

REVISED PROFORMA FOR ANNUAL REPORT – 2008-09

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

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	Programme Asstt	Jweni Semp	Farm Manager	-	10230 + 4200	11120 + 4200	07.11.07	Temporary	ST

11	Accountant / Superintendent	Meyatula	Office Supt-cum-Accountant		10230 + 4200	11580 + 4200	01.06.06	Temporary	ST
12	Stenographer	Imosangla	Jr. Steno-cum-Computer Operator		7440 + 2400	8370 + 2400	01.06.06	Temporary	ST
13	Driver-cum-Mechanic	Supongmeren	Driver		5680 + 1900	6400 + 1900	01.06.06	Temporary	ST
14	Driver-cum-Mechanic	Benjamin Rai	Driver		5680 + 1900	6400 + 1900	01.06.06	Temporary	SC
15	Supporting staff	Imkonglemla	Supporting staff		4750 + 1300	5330 + 1300	01.06.06	Temporary	ST
16	Supporting staff	Wati Ao	Supporting staff		4750 + 1300	5330 + 1300	01.06.06	Temporary	ST

1.6. Total land with KVK (in ha) :

S. No.	Item	Area (ha)
1	Under Buildings	0.2
2.	Under Demonstration Units	NIL
3.	Under Crops	0.2 (Instructional Farm)
4.	Orchard/Agro-forestry	1 ha
5.	Others (specify)	22

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	2004	4,70,000		

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
1. Computer			
a) Compact	2004	70000	Good
b) Dell	2010	-	Good
2. Sound system	2005	60000	Good
2. Photocopier			
a) Canon	2005	200000	Good
b) Ricoh			
4. Digital camera	2004	70000	Good
6. Laptop	2008	37,000	Good
7. Video Camera			
a) sony	2008	16,000	Good
b) sony DCR-SR68E	2010	19,000	Good
LCD PROJECTOR	2010	64,500	Good
Sharp – PG-D2500X			
Luminous inverter with 2	2010	28,500	Good

batteries			
-----------	--	--	--

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. Dr. Supong Keitzar, Director(Agri), & SNO 2. T.V. Holo, Jt. Director (Agri) 3. Dr. Deepak Chetri, Dy. Director (Agri) 4. Temjenlemla, ARCS Mokokchung 5. Benjongwati, SDAO Mangkolemba 6. Kilemla, Secy. Vermi & Handloom Mopungchuket 7. Nungsangkaba, SDAO Tuli 8. Benchulo Seb, WDI, DPO Land resource 9. Imrong, DHO Mokokchung 10. Talimeren, HEA 11. N. Tekatushi Ao, PO SARS 12. Dr. I. Amenla, LTO, Agri 13. Temsuinla Jamir, TO, DAO Mkg 14. Anup Dutta, BM, SBI Mkg 15. Onen Jamir, Nagaland Banana chips, Changtongya 16. All KVK staffs	✓ Approval of all the publications, news letter to be initially published annually and later on half yearly and quarterly. ✓ Name of local check varieties to be indicated. ✓ More attention to be focused on farm women and rural youths. ✓ OFT on tomato in AES-IV on need base. ✓ Presentation of Annual Report 2008-09 and Action Plan 2009-10	All the recommendations were finalized and will be implemented during 2009-10

* 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 p ^H 4-5	1,20,000
2	Clay Loam	27-40% clay 20-45% sand Medium organic matter p ^H 4-5	40,000
3	Forest Soil	Broad leaves rain forest, evergreen, temperate climate, high organic matter, dark brown soil with p ^H 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	8700	69.6
8	Colocassia	1500	127500	85
9	Passion fruit	908	24970	27.5
10	Orange	460	7636	16.6
11	Banana	270	3888	144.4
12	Pineapple	340	4930	14.5
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	
Sept.(2008)	874	27.9	19.3	79.90
Oct.	377	25.5	16.6	76.65
Nov.	Nil	23.3	12.5	65.90
Dec.	32	20.0	10.3	71.85
Jan.(2009)	Nil	19.26	6.48	73.48
Feb.	Nil	24.57	12.46	70.43
Mar.	125	26.42	14.10	69.05
Apr.	330	26.27	16.50	71.77
May	585	27.71	19.92	75.77
June	890	28.53	21.37	74.33
July	2500	28.61	21.61	76.63
Aug.				

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

Category	Population	Production	Productivity
Cattle			
Crossbred	2125	29.87 tons	6 litres/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
<i>Desi</i>	20,12,325	1042 tons	1.1 kg/8 months
<i>Improved</i>			
Ducks	491	290 kg	1 kg/6 months
Turkey and others			

Category	Area	Production	Productivity
Fish			
<i>Marine</i>			
<i>Inland</i>	5,00,000	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, Longmisa	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 vegetables only in one season (Kharif), practice of mono cropping, 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 Longjang	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 Arecanut, 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, Passion fruit 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, passion fruit, 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
Areca nut	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 2008-09

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
5	5	15	12	6	4	38	24

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	40	27	992	675	89	52	1945	1055
Rural youth	19	18	525	440	63	48	615	475
Extn. Functionaries	10	11	229	187	26	18	120	85

Seed Production (Qtl.)			Planting material (Nos.)	
5			6	
Target	Achievement		Target	Achievement
64	45.5		6000	3200

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	a) Crop failure due to moisture stress b) Low yield due to old variety	Varietal trial on Toria under rainfed condition		Cultivation of high yielding Toria crop		Kissan ghosti, field day	Seeds

2	Production of good quality tomato	Tomato	Good quality and HYV seeds are not used	Varietal trial on tomato		Cultivation of improved varieties of tomato	Insect pest & disease management	Field day	Seeds
3	Popularization of green gram	Green gram	a) Non traditional crop b) Less preference	Trial on date of sowing of green gram			Plant characteristic and harvesting	Media	seed
4	Increase production of rice	TRC paddy	Low productivity	Different planting design in SRI			Cultivation technique of SRI	Media	Seed
5	Popularization of improved variety of black gram	Black gram	a) Non traditional b) Milling of grains to dal	Trial on date of sowing black gram				Field demonstration on sowing	Seed
1	Production and management of French bean	French bean	Production is marginal		Seed production of French bean		Seed production technology		Seeds
2	Soil fertility management	Rice bean	Continuous crop cultivation depletes soil nutrients		Rice bean as a cover crop	Soil improvement through cultivation of rice bean		Field day	Seeds
3	Production and management of Toria	Toria	Seed production is low		Popularization of Toria		Seed production technology	Media	Seeds
4	Increase production of pulse crop	Pea	Low yield due to poor quality seed		Cultivation of HYV			Media	Seeds
5	Off season crop cultivation	Cucumber	Low productivity		Cultivation of Off season cucumber	Package of practices of off season cucumber			
6	Increase production	Soybean	Low yield variety		Popularization of Soybean			Field day	Seeds

3.1 Achievements on technologies assessed and refined

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

A. Technology Assessment

Trial 1

- | | | | |
|-----|---|---|--|
| 1) | Title | : | Varietal evaluation of toria under rainfed condition |
| 2) | Problem diagnose/defined | : | Low yield due to moisture stress and use of local varieties |
| 3) | Details of technologies selected for assessment /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 | : | Varietal evaluation |
| 7) | Performance of the Technology with performance indicators | : | As per the record, TS-36 showed highest yield 7.2 qt/ha, highest germination and survival percentage (85%) |
| 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 use of age old local varieties result in low yield return. Introduction of HYV and create awareness on improved cultivation practices |
| 10) | Process of farmers participation and their reaction | : | Farmers actively participated in site selection, layout and sowing. Farmers also maintained their own records ie . (germination, growth condition, insect pest infestation, no. of labour invested and yield). Seeing the crop performance and evaluating the yield difference by themselves, farmers were convince to take up in larger area and popularized among them. However, due to farmers less awareness of economic importance, cultivation is not popular so, constant backup is required. |

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	Varietal trial on Toria under rainfed condition	6	TS -36 Local (farmers practice)	Germination percentage Height of plant No. of branches yield	85% Ave. 34 cm Ave. 4 nos. 7.2 qt/ha	Better than the local varieties (checked)	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	720	18800	1:3
Local (farmers practice)	540	12600	1:2.4

Trial 2

- 1) Title : Performance trial on date of sowing of Green gram
- 2) Problem diagnose/defined : Non traditional crop, less preference in consumption
- 3) Details of technologies : Pratap
selected for assessment : Local
/refinement
- 4) Source of technology : RARS, Shillongani
- 5) Production system : Rainfed jhum paddy based system (Jhum paddy mixed cropping)
thematic area
- 6) Thematic area : Integrated crop management
- 7) Performance of the : 5th June sown gave the highest yield (8.6 qt/ha) which was par with 12th June sown yield (7.9 qt/ha)
Technology with
performance indicators
- 8) Final recommendation for:
micro level situation : The best yield was obtained from crop sown on 5th of June. However, due to late monsoon the trial was conducted from last week of May to 3rd week of June.
- 9) Constraints identified and : Less popular in cultivation and low return from locally used variety. Introduction of HYV
feedback for research : and create awareness of its nutritional value and economic benefit.
- 10) Process of farmers : Farmers actively participated in site selection, layout and sowing. Seeing the crop performance and
participation and : estimating the yield and economic return along with them, farmers were convince to take up
their reaction : green gram as a main crop. However, due to farmers' easy nature and less popular in cultivation, constant backup is required.

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
Green gram	Rainfed	Non tradition crop, less preference in consumption	Performance trial on date of sowing	4	Pratap	Height of plant No. of branches Yield	Ave. 34 cm Ave. 13 (8.6 qt/ha)	5 th June sown gave the best yield	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
Pratap	860	8700	1:2
Local (Farmer practice)	685	5200	1:1.6

Trial 3

- 1) Title : Varietal evaluation of tomato
- 2) Problem diagnose/defined : Use of local varieties and low yield
- 3) Details of technologies : Megha -1, Selection -1, Punjab chaura
selected for assessment Local
/refinement
- 4) Source of technology : RARS, Shillongani
- 5) Production system : Rainfed
thematic area
- 6) Thematic area : Varietal evaluation
- 7) Performance of the : As per the record, Megha-1 showed highest yield (355.7 qt/ha), highest germination and
Technology with survival percentage (85%) compared to other varieties
performance indicators

- 8) Final recommendation for : Megha -1 performed well under rainfed condition and can be recommended for large scale cultivation micro level situation
- 9) Constraints identified and : Use of age old local varieties results in low yield return.
feedback for research : Introduction of HYV and impart technology of improved method of cultivation
- 10) Process of farmers : Farmers actively participated in site selection, layout, nursery preparation and transplanting.
participation and : Farmers main problem was irrigation but seeing the crop performance and its economic return they were
their reaction : encouraged for tomato cultivation
- 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 yield, local varieties, lack of irrigation facilities	Performance trial on varietal evaluation	3	Megha -1, Selection -1 &2, Punjab chaura, pusa ruby, Local(farmers practice)	Plant height Girth of fruit Weight of fruit Yield/ha	<u>Megha -1</u> 37.30cm 14.67cm 52.5gm 355.7qt/ha <u>Local (farmer practice)</u> 48.33cm 11.33cm 37gm 204qt/ha	Megha- 1 showed the best yield records	Replace the present local varieties by megha-1 variety

Technology Assessed	*Production per unit (Kg/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
11			
Megha-1, sel-1&2, Punjab chaura, Pusa ruby	Megha -1 – 35570	270700	1:4.2
Local (Farmer practice)	Local (farmers practice)- 20400	129000	1:2.7

Technology Refinement

Trial 1

1. Title : Different planting design on SRI
2. Problem diagnose/defined : Low productivity
3. Details of technologies selected for assessment/refinement:
 - i. Conventional method ie. 3-4 seedlings/hill, random spacing, transplant 25-30 days old seedlings, let water standing throughout growing period - Farmers Practice
 - ii. Transplant 8-10 days old single seedling/hill, transplanting in square method, maintain 25 x25 cm spacing, water management by alternate day wetting and drying– Recommended practice
 - iii. Transplant 8-10 days old single seedling/hill, transplanting in hexagonal method, maintain 25 x25 cm spacing, water management by one day wetting and two days drying – Refined Practice
4. Source of technology : SARS, Yisemyong
5. Production system thematic area : Rainfed paddy based system
6. Thematic area : Increase production
7. Performance of the Technology : The refined practice of planting method gave more yield (48.8 q/ha) with performance indicators as compared to other planting method (41.5 q/ha) of SRI
8. Final recommendation for micro level situation : Transplant 8-10 days old seedling/hill
Transplanting in hexagonal method
Maintain 25 x25 cm spacing,
Water management by one day wetting and two days drying
9. Constraints identified and feedback for research : Take more time to mobilize farmers since this system require additional labour and skill.
10. Process of farmers participation and their reaction : Seeds selection, Nursery preparation, transplanting, weeding and water management. Yield return is higher compared to conventional method but it will take 2-3 years to go for larger area of cultivation as it need more professional cultivation

11). Results of On Farm Trials

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology refined	Parameters	Data on the parameter	Results of refinement	Feedback from the farmer	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11
Paddy (WRC)	Rainfed	Low productivity	Different planting design on SRI (Square & Hexagonal)	6	IR 64	Seedling stage (day) No. of effective tillers No. of grains/panicle Yield (Qt/ha)	<u>Square</u> 10 days old 11.8 147.6 <u>Hexagonal</u> 10 days old 13.9 155.1	Hexagonal planting design gave better performance in all yield attributes	Hexagonal design is more preferable but in this design more skill and labour is required	In hexagonal design more nos. of plants can be transplanting which directly affect the yield returns

Technology Refined	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
12	13	14	15
3-4 seedlings/hill, random spacing, transplant 25-30 days old seedlings, let water standing throughout growing period - Farmers Practice	2880	14040	1:2
Transplant 8-10 days old single seedling/hill, transplanting in square design, maintain 25 x25 cm spacing, water management by alternate day wetting and drying – Recommended practice	4145	21660	1:2.9
Transplant 8-10 days old single seedling/hill, transplanting in hexagonal design, maintain 25 x25 cm spacing, water management by one day wetting and two days drying – Refined Practice	4875	27000	1:3.3

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

List of technologies demonstrated during previous year and popularized during 2008-09 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	French bean	Crop production and management	Local (mutre)	Spring 2009	3.2	2.4	8		8	Lack of rainfall and irrigation problem
2	Rice bean	Integrated crop management	Chakhe sang local dwarf	Rabi 2008	3	2	4		4	Irrigation problem
3	Pea	Integrated nutrient management	Azad	Rabi 2008	2	1.5	6		6	Irrigation problem
4	Soybean	Integrated crop management	JS-335	Kharif 2009	2	1	4		4	Shortage of fund
5	Toria	Crop production and management	TS-38	Rabi 2008	2	1.5	3		3	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					
French bean	Spring	RF	Silt loam	1.89%	10.5 kg/ha	135 kg/ha	Paddy	27/02/09	08/05/09	1040	32
Rice bean	Rabi	RF	Silt loam	2%	8kf/ha	140 kg/ha	Paddy	21/07/08	12/12/08	4405	77
Pea	Rabi	RF	Silt loam	2.2%	8.6 kg/ha	136 kg/ha	Paddy	10/10/08	08/01/09	409	14
soybean	Kharif	RF	Silt loam	2.12%	6.6 kg/ha	148 kg/ha	Paddy	13/06/08	17/10/08	6762	99
Toria	Rabi	RF	Silt loam	1.95%	9.6kg/ha	152 kg/ha	Paddy	07/10/08	20/02/09	409	14

Performance of FLD

S I. 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	French bean	Local	Mutre	8	2.4	11.3	9.75	10.52	9.32	11.4	No. of pods/plant-48 Weight of biomass/plant – 150 gm	No. of pods/plant-39 Weight of biomass/plant – 165 gm
2	Rice bean	Local	Chakhe sang dwarf	4	2	14.8	13.4	14.1	12.8	9.21	No. of pods/plant-58 Weight of biomass/plant – 145 gm	No. of pods/plant-47 Weight of biomass/plant – 155 gm
3	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
4	Soybean	JS-335	JS-335	4	1	8	7.4	7.7	6.9	10.38	No. of pods/plant-52 Weight of biomass/plant – 90 gm	No. of pods/plant-44 Weight of biomass/plant – 105 gm
5	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
9000	7500	31560	27960	22560	20460	1:3.5
8500	7000	28200	25600	19700	18600	1:3.3
9000	7200	28350	25200	19350	18000	1:3.2
9500	8000	30800	27600	21300	19600	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).

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	10.52	9.32	11.4
		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
Soybean	Kharif	1. Seed/Variety- JS- 335	Rainfed	7.7	6.9	10.38
		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 intercropp 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
Rice bean	Rabi	1. Seed/Variety- Chakesang local dwarf	Rainfed	14.1	12.8	9.21
		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 supporting pole
2	Require no irrigation

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	11.11
		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 managerial practices

Farmers' reactions on specific technologies

S. No	Feed Back
1	Earn good return
2	Chance of poor yield if disease infest

Crop	Season	Component	Farming situation	Average yield (q/ha)	Local check (q/ha)	Percentage increase in productivity over local check
Torja	Rabi	1. Seed/Variety- TS - 38	Rainfed	5.8	5.1	12.06
		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				

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	7	15	8	7	15
Household food security										
Women and Child care										
Low cost and nutrient efficient diet designing										
Production and use of organic inputs										
Gender mainstreaming through SHGs	1				9	7	16	9	7	16
TOTAL	5				45	35	80	45	35	80

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	2				24	26	50	24	26	50
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Water management										
Seed production	1				10	15	25	10	15	25
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	2				24	26	50	24	26	50
Nursery raising										
Exotic vegetables	2				23	27	50	23	27	50

Integrated Farming										
Planting material production										
Vermi-culture	3				33	42	75	33	42	75
Sericulture	1				12	13	25	12	13	25
Protected cultivation of vegetable crops										
Commercial fruit production	1				15	10	25	15	10	25
Repair and maintenance of farm machinery and implements										
Nursery Management of Horticulture crops										
Training and pruning of orchards	1				15	10	25	15	10	25
Value addition										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery	1				14	11	25	14	11	25
Rabbit farming	1				15	10	25	15	10	25
Poultry production	1				13	12	25	13	12	25
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	2				29	21	50	29	21	50
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts	2				29	21	50	29	21	50
TOTAL	19				270	222	492	270	222	492
(C) Extension Personnel										
Productivity enhancement in field crops										
Integrated Pest Management	2				21	14	35	21	14	35

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	
Jhum paddy	15 th April	Weed management and soil conservation	Weed and soil management	3	13	12	25				
Passion fruit	21 April	Lay out and management	Systematic planting system	3	11	14	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/R/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	17 th Jan.	Production of bee colonies and wax sheets	Entomology	Bee keeping	3	PF	2				16	9	25				Nagaland Honey bee Mission	30,000
2	14 th Oct	Crop production & A.H		Increase production of crops & livestock management	3	RY	3				20	22	42				Student Union, Asangma Village	25,000
Total					6		5				36	31	67					55,000

3.4. Extension Activities (including activities of FLD programmes)

43

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 12.11.08 25.11.08 17.12.08 20.12.08	4				32	39	71	9	6	15	41	45	86
2.	Field Day	Pea 22.10.08 11.11.08 16.12.08	3				24	30	54	9	10	19	33	40	73
3.	Field day	Mustard 15.11.08 18.12.08	2				28	34	62	-	-	-	28	34	62
4.	Field Day	Groundnut 16.05.09 21.07.09	2				24	22	46	6	7	13	30	29	59
5.	Field day	French bean 18.11.08 10.12.08 16.06.09	3				27	31	58	8	7	15	35	38	73
	Total		14				135	156	291	32	30	62	167	186	353
6.	Kisan Ghosthi		11				116	130	246	68	59	127	184	189	373
7.	Exhibition		1												
8.	Film Show		10												
9.	Farmers Seminar		2				50	35	85				50	35	85
10.	Workshop														
11.	Group meetings		8				90	70	160	11	15	26	101	85	186
12.	Lectures delivered as resource persons		15												
13.	Newspaper coverage		2												
14.	Radio talks		6												
15.	Advisory Services		7				25	30	55				25	30	55
16.	Scientific visit to farmers field		11				60	45	105				60	45	105
17.	Farmers visit to KVK		16				120	207	327				120	207	327
18.	Diagnostic visits		10				59	67	126				59	67	126
19.	Animal Health Camp		2				25	35	60				25	35	60
20.	Self Help Group Conveners meetings		5				15	45	60				15	45	60
	Total		106				560	664	1224	79	74	153	639	738	1377
	Grand Total		120				695	820	1515	111	104	215	806	924	1730

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					
	Soybean	JS-335	2.6	10400	35
PULSES					
	French bean	Mutre (local)	2	7000	20
	Rice bean	Chakesang dwarf local	1.5	5250	15
	Pea	Azad	0.70	2100	15
VEGETABLES					
FLOWER CROPS					
OTHERS (Specify)					

SUMMARY

Sl. No.	Major group/class	Quantity (qtl.)	Value (Rs.)	Provided to No. of Farmers
1	CEREALS			
2	OILSEEDS	3.6	14900	55
3	PULSES	4.2	14350	50
4	VEGETABLES			
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					
	Passion fruit	Kavery	1000	5000	10
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	1000	5000	10
2	VEGETABLES			
3	SPICES			
4	FOREST SPECIES	1000	5000	50
5	ORNAMENTAL CROPS			
6	PLANTATION CROPS			
7	OTHERS			
TOTAL		2000	10000	60

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
Research papers			
Total			
Technical reports			
News letter	KVK Mokokchung, News letter	KVK Mokokchung	250
Popular articles			
Leaflets/folders	1. Citrus Rejuvenation 2. Seed treatment with bio-fertilizer in cereal crops 3. Indigenous method of seed conservation 4. Compost Making 5. Care and Management of piglets 6. Pest of Rice and their Management	KVK Mokokchung	1200
Others	A Field guide on SRI Technology for extension staf	KVK Mokokchung	100
Total	7		
GrandTOTAL	7		1550

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	High yielding paddy cultivars for Mokokchung district	25

3.7. Success stories/Case studies.

YISEMYONG BEE FARMERS SOCIETY

This is a success story on Public Private Partnership (PPP) in which each sector contributes, accomplish mutual objectives.

Apiculture is enterprise practice by 30 farmers in Yisemyong which is one of their main secondary source of income. However they were practicing primitive methods of beekeeping and without organized group and market outlet.

Sensing its importance and potential the KVK Mokokchung approach the Nagaland Bee and Honey Mission (NBHM) to promote a collaborative project. The NBHM in collaboration with our KVK organized and imparted three days training at Yisemyong to 50 farmers on Latest Scientific Management in the field of bee keeping during 2007.



After the training the bee farmers have formed a society comprising of 14 members and got registered through the initiative of KVK. The NBHM too come forward and tie up with the society in the form of PPP. By establishing this PPP the communication handicap is now bridged.

Now each society members are keeping 20 to 50 bee hives and the honey is directly purchase by NBHM. On their part the NBHM is providing bee boxes, honey extractors equipments etc on subsidized rate and also update the farmers knowledge through trainings, exposure trips etc where KVK is taking active part. Recently the NBHM has placed an order to make 2000 nos. of bee boxes by the society @ Rs.800/ box and the members are actively engaged in making the boxes.



At present on an average each members are earning Rs.5000/- per harvesting season and the NHM is going to fulfill its objective of exporting organic honey outside the state. It is widely recognized that the productivity level of agricultural and horticultural crops has been enhanced through cross pollination in an around Yisemyong and thus provide important linkages through these farming system.

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

- Identification of courses for farmers/farm women : PRA, Transect walk, Matrix ranking
- Rural Youth : PRA, Bio-resource flow model
- Inservice personnel : PRA, Group discussion

3.11 Field activities

- i. Number of villages adopted : 3
- ii. No. of farm families selected : 24
- iii. No. of survey/PRA conducted : 5

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 French bean (Mutre –local)	15	50	2000	2850
Cultivation of rice bean (Chakhesang local dwarf)	15	50	3800	4900
Cultivation of pea (Azad)	12	45	2500	3300
Cultivation of soybean (JS-335)	15	45	4400	5400
Cultivation of Toria (TS-38)	15	40	3500	4800

4.2. Cases of large scale adoption: NA

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

IMPACT STUDY REPORT

Age old traditional systems of cultivation practicing is still prevalent among the farming communities in the district. Except in few cases, majority are not aware and does not practice advanced and improved technologies farming. The district being endowed with a very favourable agro-climatic condition with vast potentiality for all types of farming enterprises. But due to ignorance and easy nature, the technologies leaved unused which ultimately led to poor production. Considering overall situation, KVK Mokokchung, with an aim to improve upon the existing farming system with improved technologies imparted awareness, knowledge and skill through OFTs, FLDs, trainings and other extension activities. to bring about a change in the livelihood of the farming communities.

To assess the impact of KVK interventions, a case study was conducted at Kobulong, Changtongya, Asangma, Ungma and Mopungchuket under Mokokchung district with the following objectives:

- 1. To study and assess exist traditional practices
- 2. To assess adoption of new technologies.

3. To study change in economic status of the farming families.
4. To assess future strategy and intervention

The study was conducted using a semi-structured interview, twenty five persons from each village took part. Fifty percent of the respondents were women.

Brief documentation of process involved are highlighted below:

All the respondents were from farming families and engaged in one or the other activities/enterprise and some even have experiences of working in group. Most of the farmers are found to be jhumias (Jhum farmers). Through participatory ranking it was identified that the main crops of the selected villages were paddy followed by tapioca. This is mainly due to land topography and lack of irrigation facilities. The farmers usually grow tapioca as an animal feeds along with Jhum paddy or as crop rotation after paddy. Almost all the farmers practices age old traditional method for farming using locally available seeds.

The KVK intervened with an aim to improve upon the present traditional practices by imparting training, conducting OFTs and FLDs, supplied improved varieties of seeds. Thirty five percent of the trained farmers indicated a good level of adoption. It was observed that the adoption of the improved package of technologies among the farmers stood at 45% and a satisfactory impact indicator as observed was that the performance in production and productivity has improved considerably by upto 10% increase in production and productivity. The products of the farmers were also exhibited during Independence and Republic days and much to be note they also received awards. At the same time a variety of factors were responsible for non adoption of the new technologies major among which were that most of time they find it difficult to move from the traditional system of farming which is still the predominant system, fragmented land holding and financial constrains.

At present the farmers are fetching good harvest from their enterprises. The farm products are either consumed at home or sold in the local markets and earns a good return. Due to higher productivity the economic status of the farming families has undergone some improvement. They are able to procure additional home needs (two farmers purchased a colour television and another three of them are now using mobile phones). With their additional income twenty famers has revealed that they will be increasing the area of their farm by 20%. It was assumed that with this level of improvement and enthusiastic better change in economic status is further anticipated.

The performance of these famers (who has adopted the new technologies) is having a good impact on the other farmers as well which has been testified by more other farmers contacting our office for providing them with necessary technical guidance.

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. (tomato)
2. Construction of separate room for rearing in large scale/ financial constraint. (sericulture)
3. Fencing problems for Stray animals. (field crops)
4. Lack of marketing facilities.
5. Post harvest management.
6. Difficulty in getting 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 for food crops and the farmers are also taking keen interest. Therefore, to overcome the present constraints some of the strategies are as follow;

1. Location specific crops which fetch more income to the farmers should be well refine and expansion of area to be encouraged.
2. Promotion of farming system model in the village.
3. To develop better communication among the farmers and the Scientists.
4. To identify source of financial assistance.
5. To imparting knowledge and skill on seed storage management.

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 educate, disseminate and encourage the farmers on adoption of improved technologies, post harvest management etc to bring about a change in crop production measures. Inputs like seeds etc should also be made available to the farmers in time and also timely back up of the activities should be done for successful implementation of programmes.

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.
National Fisheries Development Board (NFDB)	Implementation of NFDB programmes
Nagaland Bee and Honey Mission(NBHM)	Conducting training, demonstration programmes

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

S. No.	Programme	Nature of linkage	Remarks
1	Training and Demonstration	As resource person and implementation of NFDB programmes	

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									
Maize	25/3/09	1 st july	0.035	HQPM -1	Cob	0.75	350	605	Yield was satisfactory
Pulses									
French bean	3/03/09	4/05/09	0.02	Local mutre	Pod	0.5	200	260	Some quantity of seeds are preserved for next season
Green gram	3/06/09	On going	0.0194	Pratap	Pod	-	-	-	Yet to analyse yield & gross income
Black gram	29/06/09	On going	0.02	PU - 31	Pod	-	-	-	Yet to analyse yield & gross income
Cowpea	18/05/09	04 to 17 th /08/09	0.0195	NS - 634	Pod	0.35	200	350	Sowing time was late, poor yield
Dhaincha	07/04/09	Green manure	0.05		Green manure		350		Before flowering the whole plant was incorporated in the soil
Oilseeds									
Groundnut	13/06/09	On going	0.0295	JL -24	Pod	On going	-	-	Yet to analyse
Spices & Plantation crops									
Turmeric	28/05/08	On going	0.0585	Megha -1	Rhizome	On going	-	-	Yet to analyse
Vegetables									

Potato	09/11/08	06/01/09	0.01	Kufri jyoti	Tuber	0.65	200	420	Red ants infestation observed
Chilli	03/04/09	10-30 /07/09	0.009	Pusa jwala	Fruit	0.65	200	730	Yield was satisfactory
Tomato	07/01/09	20 th /04/09 to 15 th /05/09	0.0495	Sel –II	Fruit	1.5	450	1500	Yield was satisfactory
Aochisan	04/06/09	On going	0.003	Local	Leafy	On going			Yet to analyse
Others (specify)									
Pig weed	01/04/09	On going	0.003	Local	Leaves	On going			Yet to analyse yield & gross income

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 Demonstration Unit :NA

Date	Title of the training course	Client (PF/R/Y/E F)	No. of Courses	No. of Participants including SC/ST			No. of SC/ST Participants		
				Male	Female	Total	Male	Female	Total

6.5 Utilization of hostel facilities

Accommodation available (No. of beds) : 30 (Used SARS farmers hostel)

Months	Title of the training course/Purpose of stay	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
October 2008	Winter crops cultivation	25	75	
Total		25	75	
November 2008				
	Post harvest management	20	60	
Total		20	60	
December 2008				
Total				
January 2009				
Total				
February 2009	Integrated Nutrient Management	25	75	
	Potato – cultivation and post harvest management	25	75	
		50	150	
Total				
March 2009	Methods of composting	25	75	
Total		25	75	
April 2009				

	System of Rice Intensification	25	50	
Total		25	50	
May 2009				
	Indigenous feed and fodder management	25	75	
	Integrated Pest management	25	75	
Total		50	150	
June 2009	Weed management	25	50	
	Poultry production	25	50	
Total		50	100	
July 2009	Livestock - disease	25	75	
Total		25	75	
August 2009	Rejuvenation of old orchard	25	75	
Total		25	75	
September 2009				
Total				
Grand total		525	810	

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 1 st April 2009
	Kharif 2008	Rabi 2008 -09	Kharif 2008	Rabi 2008-09	
Inputs	9975	6650	9975	6650	Nil
Extension activities	1425	950	1425	950	Nil
TA/DA/POL etc.	2850	1900	2850	1900	Nil
TOTAL	14250	9500	14250	9500	

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

Item	Released by ICAR		Expenditure		Unspent balance as on 1 st April 2009
	Kharif 2008	Rabi 2008 -09	Kharif 2008	Rabi 2008-09	
Inputs	12500	13300	12500	13300	Nil
Extension activities	2400	1900	2400	1900	
TA/DA/POL etc.	4100	3800	4100	3800	
TOTAL	19000	19000	19000	19000	

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

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

7.5 Utilization of KVK funds during the year 2007 -08 and 2008 -09 (upto Sep. 2009) (year-wise separately) (current year and previous year)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	27,00,000	27,00,000	27,00,000
2	Traveling allowances	75,000	50,000	50,000
3	Contingencies	5,00,000	5,00,000	
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)			76,059
B	POL, repair of vehicles, tractor and equipments			68,941
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)			1,43,193
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)			95,462
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)			36,160
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)			34,915
G	Training of extension functionaries			45,270
H	Maintenance of buildings			
I	Establishment of Soil, Plant & Water Testing Laboratory			
J	Library			
TOTAL (A)				
B. Non-Recurring Contingencies				
1	Works			
2	Equipments including SWTL & Furniture			
3	Vehicle (Four wheeler/Two wheeler, please specify)			
4	Library (Purchase of assets like books & journals)			
TOTAL (B)				
C. REVOLVING FUND				
GRAND TOTAL (A+B+C)				32,50,000

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

Year	Opening balance as on 1 st April	Income during the year	Expenditure during the year	Net balance in hand as on 1 st April of each year
April 2005 to March 2006				
April 2006 to March 2007				
April 2007 to March 2008	1,00,000	Nil	25,000	75,000
April 2008 to March 2009	75,000	30,500	12,000	18,500

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

8.1 Constraints

- less.
- (a) Administrative: Construction of Farmers hostel, Staff quarters, 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, generator/ UPS batteries.

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	8700	69.6
8	Colocassia	1500	127500	85
9	Passion fruit	908	24970	27.5
10	Orange	460	7636	16.6
11	Banana	270	3888	144.4
12	Pineapple	340	4930	14.5
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	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 soil and topography)

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

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, transect walk, matrix ranking, bio resource flow model

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. 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 continue use of age old germplasm	All enterprises	High
Livestock feeds	Throughout of the year, covering whole district.	Covered all livestock	Moderate
Post harvest	Seasonal, whole district	All crops especially those 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
Torja	TS -36	INM on torja	-
	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. Torja
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	Toria	2006	RARS, Shillongani, NRC on Rapeseed – Mustard, Bharatpur	NA
2.	Pratap	Green gram	Not yet release	AAU, Jorhat	NA
3.	Megha-1, Sel -1, Punjab chaura, Longkum local	Tomato	2005	RARS, Shillongani	NA
4	IR -64	Rice	2004	IRRI, Philippine	NA
5	PU -31	Black gram	2005	G.P Pant university of Agri.Sci. & Tech.	NA

3. Activity Chart

Crop/Animal/ Enterprise	Problem	Cause	Solution	Activity	Reference of Technology
Toria	Low productivity under rainfed condition	<ol style="list-style-type: none"> 1. Use of old aged local cultivars 2. Non adoption of water conservation 	<ol style="list-style-type: none"> 1. Introduction of HYV and moisture stress Tolerant varieties 2. Practice of mulching using paddy straw 	<ol style="list-style-type: none"> 1. Single component FLD to demonstrate effect of paddy straw as mulch material 2. OFT on HYV 	NA
Green gram	<ol style="list-style-type: none"> 1. Non traditional crop. 2. Less preference in consumption 	<ol style="list-style-type: none"> 1. Lack of awareness of its nutritional value and economic importance 	<ol style="list-style-type: none"> 1. Introduction of short duration and high yielding varieties 2. Popularize cultivation 	<ol style="list-style-type: none"> 1. Single component FLD and awareness training 2. OFT on HYV 	NA
Black gram	<ol style="list-style-type: none"> 1. Non traditional crop 2. Less preference in consumption 	<ol style="list-style-type: none"> 1. Lack of awareness of its nutritional value and economic importance 	<ol style="list-style-type: none"> 1. Introduction of short duration and high yielding varieties 2. Popularize cultivation 	<ol style="list-style-type: none"> 1. Single component FLD and awareness training 2. OFT on HYV 	NA
Tomato	<ol style="list-style-type: none"> 1. Low productivity 	<ol style="list-style-type: none"> 1. use of local varieties 2. non adoption of recommended practices 3. non availability of improved seeds 	<ol style="list-style-type: none"> 1. Introduction of high yielding varieties, 2. adoption of recommended practices 	<ol style="list-style-type: none"> 1. training and FLD programme on recommended practices 2. OFT on HYV 	NA
Paddy (WRC)	<ol style="list-style-type: none"> 1. Low productivity 2. Irrigation problem 	<ol style="list-style-type: none"> 1. conventional method of practices 2. solely depends on rain 3. Lack of irrigation facilities 	<ol style="list-style-type: none"> 1. Adoption of recommended practices 2. proper water management 	<ol style="list-style-type: none"> 1. OFT on water management 2. introduction of promising high yielding varieties 	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/siliqua	–	12-20
Days of maturity	–	102-125
 2. Green gram (pratap)

Plant height	–	40 -55 cm
Branches	–	5-7
No. of pods/plant	–	22-25
Seeds/ pod	–	12-14
Days of maturity	–	70-80
 3. Rice bean (Chakesang localdwarf)

Plant height	–	55-80
No. of pods/plant	-	54
No. of branches	–	7-9
Days to maturity	–	100-125
 4. Soybean (JS-335)

Plant height	–	50-75cm
No. of pods /plant	-	56
Days to maturity	-	110-125

 Resistant to bacterial pustules and foliar insect pest
- 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
1. French bean/ Kidney bean (var. mutre)

Sowing time: 3rd week of Feb. to 2nd week of March for vegetable purpose and 2nd week of Aug. to 1st week of Sept. for seed purpose
 2. Rice bean (var, Chakesang local dwarf)

Sowing time : 5th to 15th July
- 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