thematic area	:	Mulching
7)	Performance of the : Technology with performance indicators	Mulching with black poly sheet recorded the best result in all the parameters. While the lowest was obtained from control (no mulching)	
8)	Final recommendation for: micro level situation		Black poly sheet should be recommended as a mulching material as it not only conserve moisture but also restrict entry of light to the crop zone and thereby suppresses weed growth
9)	Constraints identified and feedback for research	:	Non availability of good quality polythene sheets
10)	Process of farmers : participation and their reaction	Farmers participated actively throughout the cropping period and after seeing the performance of the crop they were convinced about the effect of mulching materials and wanted to take up in layer area, provided they get a good quality polysheet that will last longer	

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
Broccoli	Rainfed	Low yield due to moisture stress and weed infestation	Effect of different mulching on growth and yield of Broccoli	3	White polythene sheet, thatch, paddy, straw black polythene sheet, jute cloth, control (no mulching)	Plant height, head size, heat cut, no. of leaves, yield	36.7cm, 22cm, 6.56 kg, 14.4, 165.92q/ha	Black polysheet mulch superior than other mulching materials	Famers were convinced and decided to use black polysheet mulching material for large scale production

Technology Assessed	*Production per unit (Kg/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
White polythene sheet, thatch, paddy, straw black polythene sheet, jute cloth,	16592 kg/ha (black polysheet)	183880	1:3
Control (no mulching)	13185 kg/ha	142775	1:2

Trial 3

1)	Title	:	Incorporation of Dried Tapioca in the ration of Growers and Finishers (Pigs)
2)	Problem diagnose/defined	:	High cost of concentrate feeds
3)	Details of technologies selected for assessment	:	Tapioca is a very popular tuber crop in Mokokchung district, and these tubers have traditionally been feed to pigs by the farmers. But since it cannot be the sole ingredient in a balanced diet the level of its addition for achieving good growth rate is required. Addition of dried tapioca at the rate of 40% in the ration of growers and finishers was assessed.
4)	Source of technology	:	Department of Vety and AH, Pig Breeding Centre Merangkong.
5)	Production system	:	Semi Intensive system of Production
6)	Thematic area	:	Growth performance of pig fed with ration containing 40% dried tapioca.
7)	Performance of the Technology with performance indicators	:	Results showed that in a period of 12 months the live weight of the pigs were 127 Kg, where as in the control it was 123 kg.
8)	Final recommendation for micro level situation	:	Dried tapioca can be added in the ratio of growers and finisher at the rate of 40% .
9)	Constraints identified and feedback for research	:	Lack of facilities for bulk drying of tapioca, sun drying limits the production
10)	Process of farmers participation and their reaction	:	After selection of the farmers, orientation training was conducted separately for the farmers of the two villages. During the training knowledge on the importance of feed and nutrition was imparted with special attention on adding tapioca in the ration. A practical demonstration on feed computation was also done along with the farmers so that they will be able to compute the ration themselves. The farmers were thoroughly made aware of the aims and objectives of the programme. A record book for each farmer was given to them and was taught on how to maintain and update the records.

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
Piggery	Semi Intensive	High cost of concentrate feeds	Incorporation of Dried Tapioca in the ration of Growers and Finishers	12	Traditional system	Growth rate in body weight (Kg)	*123 Kg	Growth performance is slightly higher than the traditional/present system of production in which wheat bran is a major component	Lack of drying facilities
					40% dried tapioca		*127 Kg		

**** Body weight in 12 months***

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
1. Traditional system	123 Kgs in 12 months	12300	1.64
2. Ration with 40% dried tapioca	127 kgs in 12 months	12700	1.95

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 2009-10 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	Toria	Production and management	TS-38	Withstand more moisture stress compared to local varieties and gave high yield	3	8	2
2	Soybean	Pulses production	JS- 335	High yield, economic potential, enhances soil fertility	2	4	1

b. Details of FLDs implemented during 2008-09 (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	Tomato	High value vegetable production	Megha -1	Rabi	2	1	6		6	-
2	Pea	Crop production and management	Azad	Rabi	2	1	4		4	Irrigation problem
3	Toria	Crop production and management	TS-38	Rabi	2	1.5	6		6	Irrigation problem

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					
Tomato	Rabi	RF	Silt loam	1.89%	10.5 kg/ha	135 kg/ha	Paddy	22/10/09	-	300	2
Pea	Rabi	RF	Silt loam	2.2%	8.6 kg/ha	136 kg/ha	Paddy	14/10/09	-	"	6
Toria	Rabi	RF	Silt loam	1.95%	9.6kg/ha	152 kg/ha	Paddy	27/10/09	-	"	1

Performance of FLD

Sl .No	**Crop**	**Technology Demonstrated**	**Variety**	**No. of Farmers**	**Area (ha.)**	**Demo. Yield Qtl/ha**			**Yield of local Check Qtl./ha**	**Increase in yield (%)**	**Data on parameter in relation to technology demonstrated**	
						H	**L**	**A**			**Demo**	**Local**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
1	Tomato	Megha-1	Megha-1	6	1	390	320	355	204	74	Plant height-37.30cm Girth of fruit-14.67cm Weight of fruit-52.5gm Yield/ha-355 qt /ha	Plant height-48.33cm Girth of fruit-11.33cm Weight of fruit-37gm Yield/ha-204qt/ha

2	Pea	Azad	Azad	6	1.5	9.8	9.1	9.45	8.4	11.11	Plant height- 48 No. of pods/plant-32	Plant height- 52 No. of pods/plant-24
3	Toria	TS -38	TS -38	3	1.5	6.2	5.4	5.8	5.1	12.06	Plant height- 38 cm Branches/plant -5	Plant height- 36 Branches/plant-4

NB: Attach few good action photographs with title at the back with pencil

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
65000	50000	355000	204000	290000	154000	1:5.5
9000	7200	28350	25200	19350	18000	1:3.2
9000	7800	23200	20400	14200	12600	1:2.6

Analytical Review of component demonstrations (details of each component for rainfed / irrigated situations to be given separately for each season).

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
Tomato	Rabi	1. Seed/Variety- megha-1	Rainfed	355	204	74
		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 commercial vegetables only if irrigation problems can be overcome
2	Good economic returns crop

Farmers' reactions on specific technologies

S. No	Feed Back
1	Farmers prefer fruit size and its more juice contents
2	Proper management require experiment skills

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- Azad	Rainfed	9.45	8.4	12.5
		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	Require less managemental practices

Farmers' reactions on specific technologies

S. No	Feed Back
1	Earn good return
2	Require stalking for better yield

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	5.8	5.1	13.70
		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	Get sufficient time for field preparation after Jhum Paddy harvest
2	Withstand lodging and accommodate more plants giving higher yield

Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	6	12/12/09, 08/01/10, 20/02/10	200	Farmers were satisfied by imparted knowledge through seeing is believing at their own field
2	Farmers Training	3	04/10/09, 25/09/09 11/10/09	75	Four major enterprises were conducted
3	Media coverage	5			News paper coverage, Radio talk
4	Training for extension functionaries	2	06/10/09,30/10/09 03/11/09	13	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: NA

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		

(iii) Other Enterprises: NA

Enterprise	Variety/ breed/Species/others	No. of farmers	No. of Units	Performance parameters / indicators	Data on parameter in relation to technology demonstrated		% change in the parameter	Remarks
					Demon.	Local check		
Mushroom								
Apiary								
Sericulture								
Vermi compost								

3.3 Achievements on Training (Including the sponsored, vocational, FLD and trainings under Rainwater Harvesting Unit) :

A: ON 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	1				12	13	25	12	13	25
Resource Conservation Technologies	1				10	15	25	10	15	25
Cropping Systems										
Crop Diversification										
Integrated Farming										
Water management										
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				12	13	25	12	13	25
Exotic vegetables like Broccoli	1				12	13	25	12	13	25
Export potential vegetables										
Grading and standardization										
Protective cultivation (Green Houses, Shade Net etc.)										
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										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
f) Spices										
Production and Management technology										
Processing and value addition										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
III Soil Health and Fertility Management										
Soil fertility management	1				11	14	25	11	14	25
Soil and Water Conservation										
Integrated Nutrient										

Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Soil and Water Testing										
IV Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management	1				10	15	25	10	15	25
Rabbit Management										
Disease Management										
Feed management	1				13	12	25	13	12	25
Production of quality animal products										
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										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Income generation activities for empowerment of rural Women										
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care										
VI Agril. Engineering										
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										
VII Plant Protection										
Integrated Pest Management	1				12	13	25	12	13	25
Integrated Disease Management	1				13	12	25	13	12	25
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
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										
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										
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										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
TOTAL	9				105	120	225			
(B) RURAL YOUTH										
Mushroom Production	1				13	12	25	13	12	25
Bee-keeping										
Integrated farming										
Seed production										
Production of organic inputs										
Integrated Farming										
Planting material production										
Vermi-culture										
Sericulture	1				12	13	25	12	13	25
Protected cultivation of vegetable crops										
Commercial fruit production										

Repair and maintenance of farm machinery and implements										
Nursery Management of Horticulture crops	1				11	14	25	11	14	25
Training and pruning of orchards										
Value addition	1				15	10	25	15	10	25
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery	1				15	10	25	15	10	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	1				14	11	25	14	11	25
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
TOTAL	6				80	70	150	80	70	150
(C) Extension Personnel										
Productivity enhancement in field crops	1				10	5	15	10	5	15
Integrated Pest Management	1				11	6	17	11	6	17
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Formation and Management of SHGs	1				9	5	14	9	5	14
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Care and maintenance of farm machinery and implements										
WTO and IPR issues										
Management in farm animals										
Livestock feed and fodder production	1				-	8	8	-	8	8
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	4				30	24	54	30	24	54

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										
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										
Exotic vegetables like Broccoli	1				11	14	25	11	14	25
Export potential vegetables										
Grading and standardization										
Protective cultivation (Green Houses, Shade Net etc.)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards	1				13	12	25	13	12	25
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
e) Tuber crops										
Production and Management technology										
Processing and value addition	1				12	13	25	12	13	25
f) Spices										

Production and Management technology										
Processing and value addition										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
III Soil Health and Fertility Management										
Soil fertility management										
Soil and Water Conservation										
Integrated Nutrient Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Soil and Water Testing										
IV Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Disease Management										
Feed management	1				12	13	25	12	13	25
Production of quality animal products										
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										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	1				11	14	25	11	14	25
Income generation activities for empowerment of rural Women										
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care										
VI Agril. Engineering										
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										
VII Plant Protection										
Integrated Pest Management	1				11	14	25	11	14	25
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
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										
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										
X Capacity Building and Group Dynamics	1				13	12	25	13	12	25
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
XI Agro-forestry										
Production										

technologies										
Nursery management										
Integrated Farming Systems										
TOTAL	8				94	106	200	94	106	200
(B) RURAL YOUTH										
Mushroom Production										
Bee-keeping										
Integrated farming										
Seed production										
Production of organic inputs										
Integrated Farming										
Planting material production	1				15	10	25	15	10	25
Vermi-culture										
Sericulture										
Protected cultivation of vegetable crops										
Commercial fruit production										
Repair and maintenance of farm machinery and implements										
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Value addition	1				13	12	25	13	12	25
Production of quality animal products										
Dairying										
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										
Tailoring and Stitching										
Rural Crafts										
TOTAL	3				42	33	75	42	33	75
(C) Extension Personnel										
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards	1				9	7	16	9	7	16
Protected cultivation technology										
Formation and Management of SHGs										
Group Dynamics and farmers organization	1				9	6	15	9	6	15
Information networking										

among farmers										
Capacity building for ICT application										
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	2				18	13	31	18	13	31

C) Consolidated table (ON and 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	1				12	13	25	12	13	25
Resource Conservation Technologies	2				21	29	50	21	29	50
Cropping Systems										
Crop Diversification										
Integrated Farming										
Water management										
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				12	13	25	12	13	25
Exotic vegetables like Broccoli	2				23	27	50	23	27	50
Export potential vegetables										
Grading and standardization										
Protective cultivation (Green Houses, Shade Net etc.)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards	1				13	12	25	13	12	25
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
c) Ornamental Plants										

Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
d) Plantation crops										
Production and Management technology										
Processing and value addition	1				12	13	25	12	13	25
e) Tuber crops										
Production and Management technology										
Processing and value addition										
f) Spices										
Production and Management technology										
Processing and value addition										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
III Soil Health and Fertility Management										
Soil fertility management	1				11	14	25	11	14	25
Soil and Water Conservation										
Integrated Nutrient Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Soil and Water Testing										
IV Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management	1				10	15	25	10	15	25
Rabbit Management										
Disease Management										
Feed management	2				25	25	50	25	25	50
Production of quality animal products										
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										
Gender mainstreaming										

through SHGs										
Storage loss minimization techniques										
Value addition	1				11	14	25	11	14	25
Income generation activities for empowerment of rural Women										
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care										
VI Agril. Engineering										
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										
VII Plant Protection										
Integrated Pest Management	2				23	27	50	23	27	50
Integrated Disease Management	1				13	12	25	13	12	25
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
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										
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										
X Capacity Building and Group Dynamics	1				13	12	25	13	12	25
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
TOTAL	17				199	226	425	199	226	425
(B) RURAL YOUTH										
Mushroom Production	1				13	12	25	13	12	25
Bee-keeping										
Integrated farming										
Seed production										
Production of organic inputs										
Integrated Farming										
Planting material production	1				15	10	25	15	10	25
Vermi-culture										
Sericulture	1				12	13	25	12	13	25
Protected cultivation of vegetable crops										
Commercial fruit production										
Repair and maintenance of farm machinery and implements										
Nursery Management of Horticulture crops	1				11	14	25	11	14	25
Training and pruning of orchards										
Value addition	2				28	22	50	28	22	50
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery	2				29	21	50	29	21	50
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	1				14	11	25	14	11	25
Post Harvest Technology										
Tailoring and Stitching										

Rural Crafts										
TOTAL	9				122	103	225	122	103	225
(C) Extension Personnel										
Productivity enhancement in field crops	1				10	5	15	10	5	15
Integrated Pest Management	1				11	6	17	11	6	17
Integrated Nutrient management										
Rejuvenation of old orchards	1				9	7	16	9	7	16
Protected cultivation technology										
Formation and Management of SHGs	1				9	5	14	9	5	14
Group Dynamics and farmers organization	1				9	6	15	9	6	15
Information networking among farmers										
Capacity building for ICT application										
Care and maintenance of farm machinery and implements										
WTO and IPR issues										
Management in farm animals										
Livestock feed and fodder production	1				-	8	8	-	8	8
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	6				48	37	85	48	37	85

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

Date	**Clientele**	**Title of the training programme**	**Discipline**	**Thematic area**	**Duration in days**	**Venue (Off / On Campus)**	**Number of other participants**			**Number of SC/ST**			**Total number of participangs**		
							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 else where
					Male	Female	Total	Type of units	Number of units	Number of persons employed	
Broccoli	22/10/09	Weed management and soil conservation	Weed and soil management	2	8	17	25				
Piggery	23 Feb.	Feed management	Feed formulation using locally available feeds	3	15	10	25		8	8	

(E) Sponsored Training Programmes

Sl.No	Date	Title	Discipline	Thematic area	Duration (days)	Client (PF/RY/EF)	No. of courses	No. of Participants									Sponsoring Agency	Amount of fund received (Rs.)
								Others			SC/ST			Total				
								Male	Female	Total	Male	Female	Total	Male	Female	Total		
1	9/10/09	Winter vegetable	Horticulture	Vegetable production	2	PF	1				10	15	25				ATMA	20,000
2	14th Oct	IPM	Entomology	Pest management	2	PF	2				12	13	25				Agri. Directorate	25,000
3	11th dec	Piggery management	Vety &A.H	Hygienic	2	PF	2				8	16	24				ATMA	20,000
4	19th oct	Cultivation of rapeseed	Agronomy	Oilseed production	1	PF	1				10	25	25				ATMA	8,000
Total					7		6				40	69	99					73,000

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	Rapeseed 17.12.09 20.12.09	2				40	45	95	1	1	2	41	46	87
2.	Field Day	Pea 16.12.09	1				24	30	54	1	1	2	25	31	56
3.	Field day	Tomato 15.01.10	1				13	22	35	2	3	5	15	25	40
	Total		**4**				**77**	**97**	**184**	**4**	**5**	**9**	**81**	**102**	**183**
4.	Kisan Ghosthi		2				17	24	41				17	24	41
5.	Exhibition		1												
6.	Film Show		3												
7.	Farmers Seminar		1				8	11	19				8	11	19
8.	Workshop														
9.	Group meetings		4				30	45	75				30	45	75
10.	Lectures delivered as resource persons		12												
11.	Newspaper coverage		3												
12.	Radio talks		7												
13.	Advisory Services		4				75	45	120				75	45	120
14.	Scientific visit to farmers field		8				14	16	30				14	16	30
15.	Farmers visit to KVK		8				52	40	92				52	40	92
16.	Diagnostic visits		3				15	15	30				15	15	30
17.	Animal Health Camp		2				65	80	145				65	80	145
18.	Self Help Group Conveners meetings		3				7	8	15				7	8	15
	Total		61				283	284	567				283	284	567
	Grand Total		**65**				360	381	751	**4**	**5**	**9**	360	381	751

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					
OILSEEDS					
	Toria	TS-38	1.5	6900	45
PULSES					
	Pea	Azad	0.70	2100	15
VEGETABLES					
	Tomato	Megha-1	0.02	1200	30
FLOWER CROPS					
OTHERS (Specify)					

SUMMARY

Sl. No.	Major group/class	Quantity (qtl.)	Value (Rs.)	Provided to No. of Farmers
1	CEREALS			
2	OILSEEDS	1.5	6900	45
3	PULSES	0.70	2100	15
4	VEGETABLES	0.02	1200	30
5	FLOWER CROPS			
6	OTHERS			
TOTAL		**7.8**	**29250**	**105**

PLANTING MATERIALS

Major group/class	Crop	Variety	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
FRUITS					
SPICES					
VEGETABLES					
FOREST SPECIES					
	Alder	**Local**	**1000**	**5000**	**50**
ORNAMENTAL CROPS					
PLANTATION CROPS					
Others (specify)					

SUMMARY

Sl. No.	Major group/class	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
1	FRUITS			
2	VEGETABLES			
3	SPICES			
4	FOREST SPECIES	1000	5000	50
5	ORNAMENTAL CROPS			
6	PLANTATION CROPS			
7	OTHERS			
	TOTAL	**1000**	**5000**	**50**

BIO PRODUCTS : NA

Major group/class	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			No	(kg)		
BIOAGENTS						
BIOFERTILIZERS						
BIO PESTICIDES						

SUMMARY

Sl. No.	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			Nos	(kg)		
1	BIOAGENTS					
2	BIO FERTILIZERS					
3	BIO PESTICIDE					
	TOTAL					

LIVESTOCK :NA

Sl. No.	Type	Breed	Quantity		Value (Rs.)	Provided to No. of Farmers
			(Nos	Kgs		
Cattle						
SHEEP AND GOAT						
POULTRY						
FISHERIES						
Others (Specify)						

Summary

Sl. No.	Type	Breed	Quantity		Value (Rs.)	Provided to No. of Farmers
			Nos	Kgs		
1	CATTLE					
2	SHEEP & GOAT					
3	POULTRY					
4	FISHERIES					
5	OTHERS					
	TOTAL					

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	
Popular articles			
Leaflets/folders	• Clonal propagation of tea • Tapioca – A promising livestock feed • Training need and assessment • Pest management in tomato. • Cultivation of off season cucumber • Impact of climate change on agriculture	KVK Mokokchung	300
Total	7		
GrandTOTAL	**7**		**306**

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

S. No.	Type of media (CD / VCD / DVD / Audio-Cassette)	Title of the programme	Number
1	**CD**	**Documentation on KVK activities**	**25**

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 : 4
ii. No. of farm families selected : 30
iii. No. of survey/PRA conducted : 4

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 tomato (Megha -1)	6	75	-	3400
Cultivation of pea (Azad)	4	65	1200	3300
Cultivation of Toria (TS-38)	6	75	1500	3500

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

Most of the farming families in Nagaland are still practicing age old traditional system of cultivation. Except in few cases, majority are aware about the recent advances in technologies like use of HYV seeds, improved method of cultivation etc. Nagaland, particularly Mokokchung district is endowed with a very favourable acro-climatic condition and has potentiality to grow all types of food crops and animal rearing but due to non adoption of new technologies it has led to poor production. Considering the situation, KVK Mokokchung, with an aim to adopt the improved systems, imparted training progarmmes on various improved practices on use of HYV crop seeds, FLDs, OFTs, management of farm animals etc to bring about a change in the life of the farming families. To assess the impact of KVK interventions, a case study was conducted at Aliba, Chuchuyimpang, and Moalenden under Mokokchung district with the following objectives:

1. To study traditional practices
2. To assess adoption of new technologies.
3. To study change in economic status of the farming families.
4. To plan future strategies.

The study was conducted using a semi-structured interview where people from all age groups participated. Information gathered are highlighted below:

All the respondents were farming families and engaged in one or the other activities/enterprise and in some cases have even the experience of working in small groups. The main crop of the district is paddy followed by tapioca. Except in some villages particularly in the lower zones, most of the villages are jhumias. This is mainly due to land topography and lack of irrigation facilities. After paddy the farmers are giving more emphasis on tapioca as a source for animal feeds. Inspite of favourable agro-climatic conditions farming families of the district mostly practices age old systems using only locally available seed materials with very poor managements which lead to low production. Therefore to improve upon the present traditional practices KVK intervened by imparting training, conducting FLDs and OFTs with the participation of the farmers in the KVK operational areas. Seed inputs of improved varieties were supplied and using the materials the farmers took the cultivation following improved package of practices. Timely supervision was conducted and during the monitoring it was observed that the performance of the different enterprises was doing very well. In some cases the produce are exhibited during Independence/Republic days and received awards.

The farm women were more expert and knowledgeable in production technologies of vegetable crops, fruits etc. At present the farmer are fetching good harvest from their enterprises and sold in the local markets and earns a good return. There is high potentiality for better productions and so they are planning to expand their cultivation areas. In this regard they are further seeking the help of KVK for technical advices like planning, layout, demonstration, training, seed inputs of improved varieties and also care and management of livestock etc.

Constraints:

Some of the major constraints reported by the respondents are listed below.

1. In tomato the yield is better under shade condition but to construct a shade for large scale cultivation is a problem because the cost of construction is high.
2. Construction of separate room for rearing in large scale
3. Fencing problems for horticultural crops.
4. Lack of marketing facilities.
5. Post harvest management
6. Difficult to get good breed of animals.
7. Lack of pastureland
8. Restricted free grazing.

Future strategies:

From the case study it is evident that there is high potentiality for large scale cultivation of food crops but due to non availability of improved/HYV seeds and non adoption of recent advances of technologies the production is low. After KVK intervention there has been an increase in crop yield through adoption of new system, the farmers are convinced and are willing to continue cultivating improved varieties provided seed inputs are available. However, during implementation of any programmes the traditional practices of the farmers should be taken into consideration and improve upon it. Extension functionaries and scientists need to update knowledge, disseminate and encourage the farmers on adoption of improved technologies, post harvest management etc to bring about a change in crop production system. Inputs like seeds etc should also be made available to the farmers in time and also timely bask up of the activities should be done for achieving food security and increase farmer purchasing power.

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 in the district	Conducting training, demonstration programmes
ICIMOD, Kathmandu	Conducting Field Research activities.
ICAR, Jharnapani, Nagaland University	Consultation, meeting and exchange of technologies
AIR Doordashan Mokokchung	Technology dissemination through broadcasting media through AIR by staff of KVK.
NABARD, Nagaland	Joint implementation in forming farmers ' clubs

5.2 List special programmes undertaken by the KVK, which have been financed by State Govt./Other Agencies : NA

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)

5.3 Details of linkage with ATMA

a) Is ATMA implemented in your district : Yes

S. No.	Programme	Nature of linkage	Remarks
1	Training, Demonstration, Exhibition	Resource person and programme implementation as AMC and BTT members	75 % of ATMA activities implemented by KVK

5.4 Give details of programmes implemented under National Horticultural Mission: NA

S. No.	Programme	Nature of linkage	Constraints if any

5.5 Nature of linkage with National Fisheries Development Board : NA

S. No.	Programme	Nature of linkage	Remarks

6. PERFORMANCE OF INFRASTRUCTURE IN KVK

6.1 Performance of demonstration units (other than instructional farm): NA

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

6.2 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									
Pea	18/10/09	-	0.008	Arkel	Pod	0.64	750	1325	good
Oilseeds									
Toria	21/10/09	-	0.01	TS-36 & 38	Seed	0.18	1400	2220	good
Spices & Plantation crops									
Turmeric	28/05/09	On going	0.0585	Megha -1	Rhizome	On going	-	-	Yet to analyse
Vegetables									
Tomato	07/01/10	20th/04/09 to 15th /05/09	0.0495	Megha-1	Fruit	1.5	450	1500	Yield was satisfactory
Aochisang	04/06/09	On going	0.003	Local	Leafy	0n going			
Others (specify)									
Pig weed	01/03/09	On going	0.003	Local	Leaves	On going			

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	
1	Vermi compost	2	18,000		Newly constructed

6.4 Performance of instructional farm (livestock and fisheries production) : NA

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	

6.5 Rainwater Harvesting: NA

Training programmes conducted by using Rainwater Harvesting DemonstrationUnit :NA

Date	Title of the training course	Client (PF/RY/EF)	No. of Courses	No. of Participants including SC/ST			No. of SC/STParticipants		
				Male	Female	Total	Male	Female	Total

6.5 Utilization of hostel facilities: Not constructed, however use SARS farmers hostel when needed

Accommodation available (No. of beds) : 30

Months	Title of the training course/Purpose of stay	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
October 2009	Oilseeds, Pulses and Vegetables cultivation	25	75	
Total		25	75	
Grand total		25	75	

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)*

Item	Released by ICAR		Expenditure		Unspent balance as on 1st April 2009
	Kharif 2008	Rabi 2009 –10	Kharif 2008	Rabi 2009-10	
Inputs		6650		6650	Nil
Extension activities		950		950	Nil
TA/DA/POL etc.		1900		1900	Nil
TOTAL		9500		9500	

7.3 Utilization of funds under FLD on Pulses *(Rs. In Lakhs)*

Item	Released by ICAR		Expenditure		Unspent balance as on 1st April 2009
	Kharif 2008	Rabi 2008 -09	Kharif 2008	Rabi 2008-09	
Inputs		13300		13300	Nil
Extension activities		1900		1900	Nil
TA/DA/POL etc.		3800		3800	Nil
TOTAL		19000		19000	

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

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

7.5 Utilization of KVK funds during the year 2009 -10

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**			
2	**Traveling allowances**	1.5	1.3	0.75
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	1.6	1.36	0.70
B	POL, repair of vehicles, tractor and equipments			
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)	6.4	5.44	2.2

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			
TOTAL (A)		**9.5**	**8.1**	**3.65**
B. Non-Recurring Contingencies				
1	**Works**			
2	**Equipments including SWTL & Furniture**	7.45	2.35	
3	**Vehicle** (Four wheeler/Two wheeler, please specify)			
4	**Library** (Purchase of assets like books & journals)	0.10	0.10	
TOTAL (B)		**7.55**	**2.45**	**2.45**
C. REVOLVING FUND			100000	
GRAND TOTAL (A+B+C)		**17.05**	**11.55**	**6.1**

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

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year
31/7/2008	100000	15000	20000	95000
2009	95000	30000	25000	100000
2010	100000	45000	20000	1,25,000

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

8.1 Constraints

(a) Administrative: Construction of Farmers hostel, farm fencing
(b) Financial : Shortage of fund ie. Meals/refreshment @ Rs. 40 per trainee is too less.
(c) Technical: Lack of livestock demonstration units, farm machineries like tractor, power tiller, pumping set etc.

Annexures

District Profile - I

Include the details of

General census
Basic information about Mokokchung district:

1. Population Census (2001)
   a) Total Population - 2,27,230
   b) Rural Population - 1,96,026
   c) Cultivators - 1,33,020
   d) % of farming population - 58.54%
2. Total geographical area - 1,615 Sq km.
3. Average Jhum Cycle - 10.5 yrs
4 Food grain Production - 36731 MT (2005-06)
5. Commercial Crops Production - 52726 MT (2005-06)
6. Oilseed production - 1013 MT (2005-06)

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			
Crossbred	2125	29.87 tons milk	6 litrs/day
Indigenous	1437	-	-
Buffalo	250	-	-
Goats	3278	14.75 tons	9 kg/year
Pigs			
Crossbred	81,345	2870 tons	110 kg/year
Hens	1,01,287	3000	20 eggs/year
Desi	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
Inland	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 – 1 (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

Major agriculture and allied enterprises

- ✓ Agriculture + Horticulture
- ✓ Agriculture + Animal Husbandry

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	Mopongchuket	AES – III	PRA, transect walk, matrix ranking, bio resource flow model
2	Longkhum	AES-IV	
3	Changtongya	AES-II	
4	Longnak	AES-I	
5	Lakhuni	AES-II	

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 complied 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. 8000 ha. were effect due to deforestation	High – Jhum cycle decreasing year by year
Marketing	Lack of organise market system	Throughout the year	High
Indigenous germplasm	Low production due to use of age old germplasm	75% in crops, 40% in livestock	Medium
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, GER, ICIMOD, NEPED, State Deptt, 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
Green gram	Pratap, Meha, TMB -37, SG-21-5	Varietal evaluation	
Black gram	PU-31, IPU-94-1, KU-301,USJD-113	Performance trial	
King Chilli	Naga chilli		Intercropping with Jhum paddy
Rice	SARS-2		Critical timing of rodenticide application
Piggery	Hampshire	Upgrade local pigs with Hampshire inheritance	

Matrix ranking of technologies

1. Rice
2. Piggery
3. King chilli
4. Toria
5. Green gram
6. Black gram

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
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, Sel -1, Punjab chaura, Longkum local	Tomato	2005	RARS, Shillongani	NA
3	Pushpa	Broccoli	2008	ICAR	NA

3. Activity Chart

Crop/Animal/Enterprise	Problem	Cause	Solution	Activity	Reference of Technology
Toria	Low productivity 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	1.Low productivity	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

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

1. Toria (TS -36 & TS -38):

Plant height	–	42-99 cm
Branches	–	3.6 -5.6
Seeds	–	12-20
Days of maturity	–	102-125

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

Broccoli, tomato

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 & TS -36)

Varieties are late sowing and more tolerance to moisture stress, after the Jhum paddy harvest farmers get enough time for land preparation for sowing