

**ANNUAL REPORT**  
**of**  
**Krishi Vigyan Kendra**  

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**Khawzawl, Champhai District**  

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**during**  
**April 2010 - March 2011**  

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Email: [pckvkkhawzawl@rediffmail.com](mailto:pckvkkhawzawl@rediffmail.com) / Fax No: 03831-261485

## 1. GENERAL INFORMATION ABOUT THE KVK

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

Address	Telephone		E mail
Krishi Vigyan Kendra (KVK), Khawzawl, PO- khawzawl, Distt.- Champhai (MIZORAM)-796310	Office 03831-261484, 261486	FAX 03831- 261485	<a href="mailto:pckvkkhawzawl@rediffmail.com">pckvkkhawzawl@rediffmail.com</a>  <a href="http://www.kvkkhawzawl.in">www.kvkkhawzawl.in</a>

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

Address	Telephone		E mail
	Office	FAX	
Directorate of Agriculture (R&E) Aizawl, Mizoram- 796 001	0389-2319025	03831-2315784	

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

Name	Telephone / Contact		
	Residence	Mobile	Email
VACANT	03831-261484		pckvkkhawzawl@rediffmail.com

### 1.4. Year of sanction: 2004

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

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale (Rs.)	Present basic (Rs.)	Date of joining	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
1	Programme Coordinator	Vacant							
2	Subject Matter Specialist	MALSAWMKIMI	SMS	Horticulture	8,000-275-13,500	8,275	03.06.09	Permanent	ST
3	Subject Matter Specialist	SAYED KHALIDUDDIN AHMED	SMS	Animal Science	8,000-275-13,500	8,550	26.4.08	Permanent	GENERAL
4	Subject Matter Specialist	F. ZORAMTHARI	SMS	Plant Protection	8,000-275-13,500	8,275	06.6.09	Permanent	ST
5	Subject Matter Specialist	VACANT	SMS	Agril. Engineering	8,000-275-13,500			Permanent	
6	Subject Matter Specialist	VACANT	SMS	Agronomy	-	-	-	-	-
7	Subject Matter Specialist	VACANT	SMS	Soil Science.	-	-	-	-	-
8	Programme Assistant	LALHRUAILUANGI	Programme Assistant	Home Science	5,500-175-9000	5,850	1.7.08	Permanent	ST
9	Computer Programmer	SAMSON SAIRENGPUIA SAILO	Computer Programmer	Computer	5,500-175-9000	5,850	22.4.08	Permanent	ST
10	Farm Manager	PRAKASH THAPA	Farm Manager	B.Sc (Agri.)	5,500-175-9000	5,850	25.4.08	Permanent	GENERAL
11	Accountant / Superintendent	K.VANLALHMANGAIHI	Accountant / Superintendent	-	5,500-175-9000	5,850	29.5.08	Permanent	ST
12	Stenographer	CRUSADE THANGPUII	Stenographer	-	4,000-100-6,000	4,200	29.2.08	Permanent	ST
13	Driver	LALNUNTLUANGA	Driver	-	3,050-70-4,590	3,190	29.2.08	Permanent	ST
14	Driver	R.DENGLIANA	Driver	-	3,050-70-4,590	3,190	9.2.08	Permanent	ST
15	Supporting staff	LALTANPUIA	Supporting staff	-	2,550-65-3,200	2,680	10.7.08	Permanent	ST
16	Supporting staff	LALVENHIMA	Supporting staff	-	2,550-65-3,200	2,680	24.7.08	Permanent	ST

1.6. Total land with KVK (in ha) :

S. No.	Item	Area (ha)
1.	Under Buildings	1.31
2.	Under Demonstration Units	11.464
3.	Under Crops	0.5
4.	Orchard/Agro-forestry	Nil
5.	Others (specify)	Nil

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	-	-	-	-	-	Completed
2.	Farmers Hostel	ICAR	2009	-	-	-	-	Completed
3.	Staff Quarters (6)	ICAR	-	-	-	-	-	Completed
4.	Demonstration Units (2)	-	-	-	-	-	-	-
5	Fencing	-	-	-	-	-	-	-
	Rain Water harvesting system	-	-	-	-	-	-	-
7	Threshing floor	-	-	-	-	-	-	-
8	Farm godown	-	-	-	-	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Gypsy	-	-	-	Running condition
Tractor	-	-	-	Running condition

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
LCD projector	Sept,2008	-	Good
Xerox machine	Sept,2008	-	Good
Computer	Sept,2008	-	Good
Seed analyzer	Sept,2008	-	Good
Refrigerator	Sept,2008	-	Good
Incubator	Sept,2008	-	Good
Oven	Sept,2008	-	Good
Grinder	Sept,2008	-	Good
Laptop	Sept,2008	-	Good
T.V.	Sept,2008	-	Good
A.C.	Sept,2008	-	Good

1.8. A). Details SAC meeting\* conducted in the year: Not Applicable

Sl.No.	Date	Name and Designation of Participants	Salient Recommendations	Action taken
1.		1. .... 2. .... 3. .... 4. .... 5. ...	1. .... 2. ... 3. .... 4. ... 5. ...	1. .... 2. ... 3. .... 4. ... 5. ...
2.				

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

## 2. DETAILS OF DISTRICT (2010-11)

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

S. No	Farming system/enterprise
1.	Horticulture + Hybrid maize + Animal Husbandry- Highland (>1250m MSL)
2.	Jhum Paddy + Vegetable + Animal Husbandry- Midland (900- 1250 m MSL)
3.	Wetland Rice + Fish + Winter Vegetables - Low land (< 900 m MSL)

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

S. No	Agro-climatic Zone	Characteristics
1.	Sub- tropical/ Sub- temperate/ Humid	Some parts of the district like Ngopa & Khawzawl block experienced all the three seasons i.e. winter, summer and rains, while in the Champhai valley the temperature ranges from 1-7 <sup>o</sup> C for a longer period during winters. All crops severely affected due to the frosty weather. The relative humidity of the region is higher due to the heavy rains 2500 mm annually .

### 2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
1	Black Soils		36550 ha
2	Red Soils		89600 ha
3	Alluvial Soils		31000 ha
4	Sandy soil		3600 ha
5	Acid Soils		89600 ha

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

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	Jhum Paddy	5610	8975	16.00
2	Paddy (WRC)	4809	10685	22.21
3	Maize	2050	4311	21.00
4	Turmeric	392	4041	103.09
5	Ginger	2350	2382	100.00
6	Passion fruit	2484	2486.5	10.00
7	Grapes	447.5	2398	53.50
8	Banana	814	8954	1100.00
9	Pulses	692	849	12.26
10	Potato	138	1012	73.33

### 2.5. Weather data

Month	Rainfall (cm)	Temperature <sup>o</sup> C		Relative Humidity (%)
		Maximum	Minimum	
January	51.3	22	02	71 % -74 %
February	8	27	01	
March	69.3	30	08	
April	137	30	13	
May	321	32	17	
June	268.6	31	14	
July	407	27	14	
August	303.6	28	13	
September	301.3	26	13	
October	100.3	31	07	
November	134	29	05	
December	NIL	26	03	

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

Category	Population	Production	Productivity
<b>Cattle</b>			
<i>Crossbred</i>	346	560 tons	1.6
<i>Indigenous</i>	6663	788 tons	0.12
<b>Buffalo</b>	3053	14 tons	0.0045
<b>Mithun</b>	1091	2.16 tons	0.002
<i>Indigenous</i>		-	-
<b>Sheep &amp; Goats</b>	712 & 115	3 tons	-
<b>Pigs</b>			
<i>Crossbred</i>	24186	437 tons	-
<i>Indigenous</i>	6051	-	-
<b>Rabbits</b>	-	-	-
<b>Poultry</b>			
Hens	-	-	-
<i>Desi</i>	151607	99 tons	-
<i>Improved</i>	44430		-

Ducks	430	-	-
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Category	Area	Production	Productivity
Fish	-	-	-
Marine	-	-	-
Inland	-	-	-
Prawn	-	-	-
Scampi	-	-	-
Shrimp	-	-	-

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

No	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1.	Khawzawl	Khawzawl	Khawzawl	WRC + Jhum paddy + Maize + Winter vegetables + Animal Husbandry and Fisheries	<ul style="list-style-type: none"> <li>Improper nursery management in WRC.</li> <li>Improper nutrient management</li> <li>Infestation of insect pest and diseases.</li> <li>Lack of awareness toward s integrated farming</li> <li>Lack of knowledge and awareness on livestock management, feed and fodder production.</li> </ul>	<ul style="list-style-type: none"> <li>Nursery management</li> <li>Integrated nutrient management</li> <li>Integrated pest management</li> <li>Creating awareness for adoption of integrated farming.</li> <li>Creating awareness for livestock management and feed and fodder production.</li> </ul>
2.	Khawzawl	Khawzawl	Biate	Jhum paddy + Tea + Orange + Vegetables + Animal Husbandry	<ul style="list-style-type: none"> <li>Lack of knowledge on crop rotation</li> <li>No proper post harvest management in tea.</li> <li>Lack of quality seed of different vegetables</li> <li>Citrus declining</li> <li>Lack of knowledge and awareness on livestock management, feed and fodder production.</li> </ul>	<ul style="list-style-type: none"> <li>Creating awareness on crop rotation and integrated farming</li> <li>Training on post harvest management in tea.</li> <li>Creating awareness for the use of quality seeds in different vegetables.</li> <li>Rejuvenation of old citrus orchards.</li> <li>Creating awareness for livestock management and feed and fodder production</li> </ul>
3	Khawzawl	Khawzawl	Chawngtlai	WRC+Jhum Paddy Grapes + Ginger Passion fruit + Animal Husbandry	<ul style="list-style-type: none"> <li>Lack of Training and Pruning of Passion Fruit &amp; Grapes</li> <li>Improper nursery management in WRC.</li> <li>Improper nutrient management</li> <li>Infestation of insect pest and diseases.</li> </ul>	<ul style="list-style-type: none"> <li>Cultivation practices of Grapes and Passion fruit</li> <li>IDM on Ginger</li> <li>Integrated nutrient management</li> <li>Integrated pest management</li> <li>Creating awareness for livestock management and feed and fodder production</li> </ul>
4	Khawzawl	Khawzawl	Sialhawk	WRC+Jhum Paddy M.Orange + Banana + Animal Husbandry	<ul style="list-style-type: none"> <li>Lack of IPM</li> <li>Lack of INM</li> <li>Lack of proper management of Orchard</li> <li>Improper nursery management in WRC.</li> <li>Improper nutrient management</li> <li>Infestation of insect pest and diseases.</li> </ul>	<ul style="list-style-type: none"> <li>Cultivation practices of M.Orange</li> <li>Integrated nutrient management</li> <li>Integrated pest management</li> <li>Creating awareness for livestock management and feed and fodder production</li> </ul>

5	Khawzawl	Khawzawl	Chalrang	Pineapple + M.Orange + WRC + Jhum Paddy + Animal Husbandry	<ul style="list-style-type: none"> <li>•Lack of IPM</li> <li>•Lack of INM</li> <li>•Lack of proper management of Orchard</li> <li>•Improper nursery management in WRC.</li> <li>• Improper nutrient management</li> <li>•Infestation of insect pest and diseases.</li> </ul>	<ul style="list-style-type: none"> <li>• Cultivation practices of M.Orange</li> <li>• Integrated nutrient management</li> <li>• Integrated pest management</li> <li>• Creating awareness for livestock management and feed and fodder production</li> </ul>
6.	Champhai	Champhai	Champhai	WRC + Maize + Winter vegetables + Animal Husbandry and Fisheries	<ul style="list-style-type: none"> <li>• Improper nursery management in WRC.</li> <li>• Improper nutrient management</li> <li>• Infestation of insect pest and diseases.</li> <li>• Lack of awareness toward s integrated farming</li> <li>• Lack of knowledge and awareness on livestock management, feed and fodder production.</li> </ul>	<ul style="list-style-type: none"> <li>• Nursery management</li> <li>• Integrated nutrient management</li> <li>• Integrated pest management</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Creating awareness for livestock management and feed and fodder production.</li> </ul>
7	Champhai	Champhai	Zotlang	WRC + Jhum paddy +Potato + Winter vegetables + Animal Husbandry	<ul style="list-style-type: none"> <li>• Improper nursery management in WRC.</li> <li>• Improper nutrient management</li> <li>• Infestation of insect pest and diseases.</li> <li>• Lack of awareness toward s integrated farming</li> <li>• Lack of knowledge and awareness on livestock management, feed and fodder production.</li> </ul>	<ul style="list-style-type: none"> <li>• Nursery management</li> <li>• Integrated nutrient management</li> <li>• Integrated pest management</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Creating awareness for livestock management and feed and fodder production</li> </ul>
8	Champhai	Champhai	Hmunhmelth a	Jhum paddy + Vegetables + Animal Husbandry	<ul style="list-style-type: none"> <li>• Lack of knowledge on crop rotation</li> <li>• Lack of quality seed of different vegetables</li> <li>• Citrus declining</li> <li>• Lack of knowledge and awareness on livestock management, feed and fodder production.</li> </ul>	<ul style="list-style-type: none"> <li>• Creating awareness on crop rotation and integrated farming</li> <li>• Creating awareness for the use of quality seeds in different vegetables.</li> <li>• Creating awareness for livestock management and feed and fodder production</li> </ul>
9	Champhai	Champhai	Tuipui	WRC + Jhum paddy + Maize + Winter vegetables + Animal Husbandry and Fisheries	<ul style="list-style-type: none"> <li>• Improper nursery management in WRC.</li> <li>• Improper nutrient management</li> <li>• Infestation of insect pest and diseases.</li> <li>• Lack of awareness toward s integrated farming</li> <li>• Lack of knowledge and awareness on livestock management, feed and fodder production.</li> </ul>	<ul style="list-style-type: none"> <li>• Nursery management</li> <li>• Integrated nutrient management</li> <li>• Integrated pest management</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Creating awareness for livestock management and feed and fodder production.</li> </ul>

## 2.7 Priority/thrust areas

Crop/Enterprise	Thrust area
Rice	Integrated Nutrient Management, SRI Method of rice cultivation, weed management, varietal yield performance
Maize	Production of High Quality Protein Maize (HQPM), yield performance of different varieties
Fruits	High density planting, production of quality planting materials, rejuvenation of old orchards
Vegetables	Selection of location specific high yielding varieties of different vegetables specially winter vegetables, Production of quality planting materials and Integrated pest management.
Animal Husbandry	Identification of local breeds, promotion of round the year fodder production, organizing animal health camps, training on production and supplement of quality animal feeds for cattle, pig, poultry etc.

## 3. TECHNICAL ACHIEVEMENTS

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

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
14	17	28	34	Nil	Nil	0	0

Training (including sponsored, vocational and other trainings conducted)					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	31	19	1110	648				
Rural youth	31	5	1035	174				
Extn. Functionaries	7	-	53	-				
Field days					2	2	48	40
Scientific visit to farmers field					2	8	54	36
Farmers visit to KVK					0	11	0	176
Celebration of important days					3	2	75	44
Exposure visit					2	1	90	30
<b>TOTAL</b>	<b>69</b>	<b>14</b>	<b>2198</b>	<b>822</b>	<b>9</b>	<b>24</b>	<b>267</b>	<b>326</b>

Seed Production (Qtl.)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
Paddy (a) IR-64 = 30 qtl (b) Local = 10qtl	32 qtl 6 qtl	11,000	4,500
Pea (a) VL Matar-42 = 0.03 qtl (b) Arkel = 0.07 qtl	0.03 qtl 0.06 qtl		
Ginger =3 qtl	5 qtl		

### 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.	Management of disease	Tomato	Low yield due to Wilting of tomato plants	Management of Bacterial wilt of Tomato with Bio-agent (Biofor Pf)	NA	Management of Pest & Disease of Tomato using bio agents	NA	Training and Demonstration	Seed and Bio-agent
2.	Management of disease	Brinjal	Low yield due to Wilting of brinjal plants	Management of Bacterial wilt of Brinjal with Bio-agent (Biofor Pf)	NA	Management of Pest & Disease of Tomato using bio agents	NA	Training and Demonstration	Seed and Bio-agent
3.	Management of disease	Ginger	Rhizome rot disease is found as a severe problem	Rhizome rot management in ginger using Biofor-Pf	NA	Management of Pest & Disease of Tomato using bio agents	NA	Training and Demonstration	Rhizome and Bio-agent
4.	Varietal Evaluation	Tomato	Low yield of local variety	Varietal evaluation of Megha T-1 with local check	NA	Steps in raising Nursery & Cultivation of vegetables Crops	NA	Training and Demonstration	Seed
5.	Varietal Evaluation	Brinjal	Low yield of local variety	Varietal evaluation of RCMBL-1	NA	Nursery management & Cultivation of vegetables Crops	NA	Training and Demonstration	Seed
6.	Varietal Evaluation of Potato	Potato	Lack of awareness on cultivation practices and selection of suitable variety	Varietal evaluation of Kufri Joyti and Kufri Giriraj ,	NA	Cultivation practices of Potato	NA	Training and Demonstration	Potato tubers
7.	Crop Production	Potato	Lack of Seed tuber	Cultivation of Potato using TPS	NA	NIL	NA	Demonstration	Seed
8.	Varietal Evaluation	French Bean	Low productivity & awareness on package of practices	Varietal evaluation of F.Bean RCMFB-1	NA	NIL	NA	Demonstration	Seed & Fertilizers
9.	Varietal Evaluation	Pea	Low productivity & awareness on package of practices	Varietal evaluation of pea : VL Matar-42 with Arkel	NA	NIL	NA	Demonstration	Seed & Fertilizers
10.	INM in Rice	WRC	Lack of awareness regarding nutrient management	INM in Rice	NA	INM for sustainable agriculture	NA	Training and Demonstration	Seed and Bio-agent



11.	Yield performance of Paddy var- IR - 64	Paddy	Low productivity and late maturity from traditional local variety	Yield performance of Paddy var- IR-64	NA	Yield performance of Paddy var- IR-64	NA	Demonstration	Seed
12.	SRI in Rice	Paddy	Lack of Awareness of SRI and lodging of local variety	SRI on Local variety Manipur buh	NA	Cultivation of rice through SRI for water used efficiency	NA	Demonstration	Seed
13.	Varietal evaluation	Paddy	Lack of short duration variety and low productivity	Varietal evaluation of Paddy Shahsarang	NA	NIL	NA	Demonstration	Seed & Fertilizers
14.	Varietal evaluation	Paddy	Lack of short duration variety and low productivity	Varietal evaluation of Paddy NDR-97	NA	NIL	NA	Demonstration	Seed & Fertilizers
15.	Varietal evaluation	Paddy	Lack of short duration variety and low productivity	Varietal evaluation of Paddy HACCHA	NA	NIL	NA	Demonstration	Seed & Fertilizers
16.	Crop Production	Maize	Low productivity & awareness on package of practices	Cultivation of Maize through HQPM	NA	NIL	NA	Demonstration	Seed & Fertilizers
17.	Animal Husbandry	Piggery Production	Mineral Deficiency	Scientific management of PIG	NA	Mineral mixture as feed additive and supplement at existing traditional farmer's practice	NA	Training and Demonstration	Piglets and mineral mixture

### 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/Spices	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Varietal Evaluation	3	-	2	-	2	-	-	-	-	7
Seed / Plant production	-	-	-	-	-	-	-	-	-	-
Weed Management	-	-	-	-	-	-	-	-	-	-
Integrated Crop Management	1	-	-	-	-	-	-	-	-	1
Integrated Nutrient Management	1	-	-	-	-	-	-	-	-	1
Integrated Farming System	-	-	-	-	-	-	-	-	-	-
Mushroom cultivation	-	-	-	-	-	-	-	-	-	-
Drudgery reduction	-	-	-	-	-	-	-	-	-	-
Farm machineries	-	-	-	-	-	-	-	-	-	-
Value addition	-	-	-	-	-	-	-	-	-	-
Integrated Pest Management	-	-	-	-	-	-	-	-	-	-
Integrated Disease Management	-	-	-	1	2	-	-	-	-	3
Resource conservation technology	1	-	-	-	-	-	-	-	-	1
Small Scale income generating enterprises	-	-	-	-	-	-	-	-	-	-
<b>TOTAL</b>	<b>6</b>	<b>-</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>13</b>

\* Any new technology, which may offer solution to a location specific problem but not tested earlier in a given micro situation.

**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	-	-	-	-	-	-	-	-	1	1
Seed / Plant production	-	-	-	-	-	-	-	-	-	
Weed Management	-	-	-	-	-	-	-	-	-	
Integrated Crop Management	1	-	-	-	-	-	-	-	1	2
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	-	-	-	-	-	-	-	-	-	
<b>TOTAL</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>3</b>

\* Technology that is refined in collaboration with ICAR/SAU Scientists for improving its effectiveness.

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

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

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

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

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

**A. Technology Assessment**

**Trial 1**

- 1) Title : **Management of Bacterial wilt of Tomato with Bio Agent (Biofor Pf)**
- 2) Problem diagnose/defined : Low yield due to Wilting of tomato plants. Lack of knowledge and skills on pest and disease management.
- 3) Details of technologies selected for assessment /refinement : Assessment  
Use of Bio-Agent (Biofor Pf) for seed, Soil and Root treatment.
- 4) Source of technology : Department of Plant Pathology, AAU-Jorhat
- 5) Production system thematic area : Rainfed
- 6) Thematic area : Management of Disease
- 7) Performance of the Technology with Performance indicators : Results showed that use of Bio Agent (Biofor- Pf) greatly reduced wilting of Tomato
- 8) Final recommendation for micro level situation : Biofor -Pf Agent may be used as Soil, seed and Root treatment to manage Bacterial wilt
- 9) Constraints identified and feedback for research : Rainfall during flowering and ripening stage and Biofor -Pf is not readily available.
- 10) Process of farmers participation and their reaction : Trials were conducted at farmers field with their active participation from the time of sowing till harvesting. On seeing the difference the farmers were encouraged and ready for adoption if the bio-agents are made available to them.

**11). Results of On Farm Trial :**

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	Rain-fed	Low yield due to Wilting of tomato plants. Lack of knowledge on biological pest and disease management.	Management of Bacterial wilt of Tomato with Bio Agent ( Biofor Pf )	2	Seed treatment - 1gm Biofor : 10 gm Tomato seed. Root treatment-1kg Biofor Pf in 2 ltr of water for 1000 seedlings. Soil treatment- 10 gm Biofor Pf mixed with 100 gm Cowdung/ plant	1.Disease Incidence at 10 days intervals  2.Yield	a)Treated-NIL b)Untreated-60%  a)Treated-267 qtl/ha b)Untreated-162 qtl/ha	Incidence of Bacterial Wilt disease is found to reduce after using Biofor Pf. However, fruit borer was found	Farmers are convinced with the result and if Biofor Pf is available, farmers is always ready to apply this Technology

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
Use of Biofor -Pf	Treated – 267 qtl/ha	2,50,500	2.67 : 1
	Untreated – 162 qtl/ha	1,17,500	1.94 : 1

## Trial 2

- 1) **Title** : **Management of Bacterial wilt of Brinjal with Bio Agent (Biofor Pf)**
- 2) **Problem diagnose/defined** : Low yield due to Wilting of Brinjal plants. Lack of knowledge and skills on pest and disease management.
- 3) **Details of technologies selected for assessment /refinement** : Assessment  
Use of Bio-Agent (Biofor Pf) for seed, Soil and Root treatment
- 4) **Source of technology** : Department of Plant Pathology, AAU-Jorhat
- 5) **Production system thematic area** : Rainfed
- 6) **Thematic area** : Management of Disease
- 7) **Performance of the Technology with Performance indicators** : Results showed that use of Bio Agent (Biofor- Pf) greatly reduced wilting of Brinjal
- 8) **Final recommendation for micro level situation** : Biofor –Pf Agent may be used as seed, Soil and Root treatment to manage Bacterial wilt
- 9) **Constraints identified and feedback for research** : Due to small land holdings Farmers are bound to adopt on small areas only. Severity of Pest like Stem Borer was observed
- 10) **Process of farmers participation and their reaction** : Trials were conducted at farmers field and if Biofor Pf is made available farmers were enthusiast to adopt
- 11). **Results of On Farm Trial**

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
Brinjal	Rainfed	Low yield due to Wilting of Brinjal plants. Lack of knowledge and skills on biological pest and disease management.	Management of Bacterial wilt of Brinjal with Bio Agent ( Biofor Pf )	2	Seed treatment - 1gm Biofor : 10 gm Tomato seed. Root treatment- 1kg Biofor Pf in 2 ltr of water for 1000 seedlings. Soil treatment- 10 gm Biofor Pf mixed with 100 gm Cowdung/ plant	1. Disease Incidence  2. Yield	a) Treated-NIL b) Untreated- 35%  a) Treated-276 qtl/ha b) Untreated- 204 qtl/ha	Incidence of Bacterial Wilt disease is found to reduce after using Biofor Pf. However, fruit borer was found	Farmers are convinced with the result and if Biofor Pf is available, farmers is always ready to apply this Technology

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
Use of Biofor -Pf	Treated – 276 qt/ha	1,00,800	1.84 : 1
	Untreated – 204 qt/ha	53,200	1.48 : 1

### Trial 3

- 1) **Title** : **Rhizome Rot management in Ginger using Biofor Pf**
- 2) Problem diagnose/Refined : Rhizome Rot Diseases is a major problem in this region
- 3) Details of technologies selected for assessment /refinement : Assessment/seed treatment for Rhizome Rot management in Ginger using Biofor Pf
- 4) Source of technology : Dept of Plant Pathology AAU Jorhat
- 5) Production thematic area : Rainfed
- 6) Thematic area : Rhizome Rot management in Ginger using Biofor Pf
- 7) Performance of the Technology with Performance indicator : Results shows that the treatment plot are not affected by Rhizome Rot diseases which give an average yield of 92.3Qtl/ha in comparison to the control plot of average yield 44.8Q/ha
- 8) Final recommendation for Micro level situation : The productivity and production was found superior when treated with Biofor Pf and it is advisable to treat the Rhizome for further cultivation in the District.
- 9) Constrains identified and Feedback for research : The Farmers of this District are not selective towards the seed Rhizome they are not aware of the need for treating the seed Rhizome and insect pest management etc.
- 10) Process of farmers Participation and their reaction : Trials and demonstration was conducted at farmer's field regarding seed treatment, time of sowing and time for spraying insecticides/ Pesticides and how to manage the Disease outbreak.
- Rhizome Rot was the main Diseases prevailing in the region so the farmers took utmost interest and importance on the Training/Demonstration given to them and were further encouraged to adopt the practices.

#### 10) 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
Ginger	Rainfed	Rhizome rot disease a severe problem in the region. High cost of input and lack of knowledge on biological pest and disease management	Rhizome Rot management in Ginger using Biofor PF	2	Seed treatment @ 1kg biofor : 10 kg seed rhizome in 2litres of water and make paste dipping the rhizome for 15 minutes and dry shed for 1 hour	No of Infected Plant at 10days a)Treated b)Untreated  Yield a)Treated b)Untreated	i)8 % ii)55%  i)92.3 Qtl/ha ii)44.8Qtl/ha	Biofor PF treated plant give more yield and disease incidence was checked	Farmers are encourage to adopt to practice

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
Biofor PF	i)92.3 Qtl/ha	73,950	2.14 : 1
Control	ii)44.8Qtl/ha	17,700	1.4 : 1

## Trail 4

- 1) **Title** : **Varietal evaluation of Tomato**
- 2) **Problem diagnose/defined** : Low yield with local variety. Damage due to wilt and lack of knowledge on nursery and post harvest management.
- 3) **Details of technologies selected for assessment /refinement** : Assessment  
Megha -T1
- 4) **Source of technology** : ICAR Barapani, Shillong, Meghalaya
- 5) **Production system thematic area** : Rainfed
- 6) **Thematic area** : Varietal evaluation
- 7) **Performance of the Technology with performance indicators** : Results showed that Tomato Variety megha –I gives the higher yield (406.8 qtls./ Ha.) as compared to Local Variety (Non – descript) (237.6qtls./Ha.) which is used as local check variety. Average weight of fruits Megha- I (46 gm) compared to local variety ( Non - descript) ( 32 gm)
- 8) **Final recommendation for micro level situation** : Since Megha- I out-performed the local variety, the varieties can be recommended for cultivation in various vegetable growing areas of Champhai District.
- 9) **Constraints identified and feedback for research** : There were problems associated with pest and diseases especially fruit borer and fruit rot. Besides this, the farmers lack knowledge about proper care and management especially with respect to pruning, staking and post harvest management.
- 10) **Process of farmers participation and their reaction** : Trials were conducted at farmers field with their active participation and are interested to continue cultivation if seed are made available.

### 11) Results of On Farm trial

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 with local variety. Damage due to wilt and lack of knowledge on nursery and post harvest management.	Varietal evaluation	2	Varietal Evaluation of  Tomato Var. a) Megha – T1 b)Local	1. Survivability (%) 2. Average Plant Height (cm.) 3) Avg No. of fruits /plant 4) Average weight of individual fruits (gm) 5)Avg Yield per hectare(qt/ha)	a. 92% b. 94%  a. 2.1 ft b. 1.9 ft  a. 24 b.20  a. 46 gm b. 32 gm  a. 406.8 Q b. 237.6Q	Tomato Variety Megha-T1 may be Recommended for cultivation in Champhai District	Farmers are convinced with the result and ready for adoption of variety

\* No. of farmers

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
1. Megha –I	406.8qt/ha	2,61,800	2.80 : 1
3. Local variety non- descript	237.6 qtl/ha	92,600	1.63 : 1

## Trail 5

- 1) **Title** : **Varietal evaluation of Brinjal**
- 2) Problem diagnose/defined : Low yield with local variety and high infestation of fruit and shoot borer.
- 3) Details of technologies selected for assessment /refinement : Refinement  
i) Local non- descriptor (Farmer's practice)  
ii) RCMBL-1
- 4) Source of technology : ICAR Barapani, Shillong, Meghalaya
- 5) Production system thematic area : Rainfed
- 6) Thematic area : Varietal evaluation
- 7) Performance of the Technology with performance indicators : Results showed that average no. of fruits/plant 22/plant, average weight of fruit 144.7 gm average size (length) of fruit 17.4 cm, yield recorded 328 qtls/ha.
- 8) Final recommendation for micro level situation : After having the results RCMBL- I has found suitable for demonstration on farmer's field.
- 9) Constraints identified and feedback for research : Khawzawl and Champhai region of the state experienced dried during winter which is found as a major constraints in production of vegetables after paddy, it is suggested for research that if possible try to make drought tolerant & resistant to insect pest & diseases variety for the region.
- 9) Process of farmers participation and their reaction : Trials were conducted at farmers field with their active participation and are interested to continue cultivation if seed ( RCMBL – I) is made available.

### 11) Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem Diagnose d	Title of OFT	No. of trials*	Technology Refinement	Parameters	Data on the parameter
1	2	3	4	5	6	7	8
Brinjal	Rainfed	Low yield with local variety and high infestation of fruit and shoot borer.	Varietal evaluation	2	i) RCMBL-I ii) Local variety	1. Average no. of fruits/plant 2. Average weight of individual fruit. 3. Average size ( length) of fruit 4. Yield per hectare (qt/ha)	a. 22 /plant b. 16 /plant  a. 144.7 gm/fruit b. 105.3 gm/fruit  a. 17.4 cm b. 11 cm  a.328 qtl/ha. b.206 qtl./ha.

Results of Refinement	Justification for refinement	Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
9	11	12	13	14	15
After having the results RCMBL-I has found suitable for front line demonstration on farmer's field		1)RCMBL- 1 2)Local variety	328 qtl/ha. 206 qtl/ha.	152400 54800	2.39 : 1 1.5 : 1

## Trial 6

- 1) **Title** : **Varietal evaluation of Potato**
- 2) **Problem diagnose/Refined** : Lack of suitable varieties as location specific , harvesting time coinciding with rain and lack of storage facility
- 3) **Details of technologies selected for assessment /Refinement** : Refinement/ Sowing date was refined to overcome excessive rain.  
1. Potato var : Kufri joyti  
Kufri Giriraj
- 4) **Source of technology** : CPRS, Upper Shillong, Meghalaya
- 5) **Production thematic area** : Irrigated field
- 6) **Thematic area** : Varietal evaluation
- 7) **Performance of the Technology with Performance indicator** : Results shows that K.Jyoti give average yield of 382.8 Q/Ha as compared to K.Giriraj 263 Q/Ha K.Jyoti gives average weight of tuber/ plant 448 gm whereas K.Giriraj gives an average weight of 297 gm
- 8) **Final recommendation for Micro level situation** : The production of Tuber can be increased if sowing is done during august to September to avoid excessive rain
- 9) **Constrains identified and Feedback for research** : Due to delayed sowing of seed tubers after the late harvest of paddy,(long duration local variety), no proper development of tubers/rotting at the time of harvesting due to early rainfall.
- 10) **Process of farmers Participation and their reaction** : Field day was observed for dissemination of the technology at farmers level. Farmers could differentiate the yield traits and tuber sizes and quality of different varieties to select for themselves the best suited variety

### 11) Results of On Farm Trial

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter
1	2	3	4	5	6	7	8
Potato	Irrigated	Lack of suitable varieties as location specific and lack of storage facility	Varietal evaluation of Potato variety K.Jyoti K.Giriraj	2	Varietal evaluation of Potato	(1) Average plant height (2) Average No of tubers /hill (3) Average weight of tubers (4) Average weight of tubers /plant (5) Tuber yield	i)40 cm ii)28 cm i) 8 ii)7 i)55 gm ii)43gm i)448 gm ii)297 gm i)382.8Q/ha ii)263 Q/ha

Results of refinement	Feedback from the farmer	Technology refinement	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
9	10	11	12	13	14
Yield was higher in K Jyoti compared to K Giriraj hence K Jyoti can be further trial for demonstration	Farmers are convinced with the demonstration and are ready for large scale production if seeds are made available to them.	K.Jyoti K.Giriraj,	i)382.8Q/ha ii)263 Q/ha	147960 64100	2.2 : 1 1.53 : 1



## Trial 7

- 1) **Title** : **Cultivation of Potato using TPS Tuber**
- 2) **Problem diagnose/Refined** : Lack of Seed Tuber and Transportation problem (bulky). Poor economic conditions of the farmer.
- 3) **Details of technologies selected for assessment /Refinement** : Refinement/ date of sowing was refined.  
Potato var: TPS (HPS II/67)
- 4) **Source of technology** : Horticulture Research Complex, Nagicherra, Tripura
- 5) **Production thematic area** : Irrigated field
- 6) **Thematic area** : Cultivation of potato using TPS
- 7) **Performance of the Technology with Performance indicator** :
- 8) **Final recommendation for Micro level situation** : It was recommended that the time of sowing need to be intervened so as to avoid excessive rain and frost damage.
- 9) **Constrains identified and Feedback for research** : Due to delayed sowing of seed tubers after the late harvest of paddy,(long duration local variety), no proper development of tubers/rotting at the time of harvesting due to early rainfall.
- 10) **Process of farmers Participation and their reaction** : Field day was observed for dissemination of the technology at farmers level.  
Farmers could differentiate the yield traits and tuber sizes and quality of different varieties to select for themselves the best suited variety

### 11) Results of On Farm Trial

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter
1	2	3	4	5	6	7	8
Potato	Irrigated	Lack of Seed Tuber and Transportation problem (bulky). Poor economic conditions of the farmer.	Cultivation of Potato using TPS Tuber	2	Cultivation of Potato using TPS Tuber	a)Average plant height b)Average No of tubers /hill c)Average weight of tubers d)Average weight of tubers /plant e)Tuber yield	1 ft 4 inch 6.5 Nos 38 gm 283 gm 264.78 Qtl/Ha

Results of refinement	Feedback from the farmer	Technology refinement	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
9	10	11	12	13	14
TPS tuber gives average yield of 264.78 Q/Ha which can be further increased by intervening with the time of sowing	Farmers are convinced with the demonstration and are ready for large scale production if seeds if made available	TPS(HPS II/67)	264.78 Qtl/Ha	65,348	1.6 : 1

## Trial 8

- 1) **Title** : **Varietal Evaluation of Pea**
- 2) Problem diagnose/Refined : Low productivity and incidence of pest and Diseases
- 3) Details of technologies selected for assessment /Refinement : Assessment  
Pea var: VL Matar -42
- 4) Source of technology :
- 5) Production thematic area : Rainfed
- 6) Thematic area : Varietal evaluation
- 7) Performance of the Technology with Performance indicator : VLMatar-42 gives yield of 88.7Q/Ha as green PODS and 8.3Q/Ha as seed which was much higher as compared to Arkel as local check
- 8) Final recommendation for Micro level situation : It was recommended that the variety can be popularized with proper insect and disease management strategy
- 9) Constrains identified and Feedback for research : The variety was found susceptible to powdery mildew and rust diseases
- 10) Process of farmers Participation and their reaction : Field day was observed for dissemination of the technology at farmers level. Farmers were encouraged to adopt the variety as it produces more number of POD and seed yield.

### 11) Results of On Farm Trial

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter
1	2	3	4	5	6	7	8
Pea	Rainfed	Low yield with local variety and incidence of pest and diseases	Varietal Evaluation of Pea	2	Varietal Evaluation of Pea  1)VLMatar-42 2)Local(Arkel)	a)Average plant height  b)50% Flowering stage  c)Average no of Pods/plant  d)Average no of seed/pods  e)Yield/Ha:- i)Green Pod  ii)Seed	a)3.47 ft b)2.32 ft  a)62-65 DAS b)65-70 DAS  a)12 b)10.3  a)7 b)6  a)88.7Q b)67.3Q a)8.3 Q b)6.6 Q

Results of assessment	Feedback from the farmer	Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
9	10	11	12	13	14
The variety yield 88.7Q/Ha and 8.3Q/Ha as Green POD and seed respectively.	Farmers are convinced with the demonstration and are ready for large scale production if seeds if made available	1)VLMatar-42  2)Local(Arkel)	Green POD a)88.7Q  b)67.3Q	87400  44600	1.97 : 1  1.5 : 1

## Trial 9

- 1) **Title** : **Varietal Evaluation of French Bean**
- 2) Problem diagnose/Refined : Lack of suitable varieties as location specific.
- 3) Details of technologies selected for assessment /Refinement : Assessment  
French Bean, Variety=RCMFB-1
- 4) Source of technology : ICAR, Barapani, Meghalaya
- 5) Production thematic area : Rain fed
- 6) Thematic area : Varietal evaluation
- 7) Performance of the Technology with Performance indicator : The variety gives average number of PODS (21) and yield/Ha (86.9Q) as compared to Local variety which yielded average number of POD(19) and 60.9Q respectively.
- 8) Final recommendation for Micro level situation : The variety was recommended for further assessment
- 9) Constrains identified and Feedback for research : Due to its fibrous nature the harvesting of the variety should not be delayed(early picking need to be done)
- 10) Process of farmers Participation and their reaction : Field day and trial was observed for dissemination of the technology at farmers level. Farmers are encouraged and convinces to adopt the variety

### 11) Results of On Farm Trial

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter
1	2	3	4	5	6	7	8
F.Bean	Rainfed	Low yield with local variety	Varietal Evaluation of F.Bean	2	Varietal Evaluation of F.Bean 1)RCMFB-1 2)Local	a)Average no of Pods/plant b)Yield/Ha	a)21 b)19  a)86.9 Q b)60.5 Q

Results of assessment	Feedback from the farmer	Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
9	10	11	12	13	14
The variety gives average number of PODS (21) and yield/Ha (86.9Q) as compared to Local variety which yielded average number of POD(19) and 60.9Q respectively. Harvesting should not be delayed	Farmers are convinced with the demonstration and are ready for large scale production if seeds if made available	1)RCMFB-1 2)Local	a)86.9 Q b)60.5 Q	18420 33900	2.1 : 1 1.5 : 1

## Trial 10

### 1) Title : Application of Rice Straw for Nutrient Management in Rice

2) Problem diagnose/Refined : Lack of awareness on proper Nutrient Management and imbalance use of chemical fertilizers

3) Details of technologies selected for assessment/refinement:

Assessment, The land was thoroughly puddle and Paddy Straw @ 12.40Q/Ha was applied and kept for three months. The land was plough again and puddle with an application of Fertilizer dose of 33.75 kg N, 22.5kg P and 30kg K was applied in the treatment plot. Here three plots was used for comparison as checks . The variety of Paddy (IR-64) was chosen.

4) Source of technology : AICRP on Cropping system, AAU Jorhat

5) Production thematic area : WRC

6) Thematic area : INM

7) Performance of the Technology with Performance indicator :

Result shows that the treatment plot gives higher yield and other parameters as compared to checks except the fertilizer plot which gives higher yield than treatment plot.

8) Final recommendation for Micro level situation :

Since the production and performances in both the respect have no much differences in their yield traits with respect to IR-64 variety, it may be to IR-64 recommended that different variety including the local cultivated variety be used for proper assessment in the forth coming season.

9) Constrains identified and Feedback for research :

Although there were no much problems associated with the particular crop (IR-64), incidence of pest like leaf folder, Gandhi bug were found to some extent. Delay in harvesting due to heavy rain during ripening stage was observed and resulted in shattering loss of crop Process of farmers

10) Participation and their reaction :

Trials was conducted at these different locations at farmers field which created awareness with active participation through cultivation of the crop Awareness was created during this period amongst the interested farmers for double cropping due to its short duration variety as a crop

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
1	2	3	4	5	6	7	8
Paddy	WRC	Lack of awareness on proper Nutrient Management and imbalance use of chemical fertilizers.	INM in Rice	2	INM in Rice 1)Paddy Straw only 2)Paddy straw & Fertilizer 3)Fertilizer only 4)Control	Average Plant height Average no of Tiller /hill Effective tillers Average length of Panicles Average no grains/panicle Yield	1)2.67 ft 2) 2.78 ft 3)2.62 ft 4)2.61 ft 1)27 2)31 3)29 4)26.6 1)25.3 2)30 3)27.33 4)24.6 1)9.93 inch 2)9.95 inch 3)9.91 inch 4)9.89 inch 1)160 2)161.3 3)159 4)161.6 1)45.4 Q 2)49.3 Q 3)51.8 Q 4)43.6 Q

Results of assessment	Feedback from the farmer	Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
9	10	11	12	13	14
It may be recommended that different variety including local variety be used for proper assessment in the coming season	Farmers were convinced and were made aware regarding the management of nutrients	1)Paddy Straw only 2)Paddy straw & Fertilizer 3)Fertilizer only 4)Without ferti & Paddy Straw	1)45.4Q/Ha 2)49.3Q/Ha 3)51.8Q/Ha 4)43.6Q/Ha	26,950 21,100 30,700 18,400	1.6 : 1 1.45 : 1 1.65 : 1 1.4 : 1

## Trial 11

- 1) **Title** : **Yield performance of paddy, IR-64**
- 2) Problem diagnose/Refined : Lack of short duration HYV suitable for this area.
- 3) Details of technologies selected for assessment /refinement : Assessment  
Paddy IR-64
- 4) Source of technology : IGKV, Raipur, Chhattisgarh
- 5) Production thematic area : WRC
- 6) Thematic area : Yield performance of paddy, IR-64
- 7) Performance of the Technology with Performance indicator : Results shows that the paddy var. IR-64 gives high yield 49.94 qtls/ha, average no of tiller/hill- 31.8, average no of panicles/hill 28 nos, average length of panicle -10.12 inch and Avg no grains/panicle-162.5 Nos
- 8) Final recommendation for Micro level situation : Since the production of this variety gave higher yield as compared to their existing local variety (i.e. Manipur buh, Liankhuma etc.), it is recommended for introducing at farmers field as an instrument for encouraging the farmers of this region for double cropping.
- 9) Constrains identified and Feedback for research : Since most of the farmers of this region are marginal farmers and the production are mainly consumed by themselves, which can hardly manage their demand. Therefore, they usually grow and select seeds which suits their taste, regardless of the production and productivity.
- 10) Process of farmers Participation and their reaction : The farmers were convinced with the performance of IR-64 with respect to its productivity and production alongwith its early maturity as well as with respect to lodging problems common in local var. (Manipur buh

### 11) Results of On Farm Trial

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials *	Technology Refinement	Parameters	Data on the parameter	Results of Refinement	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Paddy variety IR-64	WRC	Low yield with local variety	Yield performance of short duration Paddy variety IR-64	2	Yield performance of Paddy variety IR-64	1) Plant height 2)Average number of Tiller /Hill 3)Average number of Active Tiller /Hill 4)Average length of Panicle 5)Average no of grains/ panicle 7) yield/Ha	a)2.13 ft b)5.9 ft a)31.8 b)18.3 a)29.82 b)16.75 a)10.12 inch b)9.9 inch a)162.5 b)168.93 a)49.94 b)37.2	The production and productivity of the variety gives much higher results than that of the existing local variety	Due to its early maturity the farmers were motivated and encourages the farmers to go for double cropping

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
Yield performances of Paddy variety IR-64	IR-64= 49.94 Q Local = 37.2 Q	27910 8800	1.6 :1 1.2 :1

## Trial 12

- 1) **Title** : **Cultivation of Paddy through SRI**
- 2) **Problem diagnose/Refined** : Low productivity and problem of lodging from traditional method of cultivation . Fear of weed problem and lack of water management.
- 3) **Details of technologies selected for assessment /refinement** : Assessment, Transplanting of Seedlings at 8-12DAS. Transplanting of 1 seedling /Hill. Control irrigation and manures and fertilizer as recommended  
Paddy Variety: Local Tall variety, Manipur Buh
- 4) **Source of technology** : ICAR, Barapani, Shillong, Meghalaya
- 5) **Production thematic area** : WRC.
- 6) **Thematic area** : Water used efficiency and to combat lodging problem of the existing local variety.
- 7) **Performance of the Technology with Performance indicator** : Results shows that the average yield of 44.8qtl/ha, 30.66 nos average of tiller/hill which is found to be much higher as compared to control plot
- 8) **Final recommendation for Micro level situation** : It can be recommended for combating the lodging problem of the local existing tall variety. Yield traits and its production was found to be much higher in respect of SRI in comparison with conventional WRC. It can be recommended that SRI practice can give more yield if irrigated at timely interval and to those farmers having controllable irrigation channel with limited/ Small areas at present situation.
- 9) **Constrains identified and Feedback for research** : The farmers of this region need to be trained as this is a new system to be introduced in the district. On the contrary, they have been practicing their own system of cultivation as rainfed WRC. SRI been labour intensive at initial stage, farmers are reluctant towards spending the extra sum of labour in the field for leveling, marking, transplanting and weeding etc. SRI should be practiced in areas where irrigation can be controlled
- 10) **Process of farmers Participation and their reaction** : This system been practice as a new type of cultivation, the farmers of this region are slowly motivated through Field Days training, Demonstration and distribution of folders etc. SRI method gives much higher yields in comparison with the present practices and for the reason they are motivated towards following the practices.

### 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
1	2	3	4	5	6	7	8	9
Paddy Var : Local ( Mani pur buh)	WRC	Low productivity and problem of lodging from traditional method of cultivation . Fear of weed problem and lack of water management	Cultivation of Paddy through SRI	3	SRI Method 1)SRI 2) Conventional	(1)Average Plant Height (2)Average no tiller/Hill (3)Average Length of Panicle (4)Avg no of Effective tillers (5)Avg length of roots (6)Yield/Ha	i)5.5 ft ii)5.9 ft i)30.66 ii)18.3 i)9.83 inch ii)9.9 inch i)29.66 ii)16.75 i)13.6 inch ii)9 inch i)44.8 Q ii)37.2 Q	SRI Method give more yield if irrigated at timely intervals and controllable irrigation system. The plant height was reduced and the plant was rigid with increased in length of root. The problem of lodging was checked

Feedback from the farmer	Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
10	11	12	13	14
Farmers are motivate to adopt the system as the production is higher as compared to Conventional	SRI Method Conventional	44.8 Q 37.2 Q	20200 8800	1.42 : 1 1.2 : 1

## Trial 13

- 1) **Title** : **Varietal Evaluation of paddy**
- 2) Problem diagnose/Refined : Lack of short duration HYV suitable for this area and problem of lodging.
- 3) Details of technologies selected for assessment /refinement : Assessment  
Paddy Shahsarang
- 4) Source of technology : ICAR, Barapani, Meghalaya
- 5) Production thematic area : WRC
- 6) Thematic area : Varietal Evaluation of paddy-Shahsarang
- 7) Performance of the Technology with Performance indicator : Results shows that the paddy var. Shahsarang gives high yield 49.02 qtls/ha, average no of tiller/hill- 29, average length of panicle -10.1 inch and Average no of Grains/ Panicle-180.34
- 8) Final recommendation for Micro level situation : Since the production of this variety gave higher yield as compared to their existing local variety (i.e. Manipur buh, Liankhuma etc.), it is recommended for introducing at farmers field as an instrument for encouraging the farmers of this region for double cropping.
- 9) Constrains identified and Feedback for research : Since most of the farmers of this region are marginal farmers and the production are mainly consumed by themselves, which can hardly manage their demand. Therefore, they usually grow and select seeds which suits their taste, regardless of the production and productivity.
- 10) Process of farmers Participation and their reaction : The farmers were convinced with the performance of Shahsarang with respect to its productivity and production alongwith its early maturity as well as with respect to lodging problems common in local var. (Manipur buh

### 11) Results of On Farm Trial

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Refinement	Parameters	Data on the parameter
1	2	3	4	5	6	7	8
Paddy variety Shahsarang	WRC	Low yield with local variety and lack of short duration variety. Problem of lodging .	Varietal Evaluation of Paddy	2	Yield performance of Paddy variety 1)Shahsarang 2)Local	1) Plant height 2)Average number of Tiller /Hill 3)Average number of Active Tiller /Hill 4)Average length of Panicle 5)Average no of grains/ panicle 7) yield/Ha	a)3.47 ft b)5.9 ft a)29 b)18.3 a)26.66 b)16.75 a)10.1 inch b)9.9 inch a)180.34 b)168.93 a)49.02 b)37.2

Results of Assessment	Feedback from the farmer	Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
9	10	11	12	13	14
The production and productivity of the variety gives much higher results than that of the existing local variety	Due to its early maturity the farmers were motivated and encourages the farmers to go for double cropping	Varietal Evaluation of Paddy 1)Shahsarang 2)Local	a)49.02Q b)37.2Q	26530 8800	1.6 : 1 1.2 : 1

## Trial 14

- 1) **Title** : **Varietal Evaluation of paddy**
- 2) Problem diagnose/Refined : Lack of short duration HYV suitable for this area.
- 3) Details of technologies selected for assessment /refinement : Assessment  
Paddy: NDR-97
- 4) Source of technology : Narendra University of Agriculture and Technology, Kumarganj, Faizabad, UP
- 5) Production thematic area : WRC
- 6) Thematic area : Varietal Evaluation of Paddy
- 7) Performance of the Technology with Performance indicator : Results shows that the paddy var. NDR-97 gives high yield 47.7 qtls/ha, average no of tiller/hill- 33.4, average length of panicle -6.5 inch, average no of grains/panicle-140.5 with early maturity of 100-105DAS.
- 8) Final recommendation for Micro level situation : Since the production of this variety gave higher yield as compared to their existing local variety (i.e. Manipur buh, Liankhuma etc.), it is recommended for introducing at farmers field as an instrument for encouraging the farmers of this region for double cropping.
- 9) Constrains identified and Feedback for research : Since most of the farmers of this region are marginal farmers and the production are mainly consumed by themselves, which can hardly manage their demand. Therefore, they usually grow and select seeds which suits their taste, regardless of the production and productivity.
- 10) Process of farmers Participation and their reaction : The farmers were convinced with the performance of NDR-97 with respect to its productivity and production alongwith its early maturity as well as with respect to lodging problems common in local var. (Manipur buh

### 11) Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Refinement	Parameters	Data on the parameter
1	2	3	4	5	6	7	8
Paddy variety Paddy: NDR-97	WRC	Low yield with local variety and lack of short duration variety. Problem of lodging .	Varietal Evaluation of Paddy	2	Yield performance of Paddy variety 1) NDR-97 2)Local	1) Plant height 2)Average number of Tiller /Hill 3)Average number of Active Tiller /Hill 4)Average length of Panicle 5)Average no of grains/ panicle 7) yield/Ha	a)2.51 ft b)5.9 ft a)33.4 b)18.3 a)32 b)16.75 a)6.5 inch b)9.9 inch a)140.5 b)168.93 a)47.7Q b)37.2Q

Results of Assessment	Feedback from the farmer	Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
9	10	11	12	13	14
The production and productivity of the variety gives much higher results than that of the existing local variety and matures early favors the farmer to opt for Double cropping	Due to its early maturity the farmers were motivated and encourages the farmers to go for double cropping	Varietal Evaluation of Paddy 1)NDR-97 2)Local	a)47.7Q b)37.2Q	24550 8800	1.52 : 1 1.2 : 1



## Trial 15

- 1) **Title** : **Varietal Evaluation of paddy**
- 2) **Problem diagnose/Refined** : Lack of short duration HYV suitable for this area and problem of lodging.
- 3) **Details of technologies selected for assessment /refinement** : Assessment, Paddy variety Haccha
- 4) **Source of technology** : Assam
- 5) **Production thematic area** : WRC
- 6) **Thematic area** : Yield performance of paddy, Haccha
- 7) **Performance of the Technology with Performance indicator** : Results shows that the paddy var. Haccha gives high yield 30.9 qtls/ha, average no of tiller/hill- 29, average length of panicle -8.84 inch, average no of grains / panicle-148.6.
- 8) **Final recommendation for Micro level situation** : Since the variety was found susceptible to blast epidemic so it was further recommended for assessment with proper management strategy.
- 9) **Constrains identified and Feedback for research** : Proper management strategy need to be adopt to overcome blast epidemic.
- 10) **Process of farmers Participation and their reaction** : Farmers were actively engaged through trials, field day etc. They are willing to go for further trial in the next season.

### 11) Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Refinement	Parameters	Data on the parameter
1	2	3	4	5	6	7	8
Paddy variety Paddy: Haccha	WRC	Low yield with local variety	Varietal Evaluation of Paddy	2	Yield performance of Paddy variety 1) Haccha 2)Local	1) Plant height 2)Average number of Tiller /Hill 3)Average number of Active Tiller /Hill 4)Average length of Panicle 5)Average no of grains/ panicle 7) yield/Ha	a)2.44 ft b)5.9 ft a)29 b)18.3 a)26.4 b)16.75 a)8.84 inch b)9.9 inch a)148.6 b)168.93 a)30.9Q b)37.2Q

Results of Assessment	Feedback from the farmer	Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
9	10	11	12	13	14
The production and productivity of the variety gives much lower results than that of the existing local variety due to blast epidemic	Due to its early maturity the farmers were willing to go for trials in the next season	Varietal Evaluation of Paddy 1)Haccha 2)Local	a)30.9Q b)37.2Q	- 8800	1 : 1 1.2 : 1

## Trial 16

- 1) **Title** : **Cultivation of Maize through HQPM**
- 2) **Problem diagnose/Refined** : Lack of awareness on improve cultivation packages and low protein content on existing local variety . Small and marginal land holdings.
- 3) **Details of technologies selected for assessment /refinement** : Refinement was done on date of sowing. Maize, HQPM-1
- 4) **Source of technology** : Directorate of Maize research ICAR, Pusa, New Delhi
- 5) **Production thematic area** : Rain-fed
- 6) **Thematic area** : Cultivation of HQPM
- 7) **Performance of the Technology with Performance indicator** : Results shows that the Maize var. HQPM-1 gives high yield 54.9 qtls/hand other attributes as compared to local variety -Mimpui
- 8) **Final recommendation for Micro level situation** : Since the production of this variety gave higher yield as compared to their existing local variety , it is recommended for introducing at farmers field.
- 9) **Constrains identified and Feedback for research** : Since most of the farmers of this region are marginal farmers and the production are mainly consumed by themselves, which can hardly manage their demand. Therefore, they usually grow Maize as secondary crop
- 10) **Process of farmers Participation and their reaction** : The farmers were convinced with the performance of HQPM-1 with respect to its productivity and production and are encouraged to grow if seeds are made available to them

### 11) Results of On Farm Trial

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Refinement	Parameters	Data on the parameter
1	2	3	4	5	6	7	8
Maize	Rain fed	Lack of awareness on improve cultivation packages and low protein content on existing local variety . Small and marginal land holdings.	Cultivation of Maize through HQPM	2	Cultivation of Maize through HQPM 1)HQPM-1 2)Local (Mimpui)	1) Plant height 2)Average length of Cob 3)Average weight of Cob 4)Average diameter of Cob 5)Average no of grains/ cob 6)Date of Harvesting 7) yield/Ha	a)6.8 ft b)5.6 ft a)6.98 inch b)6 inch a)230 gm b)200 gm a)6 inch b)6 inch a)520 b)443 a)85-90 DAS b)94-97 DAS a)54.9Q b)43.4Q

Results of Refinement	Feedback from the farmer	Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
9	10	11	12	13	14
The production and productivity of the variety gives much higher results than that of the existing local variety	The farmers were motivated and encourages the farmers to grow if seed are made available to them	Varietal Evaluation of Maize 1)HQPM-1 2)Local	a)54.9Q b)43.4Q	52,320 31,620	2.12 : 1 1.7 : 1

## Trial 17

- 1) **Title** : **Mineral mixture (Agrimin), Feed Additive and Supplement at existing traditional farmers practice**
- 2) Problem diagnose/Refined : Mineral deficiency
- 3) Details of technologies selected for assessment /refinement : Assessment
- 4) Source of technology : ZPD, Zone III, ICAR Barapani
- 5) Production thematic area : Strategic supplementation of deficient minerals.
- 6) Thematic area : 1)Increase in body weight  
2)Disease incidence
- 7) Performance of the Technology with Performance indicator : Incidence of disease ,body weight etc.
- 8) Final recommendation for Micro level situation : Mineral mixture as feed additive can be used for supplementing traditional feeds for better growth and development..
- 9) Constrains identified and Feedback for research : Awareness programme through training and Demonstration is the need at present.
- 10) Process of farmers Participation and their reaction : Free distribution of mineral mixture to make the farmers aware.

### 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 production	Traditional backyard piggery farm.	Mineral Deficiency.	Mineral mixture as feed additive and supplement at existing farmers practice.	2 (2 pigs for 1 farmers)	Traditional feeding system	1)Body weight at monthly intervals 2)Disease occurrence 3) Maximum body wt gain 4) Mortality	<table border="1"> <thead> <tr> <th>Average Body wt</th> <th>With mineral mixture</th> <th>Without mineral mixture</th> </tr> </thead> <tbody> <tr> <td>3 month</td> <td>15.75 kg</td> <td>14.25 kg</td> </tr> <tr> <td>4 Months</td> <td>23.50 kg</td> <td>19.25 kg</td> </tr> <tr> <td>5 Months</td> <td>32.65 kg</td> <td>24.75 kg</td> </tr> <tr> <td>6 Months</td> <td>40.25 kg</td> <td>30.75 kg</td> </tr> <tr> <td>7 Months</td> <td>47.90 kg</td> <td>36.25 kg</td> </tr> <tr> <td>8 Months</td> <td>55.75 kg</td> <td>42.25 kg</td> </tr> <tr> <td>9 Months</td> <td>64.25 kg</td> <td>49.75 kg</td> </tr> <tr> <td>10 Months</td> <td>73.75 kg</td> <td>56.25 kg</td> </tr> </tbody> </table>	Average Body wt	With mineral mixture	Without mineral mixture	3 month	15.75 kg	14.25 kg	4 Months	23.50 kg	19.25 kg	5 Months	32.65 kg	24.75 kg	6 Months	40.25 kg	30.75 kg	7 Months	47.90 kg	36.25 kg	8 Months	55.75 kg	42.25 kg	9 Months	64.25 kg	49.75 kg	10 Months	73.75 kg	56.25 kg	On going	Creates awareness to the farmers towards Scientific management
Average Body wt	With mineral mixture	Without mineral mixture																																		
3 month	15.75 kg	14.25 kg																																		
4 Months	23.50 kg	19.25 kg																																		
5 Months	32.65 kg	24.75 kg																																		
6 Months	40.25 kg	30.75 kg																																		
7 Months	47.90 kg	36.25 kg																																		
8 Months	55.75 kg	42.25 kg																																		
9 Months	64.25 kg	49.75 kg																																		
10 Months	73.75 kg	56.25 kg																																		

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

### 3.2 Achievements of Frontline Demonstrations

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

List of technologies demonstrated during previous year and popularized during 2007-08 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

\* Thematic areas as given in Table 3.1 (A1 and A2)

b. Details of FLDs implemented during 2007-08 (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	

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					

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

**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

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
		1. Seed/Variety				
		2. Bio-fertilizer				
		3. Fertilizer management				
		4. Plant Protection				
		5. Combination of components (Please specify)				

#### Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	

#### Farmers' reactions on specific technologies

S. No	Feed Back
1	

#### Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days				
2	Farmers Training				
3	Media coverage				
4	Training for extension functionaries				

#### c. Details of FLD on Enterprises

##### (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		

\* *Field efficiency, labour saving etc.*

##### (ii) Livestock Enterprises

Enterprise	Breed	No. of farmers	No. of animals, poultry birds etc.	Performance parameters / indicators	* Data on parameter in relation to technology demonstrated		% change in the parameter	Remarks
					Demon.	Local check		
Dairy	Jersey Cross	1	3	Milk Production, Mineral mixture and feed	-	-	-	On going

\* *Milk production, meat production, egg production, reduction in disease incidence etc.*

##### (iii) Other Enterprises

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
<b>(A) Farmers &amp; Farm Women</b>										
<b>I Crop Production</b>										
Weed Management	1				5	20	25	5	20	25
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Water management										
Seed production										
Nursery management										
Integrated Crop Management										
Fodder production										
Production of organic inputs										
<b>II Horticulture</b>										
<b>a) Vegetable Crops</b>										
Production of low volume and high value crops										
Off-season vegetables										
Nursery raising										
Exotic vegetables like Broccoli										
Export potential vegetables										
Grading and standardization										
Protective cultivation (Green Houses, Shade Net etc.)										
<b>b) Fruits</b>										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards	1				15	10	25	15	10	25
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
<b>c) Ornamental Plants</b>										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
<b>d) Plantation crops</b>										
Production and Management technology										
Processing and value addition										
<b>e) Tuber crops</b>										
Production and Management technology										
Processing and value										

addition										
<b>f) Spices</b>										
Production and Management technology										
Processing and value addition										
<b>g) Medicinal and Aromatic Plants</b>										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
<b>III Soil Health and Fertility Management</b>										
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										
<b>IV Livestock Production and Management</b>										
Dairy Management										
Poultry Management										
Piggery Management	1				6	4	10	6	4	10
Rabbit Management										
Disease Management										
Feed management	2				20	-	20	20	-	20
Production of quality animal products										
<b>V Home Science/Women empowerment</b>										
Processing and Cooking	1				0	35	35	0	35	35
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										
<b>VI Agril. Engineering</b>										
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										
<b>VII Plant Protection</b>										
Safety used of Insecticides	1				15	10	25	15	10	25
Integrated Pest Management										
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
<b>VIII Fisheries</b>										
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										
<b>IX Production of Inputs at site</b>										
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										



<b>X Capacity Building and Group Dynamics</b>										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
<b>XI Agro-forestry</b>										
Production technologies										
Nursery management										
Integrated Farming Systems										
<b>TOTAL</b>	<b>7</b>				<b>61</b>	<b>79</b>	<b>140</b>	<b>61</b>	<b>79</b>	<b>140</b>
<b>(B) RURAL YOUTH</b>										
Mushroom Production	2				26	28	54	26	28	54
Bee-keeping										
Integrated farming										
Seed production										
Production of organic inputs										
Integrated Farming										
Planting material production										
Vermi-culture										
Sericulture										
Protected cultivation of vegetable crops										
Commercial fruit production										
Repair and maintenance of farm machinery and implements										
Nursery Management of Horticulture crops	1				12	5	17	12	5	17
Training and pruning of orchards										
Value addition										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
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										
<b>TOTAL</b>	<b>3</b>				<b>38</b>	<b>33</b>	<b>71</b>	<b>38</b>	<b>33</b>	<b>71</b>

<b>(C) Extension Personnel</b>										
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Formation and Management of SHGs										
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										
Household food security										
Women and Child care										
Low cost and nutrient efficient diet designing										
Production and use of organic inputs										
Gender mainstreaming through SHGs										
<b>TOTAL</b>										

B) OFF Campus

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>(A) Farmers &amp; Farm Women</b>										
<b>I Crop Production</b>										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Water management	1				36	5	41	36	5	41
Seed production										
Integrated Nutrient Management	1				28	5	33	28	5	33
Nursery management										
Integrated Crop Management										
Fodder production										
Production of organic inputs										
<b>II Horticulture</b>										
<b>a) Vegetable Crops</b>										
Cultivation of Vegetables	1				40	4	44	40	4	44
Production of low volume and high value crops										
Off-season vegetables										
Nursery raising										
Exotic vegetables like Broccoli										
Export potential vegetables										
Grading and standardization										
Protective cultivation (Green Houses, Shade Net etc.)										
<b>b) Fruits</b>										
Training and Pruning	1				45	10	55	45	10	55
Layout and Management of Orchards										
Cultivation of Fruit	2				102	12	114	102	12	114
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
<b>c) Ornamental Plants</b>										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
<b>d) Plantation crops</b>										
Production and Management technology										
Processing and value addition										

<b>e) Tuber crops</b>										
Production and Management technology										
Processing and value addition										
<b>f) Spices</b>										
Production and Management technology										
Processing and value addition										
<b>g) Medicinal and Aromatic Plants</b>										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
<b>III Soil Health and Fertility Management</b>										
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										
<b>IV Livestock</b>										
<b>Production and Management</b>										
Dairy Management										
Poultry Management										
Piggery Management	1				14	8	22	14	8	22
Rabbit Management										
Disease Management										
Feed management										
Production of quality animal products										
<b>V Home Science/Women empowerment</b>										
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	2				3	43	46	3	43	46
Income generation activities for empowerment of rural Women										
Location specific										

drudgery reduction technologies										
Rural Crafts										
Women and child care										
<b>VI Agril. Engineering</b>										
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										
<b>VII Plant Protection</b>										
Integrated Pest Management	1				40	4	44	40	4	44
Integrated Disease Management										
Bio-control of pests and diseases										
Safety used of Insecticides	1				73	6	79	73	6	79
Production of bio control agents and bio pesticides										
<b>VIII Fisheries</b>										
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										
<b>IX Production of Inputs at site</b>										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock										

feed and fodder										
Production of Fish feed										
Mushroom Production	1			20	10	30	20	10	30	
<b>X Capacity Building and Group Dynamics</b>										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
<b>XI Agro-forestry</b>										
Production technologies										
Nursery management										
Integrated Farming Systems										
<b>TOTAL</b>	<b>12</b>			<b>401</b>	<b>107</b>	<b>508</b>	<b>401</b>	<b>107</b>	<b>508</b>	
<b>(B) RURAL YOUTH</b>										
Mushroom Production										
Bee-keeping										
Small Scale Processing	2			2	101	103	2	101	103	
Integrated farming										
Seed production										
Production of organic inputs										
Integrated Farming										
Planting material production										
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										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
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										
<b>TOTAL</b>	<b>2</b>				<b>2</b>	<b>101</b>	<b>103</b>	<b>1</b>	<b>101</b>	<b>103</b>
<b>(C) Extension Personnel</b>										
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Formation and Management of SHGs										
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										
Household food security										
Women and Child care										
Low cost and nutrient efficient diet designing										
Production and use of organic inputs										
Gender mainstreaming through SHGs										
<b>TOTAL</b>										

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
<b>(A) Farmers &amp; Farm Women</b>										
<b>I Crop Production</b>										
Weed Management	1				5	20	25	5	20	25
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Water management	1				36	5	41	36	5	41
Seed production										
Integrated Nutrient Management	1				28	5	33	28	5	33
Nursery management										
Integrated Crop Management										
Fodder production										
Production of organic inputs										
<b>II Horticulture</b>										
<b>a) Vegetable Crops</b>										
Production of low volume and high value crops										
Off-season vegetables										
Nursery raising										
Exotic vegetables like Broccoli										
Export potential vegetables										
Grading and standardization										
Protective cultivation (Green Houses, Shade Net etc.)										
Cultivation of Vegetables	1				40	4	44	40	4	44
<b>b) Fruits</b>										
Training and Pruning	1				45	10	55	45	10	55
Layout and Management of Orchards										
Cultivation of Fruit	2				102	12	114	102	12	114
Management of young plants/orchards	1				15	10	25	15	10	25
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
<b>c) Ornamental Plants</b>										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
<b>d) Plantation crops</b>										
Production and Management technology										
Processing and value addition										
<b>e) Tuber crops</b>										
Production and										



Management technology										
Processing and value addition										
<b>f) Spices</b>										
Production and Management technology										
Processing and value addition										
<b>g) Medicinal and Aromatic Plants</b>										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
<b>III Soil Health and Fertility Management</b>										
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										
<b>IV Livestock Production and Management</b>										
Dairy Management										
Poultry Management										
Piggery Management	2				20	12	32	20	12	32
Rabbit Management										
Disease Management										
Feed management	2				20	-	20	20	-	20
Production of quality animal products										
<b>V Home Science/Women empowerment</b>										
<b>Processing &amp; Cooking</b>	1				-	35	35	-	35	35
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	2				3	43	46	3	43	46
Income generation activities for empowerment of rural										

Women										
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care										
<b>VI Agril. Engineering</b>										
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										
<b>VII Plant Protection</b>										
Safety used of Insecticides	2				88	16	104	88	16	104
Integrated Pest Management	1				40	4	44	40	4	44
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
<b>VIII Fisheries</b>										
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										
<b>IX Production of Inputs at site</b>										
Seed Production										
Mushroom Production	1				20	10	30	20	10	30
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										
<b>X Capacity Building and Group Dynamics</b>										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
<b>XI Agro-forestry</b>										
Production technologies										
Nursery management										
Integrated Farming Systems										
<b>TOTAL</b>	<b>19</b>				<b>462</b>	<b>186</b>	<b>648</b>	<b>462</b>	<b>186</b>	<b>648</b>
<b>(B) RURAL YOUTH</b>										
Mushroom Production	2				26	28	54	26	28	54
Bee-keeping										
Integrated farming										
Seed production										
Production of organic inputs										
Integrated Farming										
Planting material production										
Vermi-culture										
Sericulture										
Protected cultivation of vegetable crops										
Commercial fruit production										
Repair and maintenance of farm machinery and implements										
Nursery Management of Horticulture crops	1				12	5	17	12	5	17
Training and pruning of orchards										
Value addition										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
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	2				2	101	103	2	101	103
Post Harvest										

Technology										
Tailoring and Stitching										
Rural Crafts										
<b>TOTAL</b>	<b>5</b>				<b>40</b>	<b>134</b>	<b>174</b>	<b>40</b>	<b>134</b>	<b>174</b>
<b>(C) Extension Personnel</b>										
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Formation and Management of SHGs										
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										
Household food security										
Women and Child care										
Low cost and nutrient efficient diet designing										
Production and use of organic inputs										
Gender mainstreaming through SHGs										
<b>TOTAL</b>										

Details of above training programmes as Annexure in the proforma given below

Date	Clien tel e	Title of the training programme	Discipline	Thematic area	Dur atio n in day s	Venue (Off / On Camp us)	Number of other participants			Number of SC/ST			Total number of participants		
							M	F	TT	M	F	TT	M	F	TT
16/4/2010 & 12/5/2010	PF	Scientific backyard Piggery management	Animal Sc	Piggery Management	2	On & Off				20	12	32	20	12	32
2/12/2010	PF	Storage & Utilization of Paddy Straw as feed for Cattle	Animal Sc	Feed Management	2	On				20	0	20	20	0	20
29/4/2010	PF	Integrated Nutrient management for Sustainable Agriculture	Agronomy	Nutrient Management	1	Off				28	5	33	28	5	33
7/5/2010	PF	Cultivation of Crops on raised bed for water used efficiency	Agronomy	Water Management	1	Off				36	5	41	36	5	41
28/6/2010	PF	Weed management of Paddy	Agronomy	Weed Management	1	Off				5	20	25	5	20	25
18/5/2010 & 4/11/2010	PF	Cultivation of M.Orange, Grapes etc	Horticul ture	Cultivation of Fruits	2	Off				102	12	114	102	12	114
21/5/2010	RY	Steps in raising Nursery for fruits & Vegetables	Horticul ture	Nursery Management	1	On				12	5	17	12	5	17
3/11/2010	PF	Packages of practices for cultivation of Winter vegetables	Horticul ture	Double Cropping	1	Off				40	4	44	40	4	44
3/11/2010	PF	Cultivation of M.Orange, Passion Fruit, Grapes etc	Horticul ture	Training & Pruning	1	Off				45	10	55	45	10	55
30/9/2010	PF	Scientific management of Orchards	Horticul ture	Management of young plants & Orchards	1	On				15	10	25	15	10	25
12/5/2010 & 20/5/2010 & 21/5/2010	PF & RY	Training on Mushroom Cultivation	Plant Protection	Mushroom Production	3	On & Off				46	38	84	46	38	84
3/11/2010	PF	Management of Pest & Diseases of Fruit Crops	Plant Protection	IPM	1	Off				40	4	44	40	4	44
3/11/2010 & 5/11/2010	PF	Safety use of Pesticides	Plant Protection	Use of Insecticides	2	On & Off				88	16	104	88	16	104
21/5/2010	PF	Food preparation & Processing	Home Science	Processing & Cooking	1	On				0	35	35	0	35	35
18/5/2010 & 20/5/2010	PF	Value addition of Fruits & Vegetables	Home Science	Value Addition	2	Off				3	43	46	3	43	46
20/7/2010 & 27/7/2010	RY	Processing of Fruits & Vegetables	Home Science	Small scale processing	2	Off				2	101	104	2	101	103

## (D) Vocational training programmes for Rural Youth

Crop / Enterprise	Date	Training title*	Identified Thrust Area	Duration (days)	No. of Participants			Self employed after training			Number of persons employed elsewhere
					Male	Female	Total	Type of units	Number of units	Number of persons employed	

\*training title should specify the major technology /skill transferred

## 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.	2/12/2010	Storage & Utilization of Paddy Straw as feed for Cattle	Animal Sc	Feed Management	1	PF	2				20	0	20	20	0	20	ATMA	-
2.	18/5/2010 & 4/11/2010	Cultivation of M.Orange, Grapes etc	Horticulture	Cultivation of fruits	1	PF	2				102	12	114	102	12	114	ATMA	
3	3/11/2010	Packages of practices of winter vegetables	Horticulture	Double Cropping	1	PF	1				40	4	44	40	4	44	ATMA	
4	3/11/2010 & 5/11/2010	Safety use of Pesticides	Plant Protection	Use of Insecticides	2	PF	2				88	16	104	88	16	104	ATMA	

## 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	Paddy, Maize, Brinjal etc (3.9.2010)	1				10	5	15				10	5	15
2.	Field Day	Paddy, pea Maize, Brinjal etc (7.5.2010)	1				20	5	25				20	5	25
	Total		2				30	10	40				30	10	40
3.	Kisan Mela														
4.	PRA	Base line Survey at Chawngtlai & Sialhawk village (4/4/2009) & (24/5/2009)	2				38	9	47				38	9	47
	Total														

5.	Kisan Ghosthi	Cultivation of paddy through SRI (19.11.2010)	1				34	8	42	5	3	8	39	11	50
6.	Exhibition														
7.	Film Show	TPS cultivation, Documentary film on Farm machinery, Flower arrangement	4				34	36	70	8	4	12	42	40	82
8.	Method Demonstrations														
9.	Farmers Seminar														
10.	Workshop														
11.	Group meetings	Animal husbandry, fruits & vegetable cultivation (15.5.10 & 19.10.10)	3				23	9	32				23	9	32
12.	Lectures delivered as resource persons	Cultivation of Paddy through SRI & Cultivation of Fruits, Management of Pest & Diseases	3				40	4	44				40	4	44
13.	Newspaper coverage	Training programmes, field days	16				-	-	-	-	-	-	-	-	-
14.	Radio talks														
15.	TV coverage	Training programmes, field days	6				-	-	-	-	-	-	-	-	-
16.	Popular articles														
17.	Extension Literature/ Training material produced	VideoCD & Slides	4 & 37	-	-	-	-	-	-	-	-	-	-	-	-
18.	Advisory Services	Training, Field Days, Package of practices	6				60	13	73				60	13	73
19.	Scientific visit to farmers field	Pig, paddy M.Orange, Ginger etc	8				36	-	36				36	-	36
20.	Farmers visit to KVK	Pig, paddy M.Orange, Ginger etc	2				50	12	72				50	12	72
21.	Diagnostic visits		8												
22.	Exposure visits	Grapes, Pea, Mustard	1				22	8	30				22	8	30
23.	Ex-trainees Sammelana														
24.	Soil health Camp														
25.	Animal Health Camp														
26.	Agri mobile clinic														
27.	Soil test campaigns														

28.	Farm Science Club Convener's meet														
29.	Self Help Group Convener's meetings														
30.	Mahila Mandals Convener's meetings														
31.	Celebration of important days (specify)	Republic day, Independence Day 26.1.10:15.7.10 & 4.3.10	3				28	16	44				28	16	44
	<b>Grand Total</b>		106				395	125	520	13	7	20	408	132	540

### 3.5 Production and supply of Technological products

#### SEED MATERIALS

Major group/class	Crop	Variety	Quantity (qtl.)	Value (Rs.)	Provided to No. of Farmers
<b>CEREALS</b>	Paddy	IR-64	32	32,000	80
		Local	6	6,000	15
<b>OILSEEDS</b>					
<b>PULSES</b>	Pea	Arkel	0.06	3,000	2
		VLMatar-42	0.03	1,500	2
<b>VEGETABLES</b>	Brinjal	RCMBL-1	0.001	1,000	10
<b>FLOWER CROPS</b>					
<b>SPICES</b>	Ginger	Thingpui and thing lai dum	5	7,500	1
<b>TOTAL</b>			<b>43.09 qtl.</b>	<b>51,000</b>	<b>110</b>

\*An example for guidance only



**SUMMARY**

Sl. No.	Major group/class	Quantity (qtl.)	Value (Rs.)	Provided to No. of Farmers
1	CEREALS	38	38,000	95
2	OILSEEDS			
3	PULSES	0.09	4,500	4
4	VEGETABLES	0.001	1,000	10
5	FLOWER CROPS			
6	SPICES	5	7,500	1
<b>TOTAL</b>		<b>43.09</b>	<b>51,000</b>	<b>110</b>

**PLANTING MATERIALS**

Major group/class	Crop	Variety	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
<b>FRUITS</b>	pineapple	kew	1000		1
<b>SPICES</b>					
<b>VEGETABLES</b>					
	Brinjal	RCMBL-1	500	500	10
	Cabbage	Yash	1000	1000	10
	Cauliflower	Pusa Snowball	1000	1000	10
	Broccoli	Aishwarya	1000	500	5
<b>FOREST SPECIES</b>					
<b>ORNAMENTAL CROPS</b>					
<b>PLANTATION CROPS</b>					
<b>Others (specify)</b>					
<b>TOTAL</b>			<b>4,500</b>	<b>8,000</b>	<b>36</b>

\*An example for guidance only

**SUMMARY**

Sl. No.	Major group/class	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
1	FRUITS	1000	5,000	1
2	VEGETABLES	3500	3,000	35
3	SPICES			
4	FOREST SPECIES			
5	ORNAMENTAL CROPS			
6	PLANTATION CROPS			
7	OTHERS			
	<b>TOTAL</b>	<b>4500</b>	<b>8,000</b>	<b>36</b>

**BIO PRODUCTS :**

Major group/class	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			No	(kg)		
<b>BIOAGENTS</b>						
<b>BIOFERTILIZERS</b>						
1 Vermicompost	Vermicompost	Red Worm	-	500	6,000	2
<b>BIO PESTICIDES</b>						
1						

**SUMMARY**

Sl. No.	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			Nos	(kg)		
1	BIOAGENTS					
2	BIO FERTILIZERS	Vermicompost(Red worm)		500	6,000	2
3	BIO PESTICIDE					
	<b>TOTAL</b>			500	6,000	2

**LIVESTOCK**

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

**SUMMARY**

Sl. No.	Type	Breed	Quantity		Value (Rs.)	Provided to No. of Farmers
			Nos	Kgs		
1	CATTLE					
2	PIG					
3	POULTRY					
4	FISHERIES					
5	OTHERS					
	<b>TOTAL</b>					

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

(A) KVK News Letter ((Date of start, Periodicity, number of copies distributed etc.) Mizoram KVK News letter (January – June, 2010)

#### (B) Literature developed/published

Item	Title	Authors name	Number of copies
Research papers			
Total			
Technical reports			
Popular articles			
Leaflets/folders	Serthlum chin dan	Malsawmkimi ,SMS(Horti)	150
	Pesticides chi hrang hrang leh a hman dan	F.Zoramthari,SMS(PP)	100
	Pa Khawi dan	F.Zoramthari,SMS(PP)	100
	Hlawk zawka Vawk vulh dan	S.K.Ahmed, SMS (Animal Sc.)	150
	Vermicompost siam dan	Prakash Thapa, Farm Manager	100
<b>GrandTOTAL</b>			<b>600</b>

\* an example for guidance only

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	Flower Arrangement	1
2	CD	Cultivation of TPS	1
3	CD	Demonstration on Farm Machinerics	1
4	DVD	Double Cropping	1
5	DVD	Technique of Food Processing	1

3.7. Success stories/Case studies, if any (two or three pages write-up on each case with suitable action photographs)

### SUCCESS STORY

KVK Champhai District took steps and initiatives to popularize various suitable technologies for the District through Trainings, Trials and Demonstrations. Many Farmers who are encouraged adopted these technologies. Among them the organic society Biate comprising 15 rural youth members who took Vermicomposting as their activity under the initiation and supervision of KVK Champhai District.

Initially, the compost was mainly for their own farm used and started on commercial scale from 2009 onwards after their production was surplus. At present, the production is mainly sold to co-farmers, state Horti/Agril Departments and Florist with a turnover of Rs.96,000 to 1,08,000 /year.

Worm Species	No. of Unit	Production / Year(inQtl)	Rate/Qtl	Production in terms of Rs/Annum.	Remarks
Red Worm ( <u>Eisenia foetida</u> )	12	80-90	1200	96000-108000	Additional income is also generated from the sale of Milk



The Society Acquired six no of Cattle where the Dung is used in Vermi composting



Society members of Biate with KVK Officials



The Society prepared vermicompost by Pit method with brick structure & tetra vermin bed, surface method

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

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)

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1	Passion Fruit	Soaking of Passion fruit seed in warm water for 10-15 minutes before sowing	To induced early germination
2	Mustard	In a plastic bottle/ can a few holes are made on the cap where seeds can pass through	For uniform sowing of seeds
3	Paddy	A marker made of wood are used where the teeth are nailed at the desired distance/spacing	To make marking for transplanting in lines
4	Paddy	The required seed Are put in a Jute bag(Buara) and they are emerged in water at the Paddy field in Situ for 10-15 hrs and this are taken out on the burns which were again plastered with mud and kept till sprouting i.e. 2-3 days	To induced sprouting for broadcasting in nursery bed



Figure: Plastic bottle/can used for uniform sowing of Mustard seeds



Figure: Wooden Marker used for making lines for transplanting Paddy

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

- Identification of courses for farmers/farm women : Semi-structure interview schedule
- Rural Youth : Semi-structure interview schedule
- Inservice personnel : Group discussion

### 3.11 Field activities

- i. Number of villages adopted : 9
- ii. No. of farm families selected : 90
- iii. No. of survey/PRA conducted : 2

### 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 :

SI. No	Name of the Equipment	Qty.	Cost
1			
2			
3			
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)

NB: Should be based on actual study, questionnaire/group discussion etc. with ex-participants.



#### 4.2. Cases of large scale adoption

- 1) Technology/ Skill transferred by KVK : Used of Butachlor for weed management in Paddy
- 2) Percentage of adoption : 80%(Restricted to WRC area)
- 3) Frequency of weeding before adoption : 3-4 times.
- 4) Frequency of weeding after adoption : 1 times.
- 5) Amount spend for weeding before adoption : 9,000-12,000
- 6) Amount spend for weeding after adoption : 3,000



**Fig: Application of Weedicides (Butachlor) at 2-3 Days after transplanting of Paddy**

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

## 5.0 LINKAGES

### 5.1 Functional linkage with different organizations

Name of organization	Nature of linkage
1. DAO	Participation in meeting and training
2. DHO	Participation in meeting and training
3. DVO	Participation in meeting and training

NB The nature of linkage should be indicated in terms of joint diagnostic survey, joint implementation, participation in meeting, contribution received for infrastructural development, conducting training programmes and demonstration or any other

### 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/No : Yes

S. No.	Programme	Nature of linkage	Remarks
	Training and demonstration	Financial support	

### 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 : NA

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									
Rice									
Pulses									
Pigeonpea									
Oilseeds									
Fibers									
Spices & Plantation crops									
Floriculture									
Fruits									
Vegetables									
Others (specify)									

### 6.3 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	10 Qtl	7,000	12,000	The product was mainly for own farm used

### 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

Training programmes conducted by using Rainwater Harvesting Demonstration Unit : NA

Date	Title of the training course	Client (PF/RV/EF)	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

Months	Title of the training course/Purpose of stay	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
October 2006				
Total				
November 2006				
Total				
December 2006				
Total				
January 2007				
Total				
February 2007				
Total				
March 2007				
Total				
April 2007				
Total				
May 2007				
Total				
June 2007				
Total				
July 2007				
Total				
August 2007				
Total				
September 2007				
Total				
Grand total				

5 X 25= 125 (Duration of the training course X No. of trainees)

## **7. FINANCIAL PERFORMANCE**

### **7.1 Details of KVK Bank accounts**

Bank account	Name of the bank	Location	Account Number
With Host Institute			
With KVK	Mizoram Rural Bank	Khawzawl	25016045564

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

Item	Released by ICAR		Expenditure		Unspent balance as on 1 <sup>st</sup> April 2008
	Kharif 2007	Rabi 2007 -08	Kharif 2007	Rabi 2007-08	
Inputs					
Extension activities					
TA/DA/POL etc.					
TOTAL					

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

Item	Released by ICAR		Expenditure		Unspent balance as on 1 <sup>st</sup> April 2008
	Kharif 2007	Rabi 2007 -08	Kharif 2007	Rabi 2007-08	
Inputs					
Extension activities					
TA/DA/POL etc.					
TOTAL					

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

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

7.5 Utilization of KVK funds during the year 10-11 (upto April. 2011) (year-wise separately) (current year and previous year)

S. No.	Particulars	Sanctioned	Released	Expenditure
<b>A. Recurring Contingencies</b>				
1	Pay & Allowances	29.1 lakhs	29.1 lakhs	27.59403 lakhs
2	Traveling allowances	2 lakhs	2 lakhs	1.99905 lakh
3	Wages	1 lakh	1 lakh	0.96360 lakh
4	Contingencies	8.14 lakhs	8.14 lakhs	8.14 lakhs
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)			
B	POL, repair of vehicles, tractor and equipments			
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)			
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)			
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)			
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)			
G	Training of extension functionaries			
H	Maintenance of buildings			
I	Establishment of Soil, Plant & Water Testing Laboratory			
J	Library			
<b>TOTAL (A)</b>		<b>40.24 lakhs</b>	<b>40.24 lakhs</b>	<b>38.69668 lakhs</b>
<b>B. Non-Recurring Contingencies</b>				
1	Works			
2	Equipments including SWTL & Furniture			
3	Vehicle (Four wheeler/Two wheeler, please specify)			
4	Library (Purchase of assets like books & journals)			
<b>TOTAL (B)</b>				
<b>C. REVOLVING FUND</b>				
<b>GRAND TOTAL (A+B+C)</b>		<b>40.24 lakhs</b>	<b>40.24 lakhs</b>	<b>38.69668 lakhs</b>

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

Year	Opening balance as on 1 <sup>st</sup> April	Income during the year	Expenditure during the year	Net balance in hand as on 1 <sup>st</sup> April of each year
April 2005 to March 2006				
April 2006 to March 2007				
April 2007 to March 2008				

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

**8.1 Constraints**

- (a) Administrative : No fencing due to no fund release yet.
- (b) Financial : Late release of fund
- (c) Technical : Input for OFT are not available in time.

**Requirements by KVK, khawzawl, Champhai District:**

<b>SNo</b>	<b>Components</b>	<b>Amount (Approx)</b>
1	Water harvesting Structure	10 Lakhs
2	Fencing of KVK Complex and Farm	15 Lakhs
3	Development of model Integrated farming system	50 Lakhs
4	Office Infrastructure	3Lakhs
5	Vehicle (Bolero)	8 Lakhs
6	Meteriological Observatory	5 Lakhs
7	Mobile Expo Van	20 Lakhs
<b>Total :</b>		<b>111 Lakhs</b>

## Annexure

### District profiles – I

#### 1. General Census

Total no of villages	Population	Literacy rate %	Occupation
101 villages	Total : 108392 Male : 55756 Female : 52636	91.2 % 93.2 % (M) 81.1 (F)	The population are mainly Agriculture farmers

#### 2. Agriculture & Allied Census

Sl.No	Category	Areas (Ha.)
1.	Gross cropped area	3,13,412
2.	Net area sown	3,13,412
3.	Fallow land	20,500
4.	Cultivable waste land	21,600
5.	Forest cover	2,71,180
6.	Barren lands	2,200
7.	Cropping intensity	100 %

#### Livestock

Sl.No	Name	Nos.	Production ( tons)
1.	Cattle (a) Crossbreed (b)Indigenous	346 6663	560 788
2.	Buffaloes	3053	14
3.	Pig (a) Crossbreed (b) Indigenous	24186 6051	437
4.	Mithun	1091	2.16
5.	Sheep	712	3
6.	Goat	1185	
7.	Poultry (a) Desi (b) Improved	151607 44430	99
8.	Ducks	430	-

#### 3. Agro climatic zones

Sl.No	Agro climatic zone	Characteristics
1.	Sub-tropical/sub temperate/Humid	Some parts of the district like Ngopa & Khawzawl block experience all the three seasons i.e. winter, summer and rains, while in the Champhai valley the temperature ranges from 1-7 <sup>o</sup> C for a longer period during winters. All crops severely affected due to the frosty weather. The relative humidity of the reason is higher due to the heavy rains 2500mm annually

#### 4. Agro –ecosystem

No	Agro ecological situation	Characteristics
1.	AES-I	Highlands- top hills (>1250m MSL) -The top surface soil of high hills are loam to clay loam, dark in colour, highly leached and poor in basis and soil pH ranges to 4.5- 5.5 .
2.	AES-II	Midlands – hill slopes ( 900- 1250 m MSL) -Hill terrains are light and coarse in texture, highly leach, poor in basis and rich in iron having low pH value ranges form 4.5-5.5. The surface soil texture are loam to clay loam.
3.	AES-III	Low lands – Foot hill (< 900 m MSL) -The soil of the foot hills are dark brown in colour moderately acidic pH ranging from 5.5-6.0. A texture of soil is mostly sandy loam to sandy clay loam.
Overall the soils of the district are homogenous in nature and mainly derived from sandy stones, shales and silty stone.		

## 5. Major and micro-farming system

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

No	Farming systems identified
1.	Horticulture + Maize + Animal Husbandry- Highland ( >1250m MSL)
2.	Jhum Paddy + Vegetable + Animal Husbandry- Midland ( 900- 1250 m MSL)
3.	Wetland Rice + Fish + Winter Vegetables - Low land ( < 900 m MSL)

## 6. Major production system like Rice based ( Rice- rice, Rice – Green gram etc.), Cotton based etc.

1. Rice - Potato
2. Rice - Pea
3. Rice - Brinjal
4. Rice - Tomato
5. Rice - Cabbage/Cauliflower/Broccoli etc.
6. Rice - Mustard

## 7. Major Agriculture and Allied Enterprise.

1. Agriculture (W.R.C., Jhum)
2. Horticulture (Vegetables, Fruits Orchards etc.)
3. Animal Husbandry
4. Fishery

## Agro-ecosystem analysis of the focus/target area – II

**1. Name of villages, focus area, target area etc.**

Name of villages	Focus area	Target area
Khawzawl	WRC, Jhum paddy, Maize, Tea, Passionfruit, Orange, Vegetables, Animal Husbandry and fisheries, Women and Child care, Value addition	Khawzawl, Biate, Chawngtlai, Chalrang, Sialhawk
Champhai	WRC, Jhum paddy, Maize, Passionfruit, Grape, Tea, Orange, Vegetables, Potato Animal Husbandry and fisheries, Women and Child care, Value addition	Champhai, Zotlang, Hmunhmeltha, Tuipui

**2. Survey methods used (survey by questionnaire, PRA, RRA, etc.)  
Semi-structure interview Schedule**

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

**4. Analysis and conclusion**

**5. List of location specific problems and brief description of frequency and extent/intensity/severity of each problem.**

Location	Problem	Brief description	Extent/intensity/severity
Khawzawl	<ul style="list-style-type: none"> <li>• Improper nursery management in WRC.</li> <li>• Improper nutrient management</li> <li>• Infestation of insect pest and diseases.</li> <li>• Lack of awareness toward s integrated farming</li> <li>• Lack of knowledge and awareness on livestock management, feed and fodder production.</li> </ul>		
Biate	<ul style="list-style-type: none"> <li>•Lack of knowledge on crop rotation</li> <li>• No proper post harvest management in tea.i</li> <li>•Lack of quality seed of different vegetables</li> <li>•Citrus declining</li> <li>•Lack of knowledge and awareness on livestock management, feed and fodder production</li> </ul>		
Chawngtlai	<ul style="list-style-type: none"> <li>• Lack of Training and Pruning of Passion Fruit &amp; Grapes</li> <li>• Improper nursery management in WRC.</li> <li>• Improper nutrient management</li> <li>• Infestation of insect pest and diseases.</li> </ul>		
Chalrang	<ul style="list-style-type: none"> <li>•Lack of IPM</li> <li>•Lack of INM</li> <li>•Lack of proper management of Orchard</li> <li>•Improper nursery management in WRC.</li> <li>• Improper nutrient management</li> <li>•Infestation of insect pest and diseases.</li> </ul>		
Sialhawk	<ul style="list-style-type: none"> <li>•Lack of IPM</li> <li>•Lack of INM</li> <li>•Lack of proper management of Orchard</li> <li>•Improper nursery management in WRC.</li> <li>• Improper nutrient management</li> <li>•Infestation of insect pest and diseases.</li> </ul>		



Champhai	<ul style="list-style-type: none"> <li>• Improper nursery management in WRC.</li> <li>• Improper nutrient management</li> <li>• Infestation of insect pest and diseases.</li> <li>• Lack of awareness towards integrated farming</li> <li>• Lack of knowledge and awareness on livestock management, feed and fodder production.</li> </ul>		
Zotlang	<ul style="list-style-type: none"> <li>• Improper nursery management in WRC.</li> <li>• Improper nutrient management</li> <li>• Infestation of insect pest and diseases.</li> <li>• Lack of awareness towards integrated farming</li> <li>• Lack of knowledge and awareness on livestock management, feed and fodder production.</li> </ul>		
Hmunhmeltha	<ul style="list-style-type: none"> <li>• Lack of knowledge on crop rotation</li> <li>• Lack of quality seed of different vegetables</li> <li>• Citrus declining</li> <li>• Lack of knowledge and awareness on livestock management, feed and fodder production.</li> </ul>		
Tuipui	<ul style="list-style-type: none"> <li>• Improper nursery management in WRC.</li> <li>• Improper nutrient management</li> <li>• Infestation of insect pest and diseases.</li> <li>• Lack of awareness towards integrated farming</li> <li>• Lack of knowledge and awareness on livestock management, feed and fodder production.</li> </ul>		

## 6. Matrix ranking of problems :-

Rank	Problem
1.	Lack of quality seed
2.	Improper nutrient management
3.	Lack of proper nursery management
4.	Lack of awareness towards integrated farming
5.	Lack of knowledge and awareness on livestock management feed and fodder production
6.	No proper post harvest management
7.	Lack of awareness on soil conservation
8.	Lack of awareness on integrated disease and pest management

## 7. List of location specific thrust areas

Location	Thrust areas
Khawzawl	<ul style="list-style-type: none"> <li>• Nursery management</li> <li>• Integrated nutrient management</li> <li>• Integrated pest management</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Creating awareness for livestock management and feed and fodder production.</li> </ul>
Biate	<ul style="list-style-type: none"> <li>• Creating awareness on crop rotation and integrated farming</li> <li>• Training on post harvest management in tea.</li> <li>• Creating awareness for the use of quality seeds in different vegetables.</li> <li>• Rejuvenation of old citrus orchards.</li> <li>• Creating awareness for livestock management and feed and fodder production</li> </ul>
Chawngtlai	<ul style="list-style-type: none"> <li>• Cultivation practices of Grapes and Passion fruit</li> <li>• IDM on Ginger</li> <li>• Integrated nutrient management</li> <li>• Integrated pest management</li> <li>• Creating awareness for livestock management and feed and fodder production</li> </ul>
Sialhawk	<ul style="list-style-type: none"> <li>• Cultivation practices of M.Orange</li> <li>• Integrated nutrient management</li> <li>• Integrated pest management</li> <li>• Creating awareness for livestock management and feed and fodder production</li> </ul>

Chalrang	<ul style="list-style-type: none"> <li>• Cultivation practices of M.Orange</li> <li>• Integrated nutrient management</li> <li>• Integrated pest management</li> <li>• Creating awareness for livestock management and feed and fodder production</li> </ul>
Champhai	<ul style="list-style-type: none"> <li>• Nursery management</li> <li>• Integrated nutrient management</li> <li>• Integrated pest management</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Creating awareness for livestock management and feed and fodder production</li> </ul>
Zotlang	<ul style="list-style-type: none"> <li>• Nursery management</li> <li>• Integrated nutrient management</li> <li>• Integrated pest management</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Creating awareness for livestock management and feed and fodder production</li> </ul>
Hmunhmeltha	<ul style="list-style-type: none"> <li>• Nursery management</li> <li>• Integrated nutrient management</li> <li>• Integrated pest management</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Creating awareness for livestock management and feed and fodder production</li> </ul>
Tuipui	<ul style="list-style-type: none"> <li>• Nursery management</li> <li>• Integrated nutrient management</li> <li>• Integrated pest management</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Creating awareness for livestock management and feed and fodder production</li> </ul>

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

Location	OFT	FLD
Khawzawl	Integrated Nutrient Management, varietal evaluation improved/HYV varieties, Integrated pest management, Scientific poultry and piggery management with respect to feeding housing and nutrition, Weed management	Cultivation of Fodder crops, Low cost green house
Biate	Integrated Nutrient Management, varietal evaluation improved/HYV varieties, Integrated pest management, Scientific poultry and piggery management with respect to feeding housing and nutrition	Rearing of improved crossbreeds of cattle, buffaloes
Chawngtlai	Integrated Nutrient Management, varietal evaluation improved/HYV varieties, Integrated pest management.	Scientific management of Grapes and passion fruits, Scientific management on Bee Keeping.
Sialhawk	Scientific management on Fruit Crops, varietal evaluation improved/HYV varieties, Integrated pest management	Scientific poultry and piggery management with respect to feeding housing and nutrition, Weed management
Chalrang	Scientific management on Fruit Crops and Vegetables, varietal evaluation improved/HYV varieties, Integrated pest management	High density planting of fruit crops
Champhai	Integrated Nutrient Management, Integrated pest management, weed management	Rearing of improved crossbreeds of cattle, buffaloes, cultivation of paddy through SRI, Low cost green house
Zotlang	Irrigation in potato cultivation, Integrated Nutrient Management	Cultivation of Crops on raised bed for water used efficiency
Hmunhmeltha	Integrated Nutrient Management, Integrated pest management, weed management	Cultivation of Crops on raised bed for water used efficiency
Tuipui	Integrated Nutrient Management, varietal evaluation improved/HYV varieties, Integrated pest management, Scientific poultry and piggery management with respect to feeding housing and nutrition, Weed management	Cultivation of value added crops at Low cost green house

9. Matrix ranking of technologies

Rank	Technologies
1.	Varietal evaluation
2.	Integrated Nutrient Management
3.	Integrated Pest Management
4.	Livestock and fodder production
5.	Soil and water conservation
6.	Crop production in low cost green house

10. List of location specific training needs

Location	Training needs
Khawzawl	<ul style="list-style-type: none"> <li>Nursery management</li> <li>Integrated nutrient management</li> <li>Integrated pest management</li> <li>Livestock and poultry production</li> <li>Value addition of surplus vegetables and fruits</li> <li>Women and child care</li> <li>Water management</li> </ul>
Biate	<ul style="list-style-type: none"> <li>Organic farming</li> <li>Cultivation practices of tea</li> <li>Training on post harvest management in tea.</li> <li>Rejuvenation of old citrus orchards.</li> <li>Livestock management and feed and fodder production</li> </ul>
Chawngtlai	<ul style="list-style-type: none"> <li>Training and Pruning</li> <li>Bee keeping</li> <li>Nursery management</li> <li>Integrated nutrient management</li> <li>Integrated pest management</li> </ul>
Sialhawk	<ul style="list-style-type: none"> <li>Training and Pruning</li> <li>Nursery management</li> <li>Integrated nutrient management</li> <li>Integrated pest management</li> </ul>
Chalrang	<ul style="list-style-type: none"> <li>Training and Pruning</li> <li>Nursery management</li> <li>Integrated nutrient management</li> <li>Integrated pest management</li> <li>Livestock and poultry production</li> </ul>
Champhai	<ul style="list-style-type: none"> <li>Nursery management</li> <li>Integrated nutrient management</li> <li>Integrated pest management</li> <li>Crop production under low cost green house</li> </ul>
Zotlang	<ul style="list-style-type: none"> <li>Pulse production</li> <li>Nursery management</li> <li>Integrated nutrient management</li> <li>Integrated pest management</li> <li>Livestock and fodder production</li> </ul>
Hmunhmeltha	<ul style="list-style-type: none"> <li>Nursery management</li> <li>Integrated nutrient management</li> <li>Integrated pest management</li> </ul>
Tuipui	<ul style="list-style-type: none"> <li>Pulse production</li> <li>Nursery management</li> <li>Integrated nutrient management</li> <li>Integrated pest management</li> <li>Poultry production</li> <li>Cultivation of value added crops.</li> </ul>

### Technology Inventory and Activity Chart –III

Sl.No	Technology	Crop/Enterprise	Year of release or recommendation of technology	Source of technology	Reference/citation
1.	INM	Rice	Under pipeline	AAU, Jorhat, Dept. of Soil Science Regional Agricultural Research Station AAU, Jorhat	
2.	Water management through SRI	Paddy	2004		
3.	Varietal evaluation	Potato Pea Tomato Brinjal French Bean		CPRI, Shillong  ICAR-RC, Umiam, Barapani, Meghalaya	
4.	Disease management	Ginger Tomato Brinjal	2004 2008 2008	AAU, Jorhat, Dept. of Plant Pathology	
5.	Crop production	Paddy (IR-64) Maize (HQPM) TPS		IGKV, Raipur Directorate of Maize Research ICAR Horticulture Research Complex, Dept. of Agri. Govt. of Tripura	

#### Activity chart

Crop/Animal/Enterprise	Problem	Cause	Solution	Activity	Reference of Technology
Tomato	<ul style="list-style-type: none"> <li>Low yield of local variety/ lack of HYV</li> <li>Low yield due to wilting of plants</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of HYV</li> <li>- Non availability of bio-pesticides</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of HYV</li> <li>Biological control</li> </ul>	<ul style="list-style-type: none"> <li>OFT in Megha Tomatoes</li> <li>Disease management wilt biofor pf</li> </ul>	
Potato	<ul style="list-style-type: none"> <li>Non-availability of Potato Seed Tuber</li> <li>Low yield of existing variety</li> </ul>	<ul style="list-style-type: none"> <li>Lack of Potato tuber seed</li> <li>Lack of HYV of potato</li> </ul>	<ul style="list-style-type: none"> <li>Production of tuber seed through TPS</li> <li>Cultivation of improved variety</li> </ul>	<ul style="list-style-type: none"> <li>OFT on TPS</li> <li>OFT on K.Jyoti and K.Giriraj</li> </ul>	
Pea	<ul style="list-style-type: none"> <li>Low yield of existing variety</li> <li>Disease incident</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of HYV</li> </ul>	<ul style="list-style-type: none"> <li>-Introduction of HYV</li> </ul>	<ul style="list-style-type: none"> <li>OFT on VLMatar-42</li> </ul>	
F.Bean	<ul style="list-style-type: none"> <li>Low yield of existing variety</li> <li>Disease incident</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of HYV</li> </ul>	<ul style="list-style-type: none"> <li>-Introduction of HYV</li> </ul>	<ul style="list-style-type: none"> <li>OFT on RCMFB-1</li> </ul>	
Ginger	<ul style="list-style-type: none"> <li>Rhizome rot is a severe problem</li> </ul>	<ul style="list-style-type: none"> <li>-Lack of awareness on quality seed</li> <li>- Lack of awareness on seed treatment</li> </ul>	<ul style="list-style-type: none"> <li>-Training on selection of quality seed</li> <li>-Introduction of Biofor PF</li> </ul>	<ul style="list-style-type: none"> <li>OFT on Rhizome rot management using Biofor Pf</li> </ul>	
Brinjal	<ul style="list-style-type: none"> <li>Low yield of existing variety</li> <li>Disease incident</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of HYV</li> </ul>	<ul style="list-style-type: none"> <li>-Introduction of HYV</li> </ul>	<ul style="list-style-type: none"> <li>OFT on RCMBL-1</li> </ul>	
Maize	<ul style="list-style-type: none"> <li>Low nutritive value of local variety</li> </ul>	<ul style="list-style-type: none"> <li>Non availability of HQPM</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of high quality protein maize</li> </ul>	<ul style="list-style-type: none"> <li>OFT on HQPM-I</li> </ul>	
Paddy	<ul style="list-style-type: none"> <li>Non availability of short duration HYV</li> </ul>	<ul style="list-style-type: none"> <li>Long duration of local variety and lodging</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of IR-64, Shahsarang, NDR-97 etc and SRI method</li> </ul>	<ul style="list-style-type: none"> <li>OFT on yield performance of IR 64, Shahsarang, NDR-97 etc and Cultivation through SRI</li> </ul>	