

**ANNUAL REPORT OF KVK CHAMPHAI DISTRICT, 2019-20**

**1. GENERAL INFORMATION ABOUT THE KVK**

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

Address	Telephone		E mail
	Office	FAX	
Krishi Vigyan Kendra (KVK), Khawzawl, PO- Khawzawl, Dist.-Champhai (MIZORAM)-796310	9436190701	NIL	kvkKhawzawl@gmail.com

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

Address	Telephone		E mail
	Office	FAX	
Directorate of Agriculture (R&E), Aizawl, Mizoram- 796 001	9436190701	0389-2315784	mizagri@gmail.com

1.3. Name of the Programme Coordinator/ Sr. Scientist & Head with phone & mobile No

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Henry Saplalrinliana	KVK, Complex, Kawnzar Veng, Khawzawl	9436190701	henry_sapa@yahoo.com

1.4. Year of sanction: 2004

1.5. Staff Position (As on 31<sup>st</sup> March, 2020)

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	Sr Scientist & Head	Dr. Henry Saplalrinliana	Sr Scientist & Head	Soil Science	15,600-39,100+8,000	82,200	11.02.19	Permanent	ST
2	SMS	Dr. Malsawmkimi	SMS	Horticulture	15,600-39,100+5,400	73200	02.06.09	Permanent	ST
3	SMS	Syed Khaliduddin Ahmed (study leave )	SMS	Animal Science	15,600-39,100+5,400	75400	21.04.08	Permanent	GENERAL
4	SMS	F.Zoramthari	SMS	Plant Protection	15,600-39,100+5,400	73200	02.06.09	Permanent	ST
5	SMS	Dr. Om.Prakash	SMS	Agronomy	15,600-39,100+5,400	73200	02.06.09	Permanent	General
6	SMS	Israel Lalremruata	SMS	Agro Forestry	15,600-39,100+5,400	73200	02.06.09	Permanent	ST
7	SMS	R.Vanlalduati	SMS	Soil Science	15,600-39,100+5,400	67000	06.03.12	Permanent	ST
8	Farm Manager	PrakashThapa	Farm Manager	M.Sc (Horti.)	9,300-34,800+4200	52,000	21.04.08	Permanent	GENERAL
9	Prog Asst (Computer/IT)	Samson Sairengpuia Sailo	Prog Asst (Computer/IT)	Computer/IT	9,300-34,800+4200	52,000	21.04.08	Permanent	ST
10	Prog Asst (Home Science)	Lalhruaitluangi	Prog Asst (Home Science)	Home Science	9,300-34,800+4200	52,000	27.06.08	Permanent	ST
11	Assistant	K. Vanlalhmangaihi	Assistant	M.Com	9,300-34,800+4200	52,000	29.05.08	Permanent	ST
12	Jr.Stenographer cum Computer Operator	Crusade Thangpuii	Jr. Stenographer cum Computer Operator	B.A	5,200-20,200+2,400	35300	29.02.08	Permanent	ST
13	Driver cum Mechanic	Lalnuntluanga	Driver cum Mechanic	-	5,200-20,200+1,900	29300	29.02.08	Permanent	ST
14	Driver cum Mechanic	R.Dengliana	Driver cum Mechanic	-	5,200-20,200+1,900	29300	29.02.08	Permanent	ST
15	Skill Supporting staff	Laltanpuia	Skill Supporting staff	-	4,440-7,440+1,800	24200	09.07.08	Permanent	ST
16	Skill Supporting staff	Vanlalvenhima	Skill Supporting staff	-	4,440-7,440+1,800	24200	09.07.08	Permanent	ST

- 1.6. a. Total land with KVK (in ha) : 12.774  
       i. Block-I (Instructional farm) : 11.464 ha  
       ii. Block-II (Office Complex) : 1.31 ha  
 b. Total cultivable land with KVK (in ha) : 8.464  
 c. Total cultivated land (in ha) : 3

S. No.	Item	Area (ha)
1	Under Buildings (Administrative building+ Farmers' Hostel+ Staff Quarters)	1.31
2.	Under Demonstration Units	11.464
3.	Under Crops (Cereals, pulses, oilseeds etc.)	1.7
4.	Under vegetables	0.8
5.	Orchard/Agro-forestry	1.3
6.	Plantation Crops(Coffee etc)	0.2

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	2007	-	-	-	-	Completed
2.	Farmers Hostel	ICAR	2009	-	-	-	-	Need repair
3.	Staff Quarters (6)	ICAR	2007	-	-	-	-	Completed
4.	Demonstration Units (2)	ICAR	2007	-	-	-	-	Completed
5	Fencing	ICAR	2009	-	-	-	-	Need repair

B) Vehicles

Type of vehicle	Regd. No.	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Gypsy	MZ-O1 D 4086	-	-	-	Processed for auction
	MZ-O1 8633	-	-	-	Processed for auction
Tractor	MZ-01 D 2246	-	-	-	Major repair required
	MZ-01P0211	2016	-	-	Running condition
Bolero	MZ-01 N 9053	2018	-	-	Running condition

## C) Equipment &amp; AV Aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
LCD projector	Sept,2008	-	Good
Xerox machine	Sept,2011	-	Good
Computer	Sept,2008/2011	-	Good
Seed analyzer	Sept,2008	-	NOT WORKING
Refrigerator	Sept,2008	-	Good
BOD Incubator	Sept,2008	-	NOT WORKING
Hot Air Oven	Sept,2008	-	NOT WORKING
Grinder	Sept,2008	-	Good
Laptop	Sept,2008	-	Good
T.V.	Sept,2008	-	Good
A.C.	Sept,2008	-	NOT WORKING
Water Pump (5 hp)	2008	-	Good
Paddy Thresher	2009	-	Good
Power Tiller (Mitsubishi Shakti)	2008	-	Good
Power Tiller (Greaves.GS15DILS)	2014	-	Good
Solar Dryer	2012	-	NEED REPAIR
Chaff Cutter	2014	-	Good
Mini Rice Mill cum Oil Expeller	2015	-	Good
Mini Dal Mill	2012	-	Good
Rice Mill(Polisher + winnower)	2017	-	Good

## 1.8. A). Details SAC meeting\* conducted in the year : 2019

Date	Name and Designation of Participants	Salient Recommendations	Action taken on last SAC recommendation
15 <sup>th</sup> Jan 2019	<ol style="list-style-type: none"> <li>1. Dr. H.Saithantluanga, Director of Agriculture (R&amp;E)</li> <li>2. Dr.Vanlalhruaia Hnamte, Sr Scientist &amp; Head</li> <li>3. Dr. Samuel Lalliansanga , I.A (R&amp;E)</li> <li>4. Vanlalchhuana, ASCE(Soil), Agri Dept</li> <li>5. Representative from Horticulture Dept</li> <li>6. Thantluanga Hnamte Forest Ranger</li> <li>7. C. Lalhriatpuia, Project Director , ATMA</li> <li>8. K.Lalrinmawia, Fisheries Officer .</li> <li>9. Doordarshan Kendra, Khawzawl</li> <li>10. Pc Lalzarliana, Secretary, AMFU, Khawzawl</li> <li>11. Editor, Siar news, Khawzawl..</li> <li>12. Rokimi Ralte, President, Block Mizo Hmeichhe Insuihkhawm Pawl, Khawzawl.</li> <li>13. Syed Khaliduddin Ahmed, SMS, KVK</li> <li>14. Dr. Malsawmkimi, SMS, KVK</li> <li>15. F.Zoramthari, SMS, KVK</li> <li>16. Dr. Om Prakash, SMS, KVK</li> <li>17. R.Vanlalduati, SMS, KVK</li> <li>18. Prakash Thapa, Farm Manager, KVK</li> <li>19. Samson Sailo, Prog Asst, KVK</li> <li>20. K.Vanlalhmangaihi, Asst, KVK</li> </ol>	<ol style="list-style-type: none"> <li>1) Source of Data on Land Use/ Land cover of Champhai District may be obtained from MIRSAC,</li> <li>2) Identify specific growers for seed production of notified varieties.</li> <li>3) To take initiative to protect indigenous and superior local varieties.</li> <li>4) Technology successfully tested has to be disseminated through ATMA, Agriculture and Allied Depts. for effective and successful adoption by the remotest of farmers of the district.</li> <li>5) More emphasis on their activities based on participatory mode by involving farmers and rural youth.</li> <li>6) Initiative may be taken up to identify growers for production of notified varieties.</li> <li>7) To form a Purchase Committee with reference to Non-Recurring Expenditure of KVK.</li> <li>8) To find the possibilities of rearing high altitude/ cold tolerant small ruminants animals like Sheep, Goats, etc to be introduced for next SAC.</li> <li>9) To develop own bio-Culture native to the place instead of procuring from other states as efficacy may be more in native soil.</li> <li>10) To take initiatives awareness programme on ill effect of weedicides/Pesticides through training programmes.</li> <li>11) Training programmes on post harvest management/Value addition on horticulture/Agricultural crops.</li> <li>12) Identification of seed village for promotion and production of notified seeds with provision for buy back from selected and identified farmers may be taken up as future strategy.</li> </ol>	<ol style="list-style-type: none"> <li>1) Popularization of Garlic Variety : G-282</li> <li>2) Promotion on precision farming package for Tomato variety Arka Samrat and popularization of Arka Rakshak</li> <li>3) Rhizome rot management in Ginger.</li> <li>4) Integrated Disease Management.</li> <li>5) Integrated Nutrient Management</li> <li>6) Training on awareness on fertilizer, weedicides and pesticides management</li> <li>7) Capacity building on Mushroom and vermin-compost production</li> <li>8) Awareness campaign on soil and nutrient management.</li> <li>9) Disease management on Piggery.</li> <li>10) Introduction of modified SRI for higher productivity.</li> <li>11) Purchase Committee formed</li> </ol>

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

## 2. DETAILS OF DISTRICT

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

Sl. No	Farming system/enterprises
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)

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

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>0</sup> C for a longer period during winter, severely affecting the crops because of frosty weather. The relative humidity of the region is higher due to heavy rains (2500 mm annually).

### 2.3 Soil types

Sl. 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

Sl. No	Crop	Area (ha)	Production (ton)	Productivity (Qtl /ha)
1	Jhum Paddy	4350	4431	0.982
2	Paddy (WRC)	3750	8148	0.460
3	Maize	1660	2345	0.708
4	Rice bean	83	104	0.80
5	Arhar	20	17	1.18
6	Field pea	295	425	0.694
7	Cow Pea	210	231	0.909
8	French Bean	193	401	0.481
9	Soyabean	205	196	1.05
10	Potato	205	2057	0.099
11	Onion	6	34	0.18
12	Brinjal	365	2355	0.154
13	Cauliflower	75	745	0.10
14	Pea	35	150	0.23
15	Carrot	55	393	0.14
16	Cabbage	175	2363	0.07
17	Tomato	31	292	0.11
18	Okra	279	1861.3	0.15
19	Capsicum	25	331.5	0.07
20	Broccoli	16	100.1	0.16
21	Ginger	1008	4969	0.20
22	Turmeric	555	2784	0.20
23	Bird Eye Chilly	1250	6875	0.18

## 2 2.5. Weather data: 2019

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)
		Maximum	Minimum	
Jan	9	18.7	8.4	76.5
Feb	21	20.5	10.1	74.1
Mar	43	24.4	13.5	68.4
Apr	96	26.2	15.7	79.4
May	186	26	16.6	78.3
Jun	416	24.4	17.7	88.4
Jul	358	24	18	82.5
Aug	370	23.8	17.9	81.6
Sep	285	23.7	17.4	79.9
Oct	214	23.2	15.9	77.1
Nov	47	21	12.6	74.7
Dec	17	19	9.3	64.2

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

Category	Population	Production	Productivity
Cattle			
<i>Crossbred</i>	346	560 tons	1.6
<i>Indigenous</i>	6663	788 tons	0.12
Buffalo	3053	14 tons	0.0045
Sheep			
<i>Crossbred</i>			
<i>Indigenous</i>	712 & 115	3 tons	-
Goats	NA	NA	NA
Pigs	24186	437 tons	-
<i>Crossbred</i>	6051	-	-
<i>Indigenous</i>	NA	NA	NA
Rabbits	NA	NA	NA
Poultry			
Hens	NA	NA	NA
<i>Desi</i>	NA	NA	NA
<i>Improved</i>	NA	NA	NA
Ducks	NA	NA	NA
Turkey and others	NA	NA	NA

Category	Area	Production	Productivity
Fish	NA	NA	NA
<i>Marine</i>	NA	NA	NA
<i>Inland</i>	NA	NA	NA
Prawn	NA	NA	NA
Scampi	NA	NA	NA
Shrimp	NA	NA	NA

Note: Pl. provide the appropriate Unit against each enterprise **Source: Statistical Handbook of Mizoram**



## 2.7 Details of Operational area / Villages (2019-20)

S. No.	Taluk/ Eleka	Block	Village	Major crops & enterprises	Major problem identified	Identified thrust area
1.	Khawzawl	Khawzawl	Khawzawl	WRC + Jhum paddy + Maize + Winter vegetables + Animal Husbandry and Fisheries	<ul style="list-style-type: none"> <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>• INM &amp; IPM</li> <li>• Creating awareness for adoption of IFS</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>• Lack of quality seed of different vegetables</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>• 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>• INM &amp; IPM</li> <li>• Creating awareness for livestock management and feed and fodder production</li> <li>• Training on Bee Keeping</li> </ul>
4.	Khawzawl	Khawzawl	Kawlkulh	Jhum paddy + Maize + Banana + Ginger + Animal Husbandry + orange	<ul style="list-style-type: none"> <li>• Lack of awareness towards integrated farming.</li> <li>• Improper nutrient management.</li> <li>• Citrus declining.</li> <li>• Lack of Orchard management</li> </ul>	<ul style="list-style-type: none"> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Rejuvenation of old citrus orchards.</li> <li>• Creating awareness for livestock management</li> </ul>
5.	Khawzawl	Khawzawl	Dulte	Jhum paddy + Banana + Maize + Ginger + Vegetables	<ul style="list-style-type: none"> <li>• Lack of Orchard management.</li> <li>• Improper nutrient management.</li> <li>• Lack of Disease and Pest management.</li> <li>• Lack of awareness towards integrated farming.</li> </ul>	<ul style="list-style-type: none"> <li>• Training on Orchard management.</li> <li>• Integrated nutrient &amp; Pest management.</li> <li>• Creating awareness for adoption of integrated farming.</li> </ul>

6	Khawzawl	Khawzawl	Rabung	Jhum paddy + Maize + Ginger + Vegetables	<ul style="list-style-type: none"> <li>• Improper nutrient management.</li> <li>• Lack of Disease and Pest management.</li> <li>• Lack of awareness towards integrated farming.</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated nutrient &amp; Pest management.</li> <li>• Creating awareness for adoption of integrated farming.</li> </ul>
7	Khawzawl	Khawzawl	Khawhai	Jhum paddy + Maize + Ginger + Vegetables+ Citrus+Pineapple	<ul style="list-style-type: none"> <li>• Lack of Orchard management.</li> <li>• Improper nutrient management.</li> <li>• Lack of Disease and Pest management.</li> <li>• Lack of awareness towards integrated farming.</li> </ul>	<ul style="list-style-type: none"> <li>• Training on Orchard management.</li> <li>• Integrated nutrient &amp; Pest management.</li> <li>• Creating awareness for adoption of integrated farming.</li> </ul>
8	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>• INM &amp; IPM</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Creating awareness for livestock management and feed and fodder production.</li> </ul>
9	Champhai	Champhai	Zotlang	WRC + Jhum paddy +Potato + Winter vegetables + Animal Husbandry	<ul style="list-style-type: none"> <li>• INM</li> <li>• Infestation of insect pest and diseases.</li> <li>• Lack of awareness toward s IFS</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>• INM &amp; IPM</li> <li>• Creating awareness for adoption of IFS</li> <li>• Creating awareness for livestock management and feed and fodder production</li> </ul>
10	Champhai	Champhai	Hmunhmeltha	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>
11	Champhai	Champhai	Tuipui	WRC + Jhum paddy + Maize + Winter vegetables	<ul style="list-style-type: none"> <li>• Improper nursery management in Vegetable</li> <li>• INM</li> <li>• Infestation of insect pest and diseases.</li> <li>• Lack of awareness toward s integrated farming</li> </ul>	<ul style="list-style-type: none"> <li>• Nursery management</li> <li>• INM &amp; IPM</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Creating awareness for livestock management and feed and fodder production.</li> </ul>

12	Champhai	Khawbung	Khawbung	Jhum paddy + Maize + Winter vegetables + Animal Husbandry	<ul style="list-style-type: none"> <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>• INM &amp; IPM</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Piggery management</li> </ul>
13	Champhai	Champhai	Hnahlan	Jhum paddy + Maize + Winter vegetables + Animal Husbandry and Fisheries + Grapes	<ul style="list-style-type: none"> <li>• Improper nutrient management , training &amp; pruning in Grapes</li> <li>• Infestation of insect pest and diseases.</li> <li>• Lack of awareness toward s integrated farming</li> </ul>	<ul style="list-style-type: none"> <li>• Nursery management</li> <li>• INM &amp; IPM</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Creating awareness for livestock management and feed and fodder production.</li> </ul>
14	Champhai	Khawbung	Khuangleng	Jhum paddy + Maize + Ginger + Vegetables	<ul style="list-style-type: none"> <li>• Improper nutrient management.</li> <li>• Lack of Disease and Pest management.</li> <li>• Lack of awareness towards integrated farming.</li> </ul>	<ul style="list-style-type: none"> <li>• Training on Nursery management &amp; seed treatment</li> <li>• Integrated nutrient &amp; Pest management.</li> <li>• Creating awareness for adoption of integrated farming.</li> </ul>
15	Champhai	Khawbung	Farkawn	Maize + Ginger + Vegetables+ Jhum paddy	<ul style="list-style-type: none"> <li>• Improper nutrient management.</li> <li>• Lack of Disease and Pest management.</li> <li>• Lack of awareness towards integrated farming.</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated nutrient &amp; Pest management.</li> <li>• Creating awareness for adoption of integrated farming.</li> </ul>
16	Khawzawl	Khawzawl	Ngaizawl	Jhum paddy + Maize + Ginger + Vegetables	<ul style="list-style-type: none"> <li>• Improper nutrient management.</li> <li>• Lack of Disease and Pest management.</li> <li>• Lack of awareness towards integrated farming.</li> </ul>	<ul style="list-style-type: none"> <li>• Training on Nursery management</li> <li>• Integrated nutrient &amp; Pest management.</li> <li>• Creating awareness for adoption of integrated farming.</li> </ul>
17	Khawzawl	Khawbung	Thekte	Jhum paddy + Maize + Ginger + Vegetables	<ul style="list-style-type: none"> <li>• Improper nutrient management.</li> <li>• Lack of Disease and Pest management.</li> <li>• Lack of awareness towards integrated farming.</li> </ul>	<ul style="list-style-type: none"> <li>• Training on Orchard management.</li> <li>• Integrated nutrient &amp; Pest management.</li> <li>• Creating awareness for adoption of integrated farming.</li> </ul>

18	Champhai	Champhai	Ruantlang	WRC + Jhum paddy + Maize + Winter vegetables + Animal Husbandry and Fisheries + Grapes	<ul style="list-style-type: none"> <li>• Improper nursery management in WRC.</li> <li>• INM</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>• INM &amp; Training &amp; pruning in Grapes</li> <li>• IPM</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Creating awareness for livestock management and feed and fodder production.</li> </ul>
19	Khawzawl	Khawzawl	Neihdawn	WRC + Jhum paddy + Maize + Winter vegetables + Animal Husbandry and Fisheries	<ul style="list-style-type: none"> <li>• Improper nursery management in WRC &amp; INM</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>• INM &amp; IPM</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Creating awareness for livestock management and feed and fodder production.</li> </ul>
20	Khawzawl	Khawzawl	Arro	Jhum paddy + Maize + Ginger + Vegetables	<ul style="list-style-type: none"> <li>• Improper nutrient management.</li> <li>• Lack of Disease and Pest management.</li> <li>• Lack of awareness towards integrated farming.</li> </ul>	<ul style="list-style-type: none"> <li>• Training on Nursery management.</li> <li>• Integrated nutrient &amp; Pest management.</li> <li>• Creating awareness for adoption of integrated farming.</li> </ul>
21	Khawzawl	Khawzawl	Hmuncheng	Jhum paddy + Maize + Ginger + Vegetables	<ul style="list-style-type: none"> <li>• Improper nutrient management.</li> <li>• Lack of Disease and Pest management.</li> <li>• Lack of awareness towards integrated farming.</li> </ul>	<ul style="list-style-type: none"> <li>• Training on nurserymanagement.</li> <li>• Integrated nutrient &amp; Pest management.</li> <li>• Creating awareness for adoption of integrated farming.</li> </ul>
22	Khawzawl	Ngopa	Ngopa	WRC + Jhum paddy + Maize + Winter vegetables + Animal Husbandry and Fisheries+Tea	<ul style="list-style-type: none"> <li>• Improper nursery management in WRC.</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> <li>• Improper post harvest management in Tea</li> </ul>	<ul style="list-style-type: none"> <li>• Nursery management</li> <li>• INM &amp; IPM</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Creating awareness for livestock management and feed and fodder production.</li> <li>• post harvest management in Tea</li> </ul>
23	Khawzawl	Khawzawl	New Chalrang	Jhum paddy + Maize + Ginger + Vegetables	<ul style="list-style-type: none"> <li>• Improper nutrient management.</li> <li>• Lack of Disease and Pest management.</li> <li>• Lack of awareness towards integrated farming.</li> <li>• Soil &amp; water conservation</li> </ul>	<ul style="list-style-type: none"> <li>• Training on nursery management.</li> <li>• Integrated nutrient &amp; Pest management.</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Soil &amp; water conservation</li> </ul>

24	Khawzawl	Ngopa	Hliappui	Jhum paddy + Maize + Ginger + Vegetables	<ul style="list-style-type: none"> <li>• Improper nutrient management &amp; Nursery management of Onion &amp; Garlic</li> <li>• Lack of Disease and Pest management.</li> <li>• Lack of awareness towards integrated farming.</li> </ul>	<ul style="list-style-type: none"> <li>• Training on nursery management.</li> <li>• Integrated nutrient &amp; Pest management.</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Soil &amp; water conservation</li> </ul>
25	Champhai	Khawbung	Bungzung	Jhum paddy + Maize + Winter vegetables + Animal Husbandry	<ul style="list-style-type: none"> <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>• INM &amp; IPM</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Piggery management</li> </ul>
26	Champhai	Khawbung	Bulfekzawl	Jhum paddy + Maize + Winter vegetables + Animal Husbandry	<ul style="list-style-type: none"> <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>• INM &amp; IPM</li> <li>• IFS</li> <li>• Piggery management</li> </ul>
27	Khawzawl	Khawzawl	Tualte	WRC + Jhum paddy + Maize + Winter vegetables + Animal Husbandry and Fisheries	<ul style="list-style-type: none"> <li>• Improper nursery &amp; INM in Tomato</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>• INM &amp; IPM</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Creating awareness for livestock management and feed and fodder production.</li> </ul>
28	Khawzawl	Khawzawl	Sialhawk	Jhum paddy + Maize + Ginger + Vegetables+ Citrus+Pineapple	<ul style="list-style-type: none"> <li>• Lack of Orchard management.</li> <li>• Improper nutrient management.</li> <li>• Lack of Disease and Pest management.</li> <li>• Lack of awareness towards integrated farming.</li> </ul>	<ul style="list-style-type: none"> <li>• Training on Orchard management.</li> <li>• Integrated nutrient &amp; Pest management.</li> <li>• Creating awareness for adoption of integrated farming.</li> </ul>
29	Khawzawl	Khawzawl	Tualpui	WRC + Jhum paddy + Maize + Winter vegetables + Animal Husbandry	<ul style="list-style-type: none"> <li>• Improper nursery &amp; INM in Tomato</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>• INM &amp; IPM</li> <li>• Creating awareness for adoption of integrated farming.</li> <li>• Creating awareness for livestock management and feed and fodder production.</li> </ul>
30	Khawzawl	Khawzawl	Chalrang	Jhum paddy + Maize + Ginger + Vegetables+ Citrus+Pineapple	<ul style="list-style-type: none"> <li>• Lack of Orchard management.</li> <li>• Lack of Nutrient, Disease and Pest management.</li> <li>• Lack of awareness towards IFS</li> </ul>	<ul style="list-style-type: none"> <li>• Training on Orchard management.</li> <li>• Integrated nutrient &amp; Pest management.</li> <li>• Creating awareness for adoption of integrated farming.</li> </ul>

### 3. TECHNICAL ACHIEVEMENTS

#### 3. A. Details of target and achievements of mandatory activities by KVK during 2019-20

Discipline	OFT (Technology Assessment and Refinement)				FLD (Oilseeds, Pulses, Maize, Other Crops/Enterprises)			
	Number of OFTs		Number of Farmers		Number of FLDs		Number of Farmers	
	Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
Horticulture	2	2	6	6	2	2	25	25
Agronomy	2	2	6	6	2	2	30	30
Soil Science	2	2	6	6	2	2	20	20
Plant Protection	2	2	6	6	2	2	20	20
<b>Total</b>	<b>9</b>	<b>9</b>	<b>27</b>	<b>27</b>	<b>8</b>	<b>8</b>	<b>95</b>	<b>95</b>

Training (including sponsored, vocational and other trainings carried under Rainwater Harvesting Unit)					Extension Activities			
3					4			
Number of Courses			Number of Participants		Number of activities		Number of participants	
Clientele	Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
Seed Production (ton.)				Planting material (Nos. in lakh)				
5				6				
Target		Achievement		Target		Achievement		

Note: Target set during last Annual Zonal Workshop

## 3. B. Abstract of interventions undertaken during 2019-20

Sl. 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	IPM	Tomato	Low yield due to infestation with white fly and thrips resulting in stunting, curling and drying of leaves and sometimes infected with virus	-	Integrated Pest Management of Thrips ( <i>Thrips tabaci</i> ) in Tomato	IPM of Tomato	-	Diagnostic visits, Farmers Scientist Interaction	Pesticides, Blue sticky traps and seeds
2	IDM	Tomato	Low yield due to drying of leaves, stem and the fruit.	-	IDM of Late blight ( <i>Phytophthora infestans</i> ) of tomato	IPM of Tomato	-	Diagnostic visits, Farmer Scientist interaction, Training	Seeds, Mulch film, Fungicides
3	Disease Management	Ginger	Low yield due to rotting of Rhizome	Rhizome rot ( <i>Pythium spp</i> , <i>Pseudomonas spp</i> ) management of Ginger using Biofor Pf	-	IPM in Ginger	-	Diagnostic visits, Training	Biofor Pf
4	IDM	Paddy	Low yield due to chaffiness and sterility of grains due to sheath rot	Integrated Disease Management of sheath rot ( <i>Sclerotium</i> )	-	IPM in Paddy	-	Diagnostic visits, Training, Farmers Field School	Fungicides and Bio pesticides
5	Varietal evaluation	Carrot	No Carrot production in large scale and variety suitable for the District not yet identified	Introduction of carrot variety Pusa Vrishi	-	Scientific cultivation of Carrot	-	Field day Training	Seeds
6	Varietal evaluation	Onion	Variety suitable for Kharif not yet identified	Assessment of Kharif onion variety L-883	-	-	-	Field visits	Seeds
7	Integrated crop management	Tomato	Less yield with farmers practice	-	Promotion on precision farming package for tomato variety Arka Samrat	Improved cultivation method of Tomato cultivation	-	Training Field day Field visits	Seeds Nursery tray Pesticides & insecticides

8	Varietal evaluation	Garlic	Less known higher yield of Garlic varieties	-	Assessment of Garlic variety Yamuna Safed -8	Scientific cultivation of Garlic  Post harvest management of Garlic	-	Training  Field day  Field visits	Seeds  Fungicides  NPK
9	Integrated Crop Management	Rice	Low income of the farmers from the traditional method of transplanting	Modified system of Rice Intensification for higher productivity	-	-	-	Diagnostic visits, Farmers Scientist Interaction	Seeds
10	Varietal evaluation	Rice	Low income of the farmers from the existing varieties	Varietal Evaluation of Rice var. CO-52	-	-	-	Diagnostic visits, Farmers Scientist Interaction	Seeds
11	Integrated Crop Management	Rice	Low income of the farmers from the traditional method of transplanting	-	Popularization of Aman/AP-3 with Rhizobium inoculation	-	-	Diagnostic visits, Farmers Scientist Interaction	Seeds
12	Varietal evaluation	Rice	Low income of the farmers from the existing varieties	-	Popularization of Groundnut Variety: ICGV-91114	-	-	Diagnostic visits, Farmers Scientist Interaction	Seeds
13	Nutrient management	Grapes	Low yield and poor quality of fruits	Potassium nutrition on yield & quality of Grapes	-	Potassium nutrition on yield & quality of Grapes	-	Field visit, Training	MOP
14	Soil health mngt	F.Bean	Low productivity due to inadequate availability of nutrients	Introduction of Bio-fertilizers on growth & yield of F.Bean	-	Introduction of Bio-fertilizers on growth & yield of F.Bean	-	Field visit, Training	Bio fertilizers, Seeds
15	Soil health mngt	Paddy	-	Effect of Bio-fertilizers on growth, yield & economics of Rice(Oryza sativa)	-	Effect of Bio-fertilizers on growth, yield & economics of Rice(Oryza sativa)	-	Field visit, Training	Bio fertilizers
16	Soil moisture mngt	Pea	Stunted growth due to moisture stress and frost	Influence of organic Mulches on growth & yield component of Pea-AP-3	-	Influence of organic Mulches on growth & yield component of Pea-AP-3	-	Field visit, Training	Seeds



### 3.1 Achievements on technologies assessed and refined during

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

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Varietal Evaluation	2	-	-	-	2	-	-	-	-	4
Seed / Plant production	-	-	-	-	-	-	-	-	-	-
Weed Management	-	-	-	-	-	-	-	-	-	-
Integrated Crop Management	-	-	-	-	-	-	-	-	-	-
Integrated Nutrient Management	-	-	-	-	1	1	-	-	-	2
Integrated Farming System	-	-	-	-	-	-	-	-	-	-
Mushroom cultivation	-	-	-	-	-	-	-	-	-	-
Drudgery reduction	-	-	-	-	-	-	-	-	-	-
Farm machineries	-	-	-	-	-	-	-	-	-	-
Value addition	-	-	-	-	-	-	-	-	-	-
Integrated Pest Management	-	-	-	-	-	-	-	-	-	-
Integrated Disease Management	1	-	-	-	1	-	-	-	-	2
Resource conservation technology	-	-	-	-	-	-	-	-	-	-
Small Scale income generating enterprises	-	-	-	-	-	-	-	-	-	-
<b>TOTAL</b>	<b>3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8</b>

\* Any new technology, which may offer solution to a location specific problem but not tested earlier in a given micro farming 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	-	-	-	-	-	-	-	-	-	-
Seed / Plant production	-	-	-	-	-	-	-	-	-	-
Weed Management	-	-	-	-	-	-	-	-	-	-
Integrated Crop Management	-	-	-	-	-	-	-	-	-	-
Integrated Nutrient Management	-	-	-	-	-	-	-	-	-	-
Integrated Farming System	-	-	-	-	-	-	-	-	-	-
Mushroom cultivation	-	-	-	-	-	-	-	-	-	-
Drudgery reduction	-	-	-	-	-	-	-	-	-	-
Farm machineries	-	-	-	-	-	-	-	-	-	-
Post Harvest Technology	-	-	-	-	-	-	-	-	-	-
Integrated Pest Management	-	-	-	-	-	-	-	-	-	-
Integrated Disease Management	-	-	-	-	-	-	-	-	-	-
Resource conservation technology	-	-	-	-	-	-	-	-	-	-
Small Scale income generating enterprises	-	-	-	-	-	-	-	-	-	-
<b>TOTAL</b>	-	-	-	-	-	-	-	-	-	-

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



## A.5. Results of On Farm Testing (OFT)

Sl. No.	Title of OFT	Problem Diagnosed	Name of Technology Assessed	Crop/Cropping system/ Enterprise	No. of Trials	Results of Assessment/ Refined (Data on the parameter should be provided)	Feedback from the farmer	Feedback to the Researcher	B:C Ratio (if applicable)
1	Varietal evaluation of Rice var. CO-52	Low income of the farmers from the existing varieties	Rice var. CO-52	Rice	3	<b>No. of hills /sq m</b> TO 1: 15 TO 2: 16 <b>No. of tillers / hill</b> TO 1 – 14 TO 2 - 15 <b>No. of effective tillers/ sq m</b> TO 1- 195 TO 2– 198 <b>No. of grains / panicle</b> TO 1– 213 TO 2 – 216 <b>Yield/ha</b> TO 1 – 32.4q/ha TO 2 – 30.25q/ha	It is good production enhancement	-	2.12 2.08 check
2	Modified system of Rice Intensification for higher productivity	Low income of the farmers from the traditional method of transplanting	Seedling age at 18-20 days  Spacing:  20x20 cm	Rice	3	<b>No. of hills /sq m</b> TO 1: 20 TO 2: 20 <b>No. of tillers / hill</b> TO 1 – 22 TO 2 - 19 <b>No. of effective tillers/ sq m</b> TO 1- 225 TO 2 – 210 <b>No. of grains / panicle</b> TO 1 – 208 TO 2 - 203 <b>Yield/ha</b> TO 1 – 35.60 TO 2 - 30.25	Good for enhancing yield and weeding	To be adopt at large scale through FLD	2.16 2.08 check

3	Introduction of carrot variety Pusa Vrishti	No Carrot production in large scale and variety suitable for the District not yet identified	Varietal evaluation	Carrot	3	<p><b>Technology :</b></p> <p>1.Root length (cm) :16 2. Shoulder diameter (cm):3.45 3.Weight (g):68.85 4.Duration :135 5. Yield (q):125</p> <p><b>Local</b></p> <p>1Root length (cm):12 2. Shoulder diameter (cm):2.95 3.Weight (g):52.25 4.Duration 150 5. Yield (q) 80</p>	Satisfied with the performance and look forward for further cultivation	Root is attractive and sweet	Technology :2.2 Local: 1.0
4	Assessment of Kharif onion variety L-883	Variety suitable for Kharif not yet identified	Varietal evaluation	Onion	3	<p><b>Technology</b></p> <p>1. Plant height (cm) 2. Bulb weight (g) 3. Crop duration 4. Yield /ha (q)</p> <p>Local : Same as above</p>	Failed	Although variety is for Kharif season yet could not resist heavy rainfall	
5	Integrated Disease Management of sheath rot of Paddy	Low yield due to chaffiness and sterility of grains due to sheath rot	Foliar spray of <i>P.flourescens</i> @ 0.2% concentration commencing from 45 DAT at 10 days interval for 3 times -Seed treatment with Mancozeb -Spraying with Mancozeb 75% WP @100 mg/Lt 1 <sup>st</sup> spray at the time of disease appearance and 2 <sup>nd</sup> spray 15 days later -At sooting stage, foliar spray with carbendazim @ 500 gm/ha	Paddy	3	<p><b>To 1</b> Treated 1)No of infected plants at ten days interval-18% 2)Disease incidence (%) -35% 3) Yield qt/Ha-37.6</p> <p><b>To 2</b> Farmers practice 1) No of infected plants at ten days interval-57% 2)Disease incidence (%) -78% 3) Yield qt/Ha-29</p>	Comment on shortfall of <i>P.flourescens</i> for regular use to adopt the technology.	Timely monitoring ,soil treatment and seed treatment and spraying with pesticides greatly influences the overall health and yield of the crop.	To 1 – 2.3  To 2 - 1.9
6	Rhizome rot management of Ginger using Biofor Pf	Rotting of Rhizome resulting in death of the plant	Seed treatment: Apply @ 10kg : 1kg(Rhizome seed : Biofor Pf) prepared paste @ 1kg in 2 L of water and dip Rhizome in the paste for 15 minutes and dry shade for 1 hour.  Soil application:Biofor Pf + Vermicompost @ 1kg Biofor Pf: 10kg Vermicompost to be applied as basal	Ginger	3	<p><b>To 1</b> Treated 1)No of infected plants at ten days interval-13% 2)Disease incidence (%) -23% 3) Yield qt/Ha-87.6</p> <p><b>To 2</b> Farmers practice 1)No of infected plants at ten days interval-45% 2)Disease incidence (%) -63%</p>	Comment on shortfall of <i>Biofor pf</i> for regular use to adopt the technology.	Timely monitoring and treatment of the crop greatly enhances the growth of the crop and influence	To 1 – 2.57  To 2 - 1.9

			dressing @ 100 gm/plant at 80-90 DAS			3) Yield qt/Ha-59.2		greatly in higher yield	
7	Organic management on growth and yield of French Bean	Inadequate availability of nutrients in the soil due to non application of biofertilizers	<p>Technology <b>TO1-</b> Phosphorus Solubilizing Bacteria (<i>Pseudomonas sp</i>) (@ 2.5 kg/ha + Rhizobium seed treatment @100g/kg seed will be given uniformly <b>TO2-Farmer Practice(No treatment)</b> Sowing time: First week of July Spacing: 45 cm X 10 cm</p>	French Bean	3	<p><b>Soil fertility status(kg/ha)</b> <b>TO1 (Technology)</b> 1. N-208 2. P-16.85 3. K-140.91 4. Yield (q/ha)-62 <b>TO2 (Farmers practice)</b> 1. N-183.9 2. P-12.31 3. K-126.8 4. Yield (q/ha)-51</p>	Seeing the performance of French Bean with seed treatment by biofertilizers. Farmers are willing to go for large cultivation	Seed treatment with rhizobium influences crop growth and yield.	<p><b>TO1:2.1</b> <b>TO2: 2.8</b></p>
8	Potassium nutrition on yield and quality of Grapes variety Bangalore Blue	Low yield and poor quality of fruits	<p>Technology K<sub>2</sub>O doses (g/vine) <b>TO1-300-K<sub>2</sub>O</b> <b>TO2-Farmers practice(No treatment)</b> (Fertilizer will be applied in split doses i.e Half dose of Potash will be applied immediately after pruning and the other half after 60 days of pruning.</p>	Grape	3	<p><b>Soil Fertility Status(Kg/ha)</b> <b>TO1 (Technology)</b> 1.N-293 2. P-21.7 3. K-276 4. Yield (q/ha)-57 <b>TO2 (Farmers practice)</b> 1. N-250 2. P-19.8 3. K-249 4. Yield (q/ha)-42</p>	Fruit quality, Bunch weight, and yield was better than farmer practice as well as uniform ripening	Timely application of Potash in split doses enhance better quality of grapes and recommended for large scale	<p><b>TO1:2.6</b> <b>TO2:3.2</b></p>

\*Field crops – ton/ha, \* for horticultural crops -= kg/t/ha, \* milk and meat – litres or kg/animal, \* for mushroom and vermicompost kg/unit area.

\*\* Give details of the technology assessed or refined and farmer's practice

### 3.2 Achievements of Frontline Demonstrations during 2019-20

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

List of technologies demonstrated during previous years and popularized during 2018-19 and recommended for large scale adoption in the district

Sl. No	Crop and Variety/ Enterprise	Technology demonstrated	Horizontal spread of technology		
			No. of villages	No. of farmers	Area in ha
1	Groundnut	Popularization of Groundnut Variety: ICGV 91114	3	10	5
2	Field Pea	Popularization of Var. Aman/AP-3 with <i>Rhizobium</i> inoculation	4	20	10
3	Tomato	Promotion on precision farming package for tomato variety Arka Samrat	5	15	5.25
4	Garlic	Assessment of Garlic variety Yamuna Safed -8	3	10	3.5
5	Tomato	Integrated Disease Management of Late blight ( <i>Phytophthora infestans</i> ) in tomato	4	10	4
6	Tomato	Integrated pest Management of Thrips ( <i>Thrips tabaci</i> ) in Tomato.	5	10	4
7	Pea	Influence of Organic Mulches on Growth and Yield Components of pea	3	10	2
8	Paddy	Effect of biofertilizers on growth ,yield and economics of rice ( <i>Oryza sativa</i> L)	3	10	2

b. Details of FLDs conducted during reporting period (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	Farming situation (Rainfed/ Irrigated, Soil type, altitude, etc)	Status of soil (Kg/ha)		
					Proposed	Actual	ST	Total			N	P	K
1.	Ground nut	Varietal Evaluation	Popularization of Groundnut Variety: ICGV 91114	Kharif-2019	5	5	10	10	-	Rainfed	210	14	115
2.	Field Pea	INM	Popularization of Var. Aman/AP-3 with <i>Rhizobium</i> inoculation	Rabi-2019-20	10	10	20	20	-	Rainfed, 800 M MSL	232	17	120
3	Garlic	Varietal evaluation	Popularisation of garlic variety Yamuna Safed 8	Rabi, 2019-2020	5.25	3.5	15	15		Irrigated/Sandy	214	22	164
4	Tomato	Integrated Crop Management	Promotion on precision farming package for tomato variety Arka Samrat	Summer, 2019	7.5	5.25	10	10		Rainfed/Sandy	236	26	198
5	Tomato	IPM of thrips ( <i>Thrips tabaci</i> ) in Tomato	1)Installation of blue sticky traps @ 12 no/ha to attract and kill insects. 2) Application of carbofuran 3% G @ 40 kg/ha and ETL based spraying with imidachlorpid @ 0.05%	Oct 2019-February 2020	4	4	10	10		Rainfed 23°26'48.35"N 93°15'15.9"E 814 m above MSL			
6	Tomato	IDM of Late Blight ( <i>Phytophthora infestans</i> ) in Tomato	1)Raising the crop in raise beds with plastic mulch. 2)Nursery bed treatment with <i>Trichoderma harzianum</i> (0.5%) 3)Protective spraying with mancozeb @ 0.2% or Copper oxy chloride @ 2 gm/lit	Oct 2019-February 2020	4	4	10	10		Rainfed 23°25'61.5"N 93°19'76.3"E 1460m above MSL			
7	Pea	Soil Moisture management	Influence of Organic Mulches on Growth and Yield Components of pea	Rabi-2019-20	2	2	10	10		Rainfed 23° 32.094'N 93°10.463'E 1113 m above MSL	232	11.7	210
8	Paddy	IINM	Popularisation of biofertilizers on growth ,yield and economics of rice( <i>Oryzasativa</i> L)	Kharif 2019	2	2	10	10		Rain fed 23° 31.690'N 93° 10.491'E 1118 m above MSL	208	9.3	187



## c. Performance of FLD on Crops during 2019-20

Sl. No.	Crop	Thematic area	Area (ha.)	Avg. yield (Q/ha.)		% increase in Avg. yield	Additional data on demo. yield (Q/ha.)		Data on parameters other than yield, e.g., disease incidence, pest incidence etc.		Econ. of demo. (Rs./ha.)				Econ. of check (Rs./Ha.)			
				Demo	Check		H*	L*	Demo	Local	GC**	GR**	NR**	BCR**	GC	GR	NR	BCR
1	Groundnut	Varietal Evaluation	5	8.30	6.60	25.75	8.70	6.20	-	-	37850	83360	46650	2.20	34320	66280	31960	1.93
2	Field Pea	INM	10	21.80	14.50	50.34	26.20	19.30	-	-	36280	94250	57970	2.59	32520	61600	29080	1.89
3	Tomato	Integrated crop management		325	250	30	350	243	-	-	196969	650000	453031	3.3	144230	375000	230770	2.6
4	Garlic	Varietal evaluation	3.5	72	53	35.84	77	62	-	-	164315	396000	231685	2.41	153421	291500	138079	1.9
5	Tomato	IPM	4	220	175		262.5	186	Pest Incidence – 20 %	Pest Incidence – 63 %	100000	2,62,500	1,62,500	2.62	90000	1,72,000/-	82,000/-	1.91
6	Tomato	IDM	4	219	171		263	183	Disease Incidence – 14 %	Disease Incidence – 71 %	103000	2,63,000	1,63,000	2.55	90000	1,71,000/-	81,000/-	1.9
7	Paddy	INM	2	31.06	25.12	23	32.40	30.9			30,510	76,900	46,390	2.5	25650	53800	28150	2.09
8	Pea	Soil Moisture Management	2	28.43	20.05	20.79	31.07	23.11	-	-	59,100	1,42,150	83,050	2.4	46,100	100,250	54,150	2.1

\*H-Highest recorded yield, L- Lowest recorded yield

\*\* GC- Gross Cost, GR- Gross Return, NR- Net Return, BCR- Benefit-Cost Ratio

Produce Sale Price must be as per MSP or Registered Marketing Society

Pl. apply the formula: Net Return= Gross Return-Gross Cost, BCR= GR/GC.



**\*\* GC- Gross Cost, GR- Gross Return, NR- Net Return, BCR- Benefit-Cost Ratio**

**Produce Sale Price must be as per MSP or Registered Marketing Society**

**Pl. apply the formula: Net Return= Gross Return-Gross Cost, BCR= GR/GC**

**Note: Economics to be worked out based on total cost of production per unit area and not on critical inputs alone.**

**(iii) Fisheries**

Sl. No.	Category , e.g. Common carp, ornamental fish etc.	Thematic area	Name of Technology	No. of farmers	No. of units	Major Performance parameters / indicators		% change in the parameter	Other parameters (if any)		Econ. of demo. (Rs./Ha.)				Econ. of check (Rs./Ha.)				Remarks		
						Demo	Check		Demo	Check	GC **	GR **	NR **	BC R* *	GC	GR	NR	BC R			

**\*\* GC- Gross Cost, GR- Gross Return, NR- Net Return, BCR- Benefit-Cost Ratio**

**Note: Economics to be worked out based on total cost of production per unit area and not on critical inputs alone.**

**(iv) Other enterprises**

Sl. No.	Category/ Enterprise, e.g., mushroom, vermicompost, apiculture etc.	Thematic area	Name of Technology	No. of farmers	No. of units	Major Performance parameters / indicators		% change in the parameter	Other parameters (if any)		Econ. of demo. (Rs./Ha.)				Econ. of check (Rs./Ha.)				Remarks			
						Demo	Check		Demo	Check	GC **	GR **	NR **	BC R**	GC	GR	NR	BC R				

**\*\* GC- Gross Cost, GR- Gross Return, NR- Net Return, BCR- Benefit-Cost Ratio**

**Note: Economics to be worked out based on total cost of production per unit area and not on critical inputs alone.**

**(v) Farm Implements and Machinery**

Sl. No.	Name of implement	Crop	Name of Technology demonstrated	No. of farmers	Area (In ha.)	Field observation (Output/ man-hours)		% change in the parameter	Labour reduction (Man days)	Cost reduction (Rs. per ha. or Rs. per unit etc.)	Remarks
						Demo	Check				

**f. Performance of FLD on Crop Hybrids**

Sl. No.	Crop	Name of hybrids	Area (ha.)	No. of farmers	Avg. yield (Q/ha.)		% increase in Avg. yield	Additional data on demo. yield (Q/ha.)		Econ. of demo. (Rs./Ha.)				Econ. of check (Rs./Ha.)			
					Demo.	Check		H*	L*	GC**	GR**	NR**	BCR**	GC	GR	NR	BCR
1	Carrot	Pusa Vrishthi	0.75	3	12.5	8	30	-	-	-	-	-	-	-	-	-	-
1	Tomato	Arka Samrat	7.25	10	325	250	-	350	243	196969	650000	453031	3.3	144230	375000	230770	2.6
2	Garlic	Yamuna Safed 8	5.25	15	On going	-	-	-	-	-	-	-	-	-	-	-	-
4	Field Pea	AP-3/Aman	10	20	21.8	14.5	50.34	-	-	-	-	-	-	-	-	-	-
5	Ground nut	ICGV-9114	5	10	830	-	100	-	-	-	-	-	-	-	-	-	-

\*H-Highest recorded yield, L- Lowest recorded yield

\*\* GC- Gross Cost, GR- Gross Return, NR- Net Return, BCR- Benefit-Cost Ratio

Note: Economics to be worked out based on total cost of production per unit area and not on critical inputs alone.

### 3.3. Achievements on Training

#### 3.3.1. Farmers and Farm Women in On Campus including Sponsored On Campus Training Programmes

(\*Sp. On means **On Campus** training programmes sponsored by external agencies)

Thematic area	No. of Courses/ prog			Participants																		Grand Total (x+y)
	On-Campus (1)	Sp. On* (2)	Total (1+2)	General						SC/ST						Total						
				Male		Female		Total		Male		Female		Total		Male		Female		Total		
				On (4)	Sp. On (5)	On (6)	Sp. On (7)	On (a=4+6)	Sp. On (b=5+7)	On (8)	Sp. On (9)	On (10)	Sp. On (11)	On (c=8+10)	Sp. On (d=9+11)	On (4+8)	Sp. On (5+9)	On (6+10)	Sp. On (7+11)	On (x= a+c)	Sp. On (y= b+d)	
<b>I. Crop Production</b>																						
Weed Management	1	-	1	-	-	-	-	-	-	22	-	8	-	30	-	22	-	8	-	30	-	30
Seed production	1	-	1	-	-	-	-	-	-	16	-	9	-	25	-	16	-	9	-	25	-	25
<b>II. Horticulture</b>																						
<b>a) Vegetable Crops</b>																						
Off-season vegetables	1 (2)	-	1(2)	-	-	-	-	-	-	20	-	10	-	30	-	20	-	10	-	30	-	30
Nursery raising	1(1)	-	1(1)	-	-	-	-	-	-	20	-	10	-	30	-	20	-	10	-	30	-	30
<b>b) Fruits</b>																						
Training and Pruning	1 (1)	-	1(1)	-	-	-	-	-	-	20	-	10	-	30	-	20	-	10	-	30	-	30
Cultivation of Fruit	1 (2)	-	1(1)	-	-	-	-	-	-	20	-	10	-	30	-	20	-	10	-	30	-	30
<b>VII Plant Protection</b>																						
Production of bio control agents and bio pesticides	1	2	3	-	-	-	-	-	-	27	12	18	5	45	17	27	12	18	5	45	17	62
<b>TOTAL</b>	<b>7</b>	<b>2</b>	<b>9</b>							<b>145</b>	<b>12</b>	<b>75</b>	<b>5</b>	<b>220</b>	<b>17</b>	<b>145</b>	<b>12</b>	<b>75</b>	<b>5</b>	<b>220</b>	<b>17</b>	<b>237</b>

3.3.2. Achievements on Training of <b>Farmers and Farm Women</b> in <b>Off Campus</b> including <b>Sponsored Off Campus</b> Training Programmes (*Sp. Off means Off Campus training programmes sponsored by external agencies)																						
Thematic area	No. of Courses/ prg.			Participants																		Grand Total
	Off	Sp Off*	Total	General						SC/ST						Total						
				Male		Female		Total		Male		Female		Total		Male		Female		Total		
				Off	Sp Off*	Of f	Sp Off*	Off	Sp Off*	Of f	Sp Off*	Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	
<b>I. Crop Production</b>																						
Weed Management	2	-	2	-	-	-	-	-	-	22	-	17	-	39	-	22	-	17	-	39	-	<b>39</b>
Seed production	3	-	3	-	-	-	-	-	-	45	-	21	-	66	-	45	-	21	-	66	-	<b>66</b>
<b>II. Horticulture</b>																						
<b>a) Vegetable Crops</b>																						
Export potential	1(1)	1(1)	2(2)							23	12	9	6	32	18	23	12	9	6	32	18	<b>50</b>
Off-season vegetables	1(1)		1(1)							20		10		30		20		10		30		<b>30</b>
Nursery raising	1(1)		1(1)							20		10		30		20		10		30		<b>30</b>
Post harvest management of Garlic	1(1)		1(1)							15		5		20		15		5		20		<b>20</b>
<b>b) Fruits</b>																						
Cultivation of Fruit	1(1)	1(1)	2(2)							16	19	9	6	25	25	16	19	9	6	25	25	<b>50</b>

Rejuvenation of old orchards	1(1)	1(1)	2(2)	-	-	-	-	-	-	9	19	8	14	17	33	9	19	8	14	17	33	50
<b>III Soil Health and Fertility Management</b>																						
Soil fertility management	1	1	2	-	-	-	-	-	-	14	13	7	19	21	32	14	13	7	19	21	32	53
Integrated Nutrient Management	2			-	-	-	-	-	-	18	-	16	-	34	-	18	-	16	-	34	-	34
Production and use of organic inputs	-	5	5	-	-	-	-	-	-	-	179	-	199	-	378		179	-	199	-	378	378
<b>IV Livestock Production and Management</b>																						
Piggery Management	1	-	1	-	-	-	-	-	-	24	-	16	-	40		24	-	16	-	40	-	40
<b>VII Plant Protection</b>																						
Integrated Pest Management	3	2	5							59	48	6	14	65	62	59	58	6	14	65	62	127
Integrated Disease Management	1	1	2							34	25	6	11	40	36	34	25	6	11	40	36	76
Bio-control of pests and diseases	1	2	3							55	32	15	13	70	45	55	32	15	13	70	45	115
Production of bio control agents and bio pesticides		2	2								44	-	53	-	97		44	-	53	-	97	97
<b>Total</b>	<b>22</b>	<b>14</b>	<b>34</b>							<b>431</b>	<b>312</b>	<b>174</b>	<b>329</b>	<b>605</b>	<b>650</b>	<b>411</b>	<b>352</b>	<b>164</b>	<b>329</b>	<b>605</b>	<b>650</b>	<b>1255</b>

<b>(B) RURAL YOUTH</b>																						
<b>3.3.3. Achievements on Training <u>Rural Youth in On Campus</u> including <u>Sponsored On Campus</u> Training Programmes (*Sp. On means On Campus training programmes sponsored by external agencies)</b>																						
Thematic area	No. of Courses/ Prog			Participants																		Grand Total (x + y)
	On (1)	Sp On* (2)	Total I (1+2 )	General						SC/ST						Total						
				Male		Female		Total		Male		Female		Total		Male		Female		Total		
				On (4)	Sp. On (5)	On (6)	Sp. On (7)	On (a= 4+6 )	Sp. On (b= 5+7 )	On (8)	Sp. On (9)	On (10 )	Sp. On (11)	On (c= 8+10 )	Sp. On (d= 9+11 )	On (4+8 )	Sp. On (5+9 )	On (6+10 )	Sp. On (7+11 )	On (x= a +c)	Sp. On (y= b +d)	
Mushroom Production	2	1	3	-	-	-	-	-	-	13	33	35	21	48	54	13	33	35	21	48	54	102
Protected cultivation of vegetable crops	1(3)	-	-	-	-	-	-	-	-	15	-	5	-	20	-	15	-	5	-	20	-	20
Commercial fruit production	1(2)	-	-	-	-	-	-	-	-	10	-	5	-	15	-	10	-	5	-	15	-	15
<b>TOTAL</b>	<b>4</b>	<b>1</b>	<b>5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>25</b>	<b>13</b>	<b>10</b>	<b>35</b>	<b>35</b>	<b>48</b>	<b>25</b>	<b>13</b>	<b>10</b>	<b>35</b>	<b>35</b>	<b>48</b>	<b>83</b>



**3.3.4. Achievements on Training of Rural Youth in Off Campus including Sponsored Off Campus Training Programmes  
(\*Sp. Off means Off Campus training programmes sponsored by external agencies)**

Thematic area	No. of Courses/ Prog.			Participants																		Grand Total
	Off	Sp Off	Total	General						SC/ST						Total						
				Male		Female		Total		Male		Female		Total		Male		Female		Total		
				Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	Off	Sp Off*	
Mushroom Production	-	1	1	-	-	-	-	-	-	-	14	-	27	-	41	-	14	-	27	-	41	41
Seed production	1	-	1	-	-	-	-	-	-	11	-	7	-	18	-	11	-	7	-	18	-	18
Organic pesticides	2	-	2	-	-	-	-	-	-	10	-	37	-	47	-	10	-	37	-	47	-	47
Protected cultivation of vegetable crops	1(3)	-	1(3)	-	-	-	-	-	-	30	-	10	-	40	-	30	-	10	-	40	-	40
Commercial fruit production	-	1(2)	1(2)	-	-	-	-	-	-	-	15	-	5	-	20	-	15	-	5	-	20	20
<b>TOTAL</b>	<b>4</b>	<b>1</b>	<b>5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>51</b>	<b>15</b>	<b>54</b>	<b>5</b>	<b>105</b>	<b>20</b>	<b>51</b>	<b>15</b>	<b>54</b>	<b>5</b>	<b>105</b>	<b>20</b>	<b>125</b>

C. Extension Personnel																							
3.3.5. Achievements on Training of <u>Extension Personnel in On Campus</u> including <u>Sponsored On Campus</u> Training Programmes (*Sp. On means On Campus training programmes sponsored by external agencies)																							
Thematic area	No. of Courses/ prog			Participants																		Grand Total (x + y)	
	On (1)	Sp On* (2)	Total (1+2 )	General						SC/ST						Total							
				Male		Female		Total		Male		Female		Total		Male		Female		Total			
				On (4)	Sp. On (5)	On (6)	Sp. On (7)	On (a= 4+6 )	Sp. On (b= 5+7 )	On (8)	Sp. On (9)	On (10 )	Sp. On (11)	On (c= 8+10 )	Sp. On (d= 9+11 )	On (4+8 )	Sp. On (5+9 )	On (6+10 )	Sp. On (7+11 )	On (x= a +c)	Sp. On (y= b +d)		
Protected cultivation technology	1 (3)		1 (3)							6		4			10		6		4		10		10
<b>Total</b>	<b>1</b>		<b>1</b>							<b>6</b>		<b>4</b>			<b>10</b>		<b>6</b>		<b>4</b>		<b>10</b>		<b>10</b>
3.3.6. Achievements on Training of <u>Extension Personnel in Off Campus</u> including <u>Sponsored Off Campus</u> Training Programmes (*Sp. Off means Off Campus training programmes sponsored by external agencies)																							
Thematic area	No. of Courses/ prog.			Participants																		Grand Total	
	Off	Sp Off*	Total	General						SC/ST						Total							
				Male		Female		Total		Male		Female		Total		Male		Female		Total			
				Of f	Sp Off*	Of f	Sp Off*	Of f	Sp Off*	Of f	Sp Off*	Of f	Sp Off*	Of f	Sp Off*	Of f	Sp Off*	Of f	Sp Off*	Of f	Sp Off*		
Integrated Pest Management		1	1								7		3		10		7		3		10		10
Production and use of organic inputs		1	1								18	-	12	-	30	-	18	-	12	-	30	-	30
<b>TOTAL</b>		<b>2</b>	<b>2</b>								<b>25</b>	<b>-</b>	<b>15</b>	<b>-</b>	<b>40</b>	<b>-</b>	<b>25</b>	<b>-</b>	<b>15</b>	<b>-</b>	<b>40</b>	<b>-</b>	<b>40</b>

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

**Annexure 1: Details of Training Programme (On Campus including Sponsored On Campus) for Farmers, Farm Women, Rural Youth and Extension Personnel**

Discipline	Area of training	Title of the training programme	Date	Duration in days	Venue	Beneficiary group (Farmer & Farm women/ RY/ EP and NGO Personnel)	General participants			SC/ST			Grand Total		
							M	F	T	M	F	T	M	F	T
Agronomy	Rice	Advantage of chemical weed mngt. in Rice	16/6/2019	1	KVK	F&FW				7	3	10	7	3	10
	Groundnut	Package of practices for cultivation of groundnut	12-13/7/2019	2	KVK	F&FW				11	4	15	11	4	15
	Weed mngt	Chemical weed mngt. in non cropped areas	23/6/2019	1	KVK	RY				22	8	30	22	8	30
Horticulture	Cultivation of fruit crops	Improved production technology in Khasi mandarin orange	2/4/2019, 9/4/2019, 16/4/2019	3	KVK	F&FW				20	10	30	20	10	30
	Training and pruning	Training and pruning of major fruit crop in Champhai District	18.4.2019 22.4.2019 25.4.2019	3	KVK	F&FW				20	10	30	20	10	30
	Off season vegetable cultivation	Scientific cultivation of off-season cultivation	13.5.2019 15.5.2019 17.5.2019	3	KVK	F&FW				20	10	30	20	10	30
	Nurser raising	Nursery management of horticultural crop	23.5.2019 29.5.2019 31.5.2019	3	KVK	F&FW				20	10	30	20	10	30
	Protected cultivation of vegetable crops	Protected cultivation of horticultural crops	19.6.2019 24.6.2019 25.6.2019	3	KVK	RY				15	5	20	15	5	15
	Commercial fruit production	Commercial production of major fruit crop in Champhai District	28.6.2019 1.7.2019	2	KVK	RY				10	5	15	10	5	15
	Protected cultivation technology	Protected cultivation of horticultural crops	11.7.2019	1	KVK	EP				6	4	10	6	4	10
Plant Protection	Mushroom Cultivation	Vocational training on Mushroom Cultivation	18-20/9/2019	3	KVK	F&FW				27	18	45	27	18	45
	Mushroom Cultivation	Training Mushroom Cultivation	17/10/19	1	KVK	F&FW				12	5	17	12	5	17
	Mushroom Cultivation	Vocational training on Mushroom Cultivation (STRY)	23/9/2019- 28/9/19	6	KVK	RY				13	35	48	13	35	48

**Annexure 2: Details of Training Programme (Off Campus including Sponsored Off Campus) for Farmers, Farm Women, Rural Youth and Extension Personnel**

Discipline	Area of training	Title of the training programme	Date	Duration in days	Venue	Beneficiary group	General participants			SC/ST			Grand Total		
							M	F	T	M	F	T	M	F	T
Agronomy	Rice	Advantage of chemical weed mngt. in Rice	2/6/2019	1	Zotlang	F & FW				22	17	39	22	17	39
	Field Pea	Scientific cultivation of Field pea & benefits of <i>Rhizobium</i> inoculation	19/9/2019 19/10/2019	2	Ruantlang, Zotlang, Vengsang Mualkawi	F & FW				45	21	66	45	21	66
	Weed mngt.	Chemical weed mngt. in non cropped areas	8/4/2019	1	Zotlang	RY				11	7	18	11	7	18
Horti	Cultivation of fruit	Cultivation of Khasi mandarin	8.8.2019 & 16/8/2019	2	Hmumhmeltha , Chawngtlai	F&FW				35	15	50	35	15	50
	Rejuvenation	Citrus rejuvenation	13.8.2019 & 14/8/2019	2	Ngaizawl Neihdawn	F&FW				28	22	50	28	22	50
	Nursery raising	Production technology of nursery raising	22.8.2019	1	Tuipui	F&FW				20	10	30	20	10	30
	Off-season vegetables	Scientific cultivation of Off season vegetable cultivation	17.9.2019	1	Chawngtlai	F&FW				20	10	30	20	10	30
	Post-harvest management	Post-harvest management of Garlic	26.9.2019	1	Ngopa	F&FW				50	20	70	50	20	70
	Protected cultivation of vegetable crops	Protected cultivation of horticultural crops	4.10.2019	1	Humhmeltha	RY				30	10	40	30	10	40
	Commercial fruit production	Commercial production of major fruit crop in Champhai District	13.10.2019	1	Tualte	RY				15	5	20	15	5	20
Plant Protection	IPM	IPM Nursery Management of Paddy (RKVY)	11/6/19	1	Tuisenphai	F&FW				22	9	31	22	9	31
		IPM Nursery Management of Paddy (NCIPM)	3/6/19	1	Khawzawl	F&FW				33	19	52	33	19	52
		Nursery management	4/6/19	1	Tuimuk	F&FW				31	10	41	31	10	41
		IPM on Tomato	21/10/19	1	Tuipui	F&FW				16	13	29	16	13	29
		IPM on Tomato	1/11/19	1	Ruantlang	F&FW				15	6	21	15	6	21

		IPM on nursery management of Winter Vegetables	2/11/19	1	Khawzawl	EP				7	3	<b>10</b>	7	3	<b>10</b>
	IDM	Disease free and healthy Seed selection (NCIPM)	20/5/19	1	Tuisenphai	F&FW				25	8	<b>33</b>	25	8	<b>33</b>
		Disease free and healthy Seed selection	21/5/19	1	Tuimuk	F&FW				34	9	<b>43</b>	34	9	<b>43</b>
	Bio control	Use of Pheromone trap	13/6/19	1	Tuisenphai	F&FW				32	8	<b>40</b>	32	8	<b>40</b>
		<i>Use of Trichogramma spp</i>	24/6/19	1	Tuisenphai	F&FW				33	9	<b>42</b>	33	9	<b>42</b>
		Use of pheromone trap	25/6/19	1	Tuimuk	F&FW				22	11	<b>33</b>	22	11	<b>33</b>
	Organic pesticides	Training on Preparation of Organic Pesticides	30/9-1/10/19	2	Khawhai	RY				19	30	<b>49</b>	19	30	<b>49</b>
		Training on preparation of Organic Pesticides	22/10/19	1	Khawhai	F&FW				25	23	<b>48</b>	25	23	<b>48</b>
	Mushroom Cultivation	Training on Mushroom Cultivation	18/10/19	1	N Chalrang	RY				47	48	<b>95</b>	47	48	<b>95</b>
	Soil Sc	Production & use of Organic input	Training on Production of Vermi-compost	11/2/2019 & 18/2/2019	2	Tuipui	F&FW				39	18	<b>57</b>	39	18
Soil Fertility Management		Recommended doses of fertilizer application & Soil Testing	26/7/2019	1	Tuipui	F&FW				13	19	<b>32</b>	13	19	<b>32</b>
Soil Fertility Management		Recommended doses of fertilizer application & Soil Testing	18/10/2019	1	New Chalrang	F&FW				14	7	<b>21</b>	14	7	<b>21</b>
Production & use of Organic input		Promotion of organic farming	23/2/2019	1	Tualte & Khawhai	F&FW				55	29	<b>84</b>	55	29	<b>84</b>
INM		Awareness on INM	18/9/2019 to 20/9/2019	3	Tualte, Khawhai & Ruantlang	F&FW				18	16	<b>34</b>	18	16	<b>34</b>
Production & use of Organic input		Training on Organic farming	5/3/2019	1	Champhai	EP				18	12	<b>30</b>	18	12	<b>30</b>
Production & use of Organic input		Training on Vermicomposting	13/9/2019 & 14/9/2019	2	Khawhai & Zotlang	F&FW				59	37	<b>96</b>	59	37	<b>96</b>
Organic Input Production		Vermi-compost	7/5/2019	1	Tualte	F&FW				14	24	<b>38</b>	14	24	<b>38</b>
Organic Input Production		Soil conservation measures & Vermi-compost production	20/2/2019, 21/2/2019 & 22/2/2019	3	Khawbung, Farkawn, Khuangleng	F&FW				24	79	<b>103</b>	24	79	<b>103</b>
Animal Sc	Livestock Production	Livestock management and production of Piggery		1 day	Khawzawl	F&FW				24	16	40	24	16	<b>40</b>

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

Crop / Enterprise	Date (From – To)	Duration (days)	Area of training	Training title*	No. of Participants									Impact of training in terms of Self-employment after training				Whether Sponsored by external funding agencies (Please Specify with amount of fund in Rs.)
					General			SC/ST			Total			Type of enterprise ventured into	Number of units	Number of persons employed	Avg. Annual income in Rs. generated through the enterprise	
					M	F	T	M	F	T	M	F	T					
Vermi compost	13/2/2019 To 15/2/2019	3	Organic farming	Production of Vermicompost	-	-	-	37	23	60	37	23	60	-	-	-	-	NABARD Rs.50,000
Organic farming	25/2/2019 To 2/3/2019	5	Production of Organic inputs	Training on Vermicompost production	-	-	-	12	18	30	12	18	30	-	-	-	-	MANAGE Rs.42,000
Mushroom	23/9/19-28/9/19	6	STRY	Mushroom Cultivation	-	-	-	13	35	48	13	35	48	-	-	-	-	MANAGE Rs.42,000
<b>Total</b>	-	-	-	-	-	-	-	62	76	138	62	76	138	-	-	-	-	-

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

## Annexure 3: Only Sponsored Training Programmes (On, Off and Vocational)

On/ Off/ Vocational	Beneficiary group (F/ FW/ RY/ EP)	Date (From- To)	Duration (days)	Discipline	Area of training	Title	No. of Participants									Sponsoring Agency	Amount of fund received (Rs.)
							General			SC/ST			Total				
							M	F	T	M	F	T	M	F	T		
on	RY	23/9/19 to 28/9/19	6	Plant protection	Mushroom	Mushroom Cultivation				13	35	48	13	35	48	MANAGE	42,000
off	F and FW	11/6/19, 25/6/19	2	Plant Protection	FFS	FFS on Paddy				43	17	60	43	17	60	RKVY	26,700
off	F and FW	20/5/19, 3/6/19 & 13/6/19	3	Plant Protection	Paddy	IPM on Paddy				92	23	115	92	23	115	NCIPM	-
Off	F/FW	15/1/2019, 11/2/2019 & 26/2/2019	3	Hort	Export potential	Scientific cultivation of Garlic				40	20	60	40	20	60	NABARD	12000
off	F/FW	5/6/2019, 17/6/2019 26/6/2019	3	Hort	Cultivation of fruit	Cultivation of Khasi mandarin				27	8	35	27	8	35	ATMA	-
Off	F/FW	10/7/2019, 23/7/2019 12/11/2019	3	Hort	Rejuvenation	Citrus rejuvenation				9	6	15	9	6	15	ATMA	-
Off	F&FW	13/2/2019 To 15/2/2019	3	Soil Sc	Vermicomposting & Mushroom	Vermicomposting & Mushroom Cultivation				37	23	60	37	23	60	NABARD	50,000
Off	RY	6/1/2019 To 19/1/2019	14	Soil Sc	Vermicomposting	Vermicomposting				24	9	33	24	9	33	ATMA	-
On	RY	3-9/6/2019	7	Soil Sc	Vermi composting	Vermicomposting				30	30	60	30	30	60	ATMA	-
Off	F&FW	3/12/2019	1	Soil Sc	Organic farming	Organic farming				19	13	32	19	13	32	PKVY	-
On	RY	25/2/2019 To 2/3/2019	5	Soil Sc	Production of Organic inputs	Training on Vermi compost production				12	18	30	12	18	30	MANAGE	42,000

**3.4. Extension Activities (including activities of FLD programmes) (Please mention specific Extension Activity conducted by the KVK such as Field Day, KisanMela, Exhibition, Diagnostic Visit, etc) during**

Sl. No.	Extension Activity	Topic	Date and duration	No. of activities	Participants											
					General			SC/ST			Extn. Official			Grand Total		
					M	F	T	M	F	T	M	F	T	M	F	T
1.	Advisory services			16				92	54	124				92	54	124
2.	Diagnostic visit			68				132	83	215	6	-	6	138	83	221
3.	Field day			1				32	16	48	2	-	2	34	16	50
4.	Group Discussion															
5.	Kishan Gosthi			1				183	67	250	7	2	9	190	69	259
6.	Film show			4				183	97	280	4	-	4	187	97	284
7.	SHG formation															
8.	Exhibition			2				258	84	342	7	3	10	265	87	352
9.	Scientists visit to farmers fields			29				27	22	49				27	22	49
10.	Farmers visit to KVK			89				497	439	936				497	439	936
11.	Animal Health camp			1				28	24	52	3	-	3	31	24	55
12.	Farm science club															
13.	Ex-trainee Sammelan															
14.	Farmers seminar/ workshop			2				77	53	130				77	53	130
15.	Method demonstration			12				92	56	148				92	56	148
16.	Celebration of important days			9				268	250	518				268	250	518
17.	Exposure visits															
18.	Electronic media (CD/DVD)															
19.	Extension literature			8				42	13	55				42	13	55
20.	Newspaper coverage			11				-	-	-				-	-	-
21.	Popular articles															
22.	Radio talk															
23.	TV talk															
24.	Training manual			78				214	112	326				214	112	326
25.	Soil health camp			3				38	22	60				38	22	60
26.	Awareness campaign (Kharif & Rabi)															
27.	Lecture delivered as resource person			8												
28.	PRA			4				97	63	160				97	63	160
29.	Farmer-Scientist interaction			2				28	22	50				28	22	50
30.	Soil test campaign			3				44	16	60				44	16	60
31.	Mahila Mandal Convener meet															
32.	Research Publication			1												
<b>Grand Total</b>				<b>352</b>				<b>2332</b>	<b>1493</b>	<b>3803</b>	<b>29</b>	<b>5</b>	<b>34</b>	<b>2361</b>	<b>1498</b>	<b>3837</b>



### 3.5 Production and supply of Technological products during 2019-20

#### A. SEED MATERIALS

Major group/class	Crop	Variety	Quantity (qt)	Value (Rs.)	Number of recipient/ beneficiaries		
					General	SC/ST	Total
CEREALS	Maize	RCM-76	3	24000	Nil	30	30
	Rice	Manipur	25	75000	Nil	50	50
OILSEEDS	Groundnut	GPBD-5	4	30000	Nil	50	50
PULSES	Field Pea	IPFD10-12	1.5	15000	Nil	10	10
VEGETABLES	Garlic	G282	12	108000	Nil	24	24
<b>TOTAL</b>			<b>45.5</b>	<b>252000</b>	<b>Nil</b>	<b>164</b>	<b>164</b>

#### A1. SUMMARY of Production and supply of Seed Materials during 2019-20

Sl. No.	Major group/class	Quantity (q) produced	Quantity (q) supplied	Value (Rs.) of quantity produced	Number of recipient/ beneficiaries		
					General	SC/ST	Total
1	CEREALS	-	-	-	-	-	-
	a) Maize	4	3	32000	Nil	30	30
	b) Paddy	32	25	96000	Nil	50	50
2	OILSEEDS	4	4	30000	Nil	50	50
3	PULSES	2.8	1.5	28000	Nil	10	10
4	VEGETABLES	12	12	108000	Nil	24	24
	<b>TOTAL</b>	<b>54.8</b>	<b>45.5</b>	<b>294000</b>	<b>Nil</b>	<b>164</b>	<b>164</b>

#### B. Production and supply of Planting Materials(Nos. in No.) during 2018-19

Major group/class	Crop	Variety	Quantity (In quintal) produced	Quantity (In No.) supplied	Value (Rs.) produced	Number of recipient/ beneficiaries		
						General	SC/ST	Total
Vegetables	Chilli	Arka Harit	8000	92	9,600/-	-	-	-
	Brinjal	Local	10,000	80	8,000/-	-	-	-
	Onion	Agrifound Light Red	14,000	100	10,000/-	-	-	-
	Tomato	Arka Rakshak & Arka Samrat	10,000	85	15,000/-	-	-	-
Flower	Marigold	Pusa Narangi	-	150	5,000/-	-	-	-
<b>TOTAL</b>			<b>42,000</b>	<b>450</b>	<b>4,76,000/-</b>			

## C. Production of Bio-Products during 2019-20

Major group/class	Product Name	Species	produced Quantity		Value (Rs.)	Number of Recipient /beneficiaries		
			No	(qt)		General	SC/ST	Total
			BIOAGENTS	-		-	-	-
BIOFERTILIZERS	-	-	-	-	-	-	-	
1	Vermicompost	<i>Eudrilus eugeniae</i>	4500 kg	-	45000	-	80	80
BIO PESTICIDES	-	-	-	-	-	-	-	

## D. Production of livestock during 2019-20

Sl. No.	Type/ category of livestock	Breed	Quantity		Value (Rs.)	Number of Recipient beneficiaries		
			(Nos)	Kgs		General	SC/ST	Total
			1	Cattle/ Dairy		-	-	-
2	Goat	-	-	-	-	-	-	
3	Piggery	-	-	-	-	-	-	
4	Poultry	-	-	-	-	-	-	
	1) Turkey	Broad Breasted White	6	-	1200	-	3	3
<b>TOTAL</b>	-	-	<b>6</b>	-	<b>1200</b>	-	<b>3</b>	<b>3</b>

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

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

(B) Articles/ Literature developed/published

Item	Title /and Name of Journal	Authors name	Number of copies	
			Produced/ published	Supplied/ distributed
Research papers				
Book/ Book Chapter				
Popular articles				
Technical bulletins				
Extension bulletins				
Newsletter				
Conference/ workshop proceedings	Formulating feasible approaches for nutrients management in shifting cultivation scenarios of eastern Himalayan tracts <b><i>International Workshop on nutrient management in shifting cultivation in North-east India, Mizoram University, Aizawl, January 22 – 24, 2020.</i></b>	Henry Saplalrinliana	-	35
Leaflets/folders	1) Tomato variety Arka Rakshak leh Arka Samrat chin leh enkawldan ( Package & Practices of growing tomato var. Arka Rakshak and Arka Samrat) 2) Vermi composting 3) Tomato Natna leh Rannung Ven leh Enkaw (Protection of tomato from pest & Diseases)	Malsawmkimi R. vanlalduati F. Zoramthari	450 (150 copy each)	450 copies
	Azolla Lei tihthana leh Ran chaw (Azolla-biofertilizer and animal feed)	Henry Saplalrinliana	80 copies	80 copies
<b>TOTAL</b>			<b>680</b>	<b>715</b>

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

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

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

**3.7 Success stories/Case studies, if any (two or three pages write-up on each case with suitable action photographs)****a) Success story on cultivation of Garlic variety G-282**

KVK, Champhai Distict brought Garlic variety G- 282 seeds from NHRDF , Hubli and conducted on farm trial at three farmers field at Khawzawl . On an average the farmers could harvest 60q from one hectare of land. KVK, Khawzawl has experimented adaptability of Garlic variety G 282 and proved that it can be grown successfully under the agro climatic condition of Champhai District. Average yield were around 60-70 q/ha, bulb weight is 55.8g . It is an early maturing variety and takes 150 days for crop maturity. As Garlic cultivation is new to the farmers and not yet known by the farmers in terms of good scope and marketing. Project proposal on the topic “Crop diversification through the introduction of improved Garlic variety G-282” held at KVK Khawzawl, Champhai district was submitted to the NABARD and KVK Khawzawl was granted 944100/- (Rupees Nine lakh forty four thousand one hundred only) from NABARD to support Front line demonstration at Farmers field. The project aimed to generate awareness of garlic cultivation not only for production, but also to increase their income. Duration of the project was 2018-2019 & 2019-2020. A total of 30 numbers of farmers was selected under this project, 30 farmers from in and around Khawzawl Village. All the selected farmers followed scientific package of practice. Pipes, sprinkler head, Vermicompost, fungicides and insecticides were also provided to the farmers under the project. In the first year, the beneficiaries who harvested with optimum crops kept seeds for seedling purpose for next year. Crop is yet to harvest for the second year of the project.

4



**b) Integrated Farming System:**

Name: Lalnuntluanga, Mual veng, Ruantlang, Champhai district.

Farm Size: 1.62ha

Farm experience: 15 years

Intervention: IFS Model



**Salient Features:**

- 1) Suggestive model for effective utilization and conservation of rain water.
- 2) Best farmer award in the district 2019
- 3) Facilitator and model farmer for IFS.

**Impact & Achievement:**

- 1) Act as a resource person for various programme
- 2) Farmers started adopting the technologies from his farm and enterprises.
- 3) 99 Nos of farmers benefitted through seed/planting materials/livestock

On Farm Income					Off Farm Income				
S.no	Crop/Enterprise	Area/Unit	Gross Income/year (Rs.)	Net Income/Year (Rs.)	S.no	Crop/Enterprise	Area/Unit	Gross Income/year (Rs.)	Net Income/Year (Rs.)
1	Rice-Maize based cropping system	1ha	1,32,000	67,000	1	Piggery	1 unit	50,000	21,000
2	Mustard	0.2	1,10,000	87,000	2	Fishery	0.5 ha	1,20,000	90,000
3	Field Pea	0.5	47,000	32,000	3	Cattle	22 nos	1,20,000	1,00,000
4	Tomato	0.6	2,71,000	1,80,000	4	Brick	-	6,50,000	3,50,000
5	French Bean	0.3	20,500	13,500					

TOTAL INCOME		
Sl. No.	On Farm Income/Month	Off Farm Income/Month
1	46,000/-	32,375/-
<b>Total</b>	<b>78,375/-</b>	

**5.7 Give details of innovative methodology/technology developed and used for Transfer of Technology during the year 2019-20**

- a) Dehusking of Arecanut
- b) Wooden marker for line making
- c) Use of lantana camera as repellent in low cost storage structure.
- d) Low cost onion storage structure using bamboo.
- e) Use of A-Frame for contour line marking

**5.8 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	Logwood bunding for soil conservation	Trees/Branches felled during <i>Jhuming</i> are used as bunding across the slopes.	1) Retention of soil/ soil conservation measure 2) Path way 3) Substrate for wild edible mushroom
2	Pest Management	Placing of decomposed Crab at paddy field	Pest repellent
3	Seed treatment	Burning of seeds with hard coat at the time of <i>Jhum</i> burning	Early seed germination esp for <i>Musa ensente</i> and <i>Zanthoxylum rhetsa</i>
4	Pest management	Broadcasting of Ashes to the crops foliage	Pest repellent

**3.10 Indicate the specific training need analysis tools/methodology followed for Identification of courses for farmers/farm women:**

- a) Lack of cropping system to accommodate more crops for better yield & income.
- b) Low yield due to moisture stress & disease.
- c) Garden Pea Variety suitable during high temperature not yet identified in the district.
- d) Less known variety of onion suitable in the District
- e) Production of rice is mainly constrained by iron (Fe) induced phosphorus deficiencies.
- f) Potato production not reaching the national average due to unscientific nutrient management.(52%)
- g) No scientific agroforestry model for converting *jhum* field to settled farming(88.6%)
- h) Improper nutrient management in *jhum* field (90%)
- i) Incidence of Late Blight (*Phytophthora infestans*)of Potato
- j) Incidence of white fly in Mizo Chili
- k) Lack of awareness on Integrated Pest & Disease management on Citrus.
- l) Lack of awareness on integrated crop management for soil and water conservation
- m) SALT technology for Soil & water conservation.
- n) Lack of awareness on importance of site selection and farm management.
- o) Training on Export potential technology
- p) Lack of knowledge and awareness on livestock management, feed and fodder production.
- q) Designing and development for high nutrient efficiency diet
- r) Storage loss minimization techniques
- s) Income generation activities for empowerment of rural Women
- t) Design and development of low/minimum cost diet
- u) Income generation activities for empowerment of rural Women
- v) Gender mainstreaming through SHGs
- w) Women and child care

- **Rural Youth**
  - a) Training programme on organic production and its uses
  - b) Training programme on Bio-control Agent
  - c) In-situ organic production from available resources.
  - d) Importance of Bee keeping for higher crop production
  - e) Entrepreneurial development of Rural youths
  - f) Integrated Farming System
  - g) Leadership development
  
- **Extension personnel**
  - a) Training programme on Bio-control Agent
  - b) Awareness programme on fertilizer , pesticides and water use efficiency
  - c) SALT technology for Soil & water conservation.
  - d) Food processing and Post-Harvest technology.
  - e) Formation of FIG, SHG, FPO
  - f) Household food security by kitchen gardening and nutrition gardening
  - g) Micro irrigation systems of orchards

### 3.11 Field activities

- i. Number of villages adopted : 41
- ii. No. of farm families selected : 4337
- iii. No. of survey/PRA conducted : 4



### 3.12. Activities of Soil and Water Testing

Status of establishment of Lab : Available

1. Year of establishment : 2015
2. List of equipments purchased with amount :

Sl. No	Name of the Equipment			Qty.	Cost
	S&WT lab	Mini lab/ Mridaparikshak	Manufacturer		
1	Side table	-	-	1	8500
2	Steel rack	-	-	3	26700
3	Book case	-	-	3	51000
4	USDV 8	-	-	3	75231
5	Stool	-	-	2	2622
6	-	MRIDAPARIKSHAK	-	1	86000
<b>Total</b>		-	-	<b>13</b>	<b>2,50,053</b>

### 12. Details of samples analyzed (2019-20) :

Details	No. of Samples analysed	No. of Farmers	No. of Villages	Amount ( In Rupees) realized
Soil Samples	209	209	15	-
Water Samples	-	-	-	-
Plant Samples	-	-	-	-
Petiole Samples	-	-	-	-
<b>Total</b>	<b>209</b>	<b>209</b>	<b>15</b>	<b>-</b>

**13. Details of Soil Health Cards (SHCs) (2019-20)**

- a. No. of SHCs prepared : 209  
 b. No. of farmers to whom SHCs were distributed : 209  
 c. Name of the Major and Minor nutrients analysed : N, P, K, Iron, Cu, Mn, Zinc  
 d. No. of villages covered : 15

**3.13 Details of SMS/ Voice Calls sent on various priority areas**

Message type	Crop		Livestock		Weather		Marketing		Awareness		Other Ent.		Total	
	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary	No. of Message	No. of Beneficiary
Text only	150	150	50	50	12	12	20	20	130	130	30	30	392	392
Voice only	250	250	20	20	20	20	23	23	34	34	20	20	367	367
Voice and Text both	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>400</b>	<b>400</b>	<b>70</b>	<b>70</b>	<b>32</b>	<b>32</b>	<b>43</b>	<b>43</b>	<b>164</b>	<b>164</b>	<b>50</b>	<b>50</b>	<b>759</b>	<b>759</b>

**15. Contingency planning for 2019-20**

**a. Crop based Contingency planning**

Contingency (Drought/ Flood/ Cyclone/ Any other please specify)	Proposed Measure	Proposed Area (In ha.) to be covered	Number of beneficiaries proposed to be covered		
			General	SC/ST	Total
Climate change	Introduction of new variety or crop	13	-	22	22
Soil Erosion	Introduction of Resource Conservation Technologies	12	-	15	15
Scarcity of Water/ Late Monsoon	Water used efficiency through drip and Rain Water Harvesting Structure	12 units	-	10	10

### b. Livestock based Contingency planning

Contingency (Drought/ Flood/ Cyclone/ Any other please specify)	Number of birds/ animals to be distributed	No. of programmes to be undertaken	No. of camps to be organized	Proposed number of animals/ birds to be covered through camps	Number of beneficiaries proposed to be covered		
					General	SC/ST	Total
					-	-	-

## 4.0. IMPACT

### 4.1. Impact of KVK activities (Not to be restricted for reporting period only)

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Introduction of off season Tomato variety- Arka Rakshak	42	100	Nil	Rs.1,68,000/-
Introduction of Garlic Variety –G-282	50	76	Nil	Rs. 1,37,500/-
Mushroom Production	22	63	Rs. 27,450/-	Rs. 53,390/-
Vermi compost production	14	64	Rs. 12,320/-	Rs. 28,750/-
System of Rice Intensification	33	84	Rs. 16,800/-	Rs. 22,480/-
Introduction of dual purpose backyard poultry breed	8	87	Rs. 7,400/-	Rs. 9,630/-
Young seedling and line planting of Paddy	71	80	Rs. 16,400/-	Rs. 19,900/-
Paddy cum Fish culture	16	87	Rs. 17,540/-	Rs. 56,000/-
Value addition of Horticulture crops	44	72	Nil	Rs. 32,800/-
Rhizome rot management in Ginger	67	86	Rs. 1,44,000/-	Rs. 2,16,000/-
Use of Butachlor in weed management of Paddy	54	90	Rs. 17,000/-	Rs. 19,480/-
Raised Bed nursery management	32	87	Rs.3,000/-	Rs.5,300/-
Use of Paddy straw as Mulch in vegetable crop (Rabbi)	24	66	Rs.17,000/-	Rs.23,700/-
Use of Azolla as biofertilizer in Paddy	18	66	Rs.16,600/-	Rs.18,200/-

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

#### 4.2. Cases of large scale adoption

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

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

## 5 LINKAGES ESTABLISHED

### 5.1 Functional linkage with different organizations established during 2019-20

Name of organization	Nature of linkage
State Department of Agriculture/Horticulture/ AH&VETY/ Fishery/ Forestry/ Soil & Water Conservation/ Minor Irrigation/ Sericulture of Champhai District and Khawzawl District.	Implementation of RKVY, NFSM, supply of subsidized inputs like chemicals, farm machinery, Project, Training, Technical Advices, etc
NABARD	Implementation of Project and Trainings
ATMA	Training and technical advice as Resource person
IWMP	Training and technical advice as Resource person
Block Development Office	Training and technical advice as Resource person
NGOs AMFU, YMA etc	Technology transfer, Awareness programme, Celebration of important days
IFAD FOCUS(Fostering Climate Resilient Upland Farming System)	Training and technical advice as Resource person and as National Representative
District Commissioner of Champhai District and Khawzawl District.	Member-District level committee on providing irrigation facilities to farmers.

**5.2 List special programmes undertaken by the KVK, which have been financed by State Govt./Other Agencies during 2019-2020:**

Name of the scheme/ special programme	Activity	Date/ Month of initiation	Funding agency	Amount (Rs.)
Crop diversification through the introduction of improved variety of Garlic variety G 282 in Champhai District	Training, Trial at farmers field Inspection	October 2018 – May 2019	NABARD	9,44,100/-
Skill training for Rural youth	Training	Sept, 2019	SAMETI	42000/-
Implementation of IPM in rice and vegetables crops in NEH Region	Training, Trials	2019-2020	NCIPM	2,50,000/-
Cluster demonstration on organic farming	Trials, Training	2019-2020	PKVY	
Popularization of field pea with rhizobium inoculation	Trials, Training	October 2019-feb 2020	NFSM	150000/-

**5.3 Details of linkage with ATMA**

a) Is ATMA implemented in your district: **Yes**

Sl. No.	Programme	Nature of linkage	Remarks
1	Assessment and refinement	Data collection and trials	-
2	Trainings	Resource person	-
3	Filed visits	Joint visits	-
4	Training & Demonstration	Designated expert support	-

## 6. PERFORMANCE OF INFRASTRUCTURE IN KVK DURING 2019-20

### 6.1 Performance of demonstration units (other than instructional farm)

Sl. No.	Demo Unit (Name and No.)	Year of estd.	Area	Details of production			Amount (Rs.)		Remarks
				Variety/ species/ breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1	Vermi composting unit – 2 nos	2008 & 2016	480 sq/ft	Red Worm( <i>Eisenia-foetida</i> )	Compost/Biofertilizers	25q	12000	30000	-

### 6.2 Performance of instructional farm (Crops) including seed production during 2019-20

Name of crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.( in qtl)	Cost of inputs	Gross income	
<b>Cereals</b>									
Rice	June 10	30 oct	0.8	Ruata & Manipur	Seed	25	23600	54000	-
Maize	July 16	Oct 24	0.25	RCM-75 & 76	Seed	3	9400	17850	-
<b>Pulses</b>									
Arhar	May 16	Oct 19	0.7	Local	Seed	0.58	2300	4640	-
Pea	Sept 3	Dec 16	0.25	AP-3	Green Pod	0.36	1100	2340	-
<b>Vegetables</b>									
Okra	June 18	Aug - Sept	0.2	Arka Anamika	Fruits	0.32	840	1120	-
F. Bean	July 10	Sept - Oct	0.15	Arka Anoop	Green Pod	14.5	3175	8250	-

### 6.3 Performance of production Units (bio-agents / bio pesticides/ bio fertilizers etc.) during 2018-19

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1	Vermi-compost	2500 kg	-	30,000	-

### 6.4 Performance of instructional farm (livestock and fisheries production)

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

### 6.5 Rainwater Harvesting

#### Training programmes conducted by using Rainwater Harvesting Unit/ structure

Date	Title of the training course	Client (PF/R/EF)	No. of Courses	No. of Participants including SC/ST		
				Male	Female	Total
10/6/2019	Conservation & maximum utilizations of Rain Water through Rain Water Harvesting	PF	1	18	9	27

### 6.6. Utilization of hostel facilities (Month-Wise) during 2019

#### Accommodation available (No. of beds): 15 nos

Months	Title of the training course/Purpose of stay	Duration of Training	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
Sept	Mushroom Cultivation	6 days	48	6	-
	Mushroom Cultivation	3 days	25	3	-
Oct	Mushroom Cultivation	1 day	37	1	-
	Preparation of Organic Pesticides	2 days	47	2	-

Note: (Duration of the training course X No. of trainees)=Trainee days

## 7. FINANCIAL PERFORMANCE

### 7.1. Details of KVK Bank accounts

Bank account	Name of the bank	Location/ Branch	Account Number
With Host Institute	-	-	-
With KVK	State Bank of India	Khawzawl	37041217638
Revolving Fund	State Bank of India	Khawzawl	37958564078

### 7.2. Utilization of funds under CFLD on Oilseeds and Pulses (Rs. In Lakhs) if applicable during 2019

Item	Released by ICAR/ATARI (in lakh)		Expenditure (in lakh)		Unspent balance as on 17 <sup>st</sup> February, 2020
	Amount (Pulses)	Amount (Nutri Cereal)	Amount (Pulses)	Amount (Nutri Cereal)	
Inputs	-	-	-	-	NIL
Extension activities	0.774	-	0.774	-	-
TA/DA/POL etc.	-	-	-	-	-
<b>TOTAL</b>	0.774	-	0.774	-	<b>0</b>



## 7.3 Utilization of KVK funds during the year 2019

S. No	Particulars	Sanctioned (in	Released (in Lakh)	Expenditure (in Lakh)
<b>A. Recurring Contingencies</b>				
1	<b>Pay &amp; Allowances</b>	164.70323	164.70323	164.70323
2	<b>Traveling allowances</b>	2.50	2.50	2.50
3	<b>HRD(Human Resource Development)</b>	0.75	0.75	0.75
4	<b>Contingencies</b>	<b>13.50</b>	<b>13.50</b>	<b>13.50</b>
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	-	-	-
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	-	-	-
E	Frontline demonstration except oilseeds and pulses	-	-	-
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>132.18</b>	<b>130.11</b>
<b>B. Non-Recurring Contingencies</b>				
1	<b>Works</b>	-	-	-
2	<b>Equipments including SWTL &amp; Furniture</b>	0.30	0.30	0.30
3	<b>Vehicle</b> (Four wheeler, please specify)	-	-	-
4	<b>Hydroponics</b>	1.00	1.00	1.00
<b>TOTAL (B)</b>			<b>0.30</b>	<b>0.30</b>
<b>C. REVOLVING FUND</b>		1.30	1.30	1.30
<b>GRAND TOTAL (A+B+C)</b>		<b>183.75323</b>	<b>183.75323</b>	<b>183.75323</b>

**7.4 Status of Revolving Fund (Rs. in lakhs) for last three years**

Year	Opening balance as on 1 <sup>st</sup> April	Income during the year	Expenditure during the year	Net balance with KVK (in lakh)
Jan 2019 to Dec 2019	75,000	1,79,540	1,29,890	0.49650
April 2018 to March 2019	48,625	42,680	3,680	0.87625
April 2017 to March 2018	37,266	12,539	1,180	0.48625

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

**8.1 Constraints and Suggestion (Provide point-wise if any, for recommendation)**

**CONSTRAINTS:-**

**(a) Administrative:**

- ❖ No define guidelines for the services benefit and lack of promotion channel for KVK staff.
- ❖ Unavailability of pension and gratuity benefits and medical benefits for KVK staff.
- ❖ Over burden by reporting to host department, ICAR and District authorities.
- ❖ Shortfall in modernization and upgradation of office buildings, assets and staff quarters
- ❖ Overlapping of KVK activities with that of the host department, other assigned activities besides mandated activities of KVK
- ❖ Lack of support from host department, Agriculture and other allied departments.
- ❖ Lack of opportunities for upgrading knowledge as no provision of full fledge library, subscription of journal etc.
- ❖ Lack of man power for administration establishment and effective and smooth functioning of KVK.
- ❖ Delay in recruitment of vacant post.

(b) **Financial**

- ❖ Non availability of funds for building (Administrative, Staff quarter, Farmer Hostel etc) maintenance and renovation.
- ❖ Limited fund for Farm development and establishment of demonstration unit.
- ❖ No provision of fund for boundary wall fencing, farm approach and internal roads.
- ❖ No provision for development of Integrated farming system model, infrastructure facilities viz. Farm go-down/store, electrification and water supply
- ❖ Insufficient fund for conducting training, trials and demonstration.
- ❖ Insufficient fund for contingencies, transport allowances etc.
- ❖ Insufficient fund under salary head to cover 7CPC arrear.

(c) **Technical**

- ❖ Untimely supply of inputs
- ❖ Lack of awareness among the farmers regarding the use of ICT for educational and agricultural purpose.
- ❖ Lack of reliable and updated statistical data of the district.
- ❖ Low risk and decision making abilities of the farmers to take up new technologies.
- ❖ Shortage of transportation facilities for conduct of various mandated activities.
- ❖ Lack of Quarantine post to check diseases and pest etc.
- ❖ Lack of infrastructure facilities for livestock production and research activities.
- ❖ Insufficient infrastructure facilities for plant protection.
- ❖ Insufficient skilled man power for Laboratory works
- ❖ Insufficient, proper and improved facilities for Information & Communication Technology.
- ❖ Insufficient man power for farm development.

**SUGGESTION:-**(a) **Administrative:**

- ❖ Regularization of KVK staff at par with the State Govt. employees or ICAR employees.
- ❖ Development of define guidelines for pension, medical facilities and other services benefit at par with ICAR or State/Central Govt. employees.
- ❖ Minimize the workload and overburden of KVK by giving priority to mandated activities by removing overlapping of KVK activities with that of the host department, other assign activities besides mandated activities.
- ❖ Treatment of KVK staff at par for the purpose of privileges, amenities and facilities permissible to the employees of the host department
- ❖ Increase man power of non-technical staff to minimize the workload and burden.
- ❖ Renovation of Staff Quarters, Farmers' Hostel and Admin building at the earliest

(b) **Financial**

- ❖ Provision of funds for Building maintenance and renovation.
- ❖ Additional fund for farm works, demonstration unit and IFS model
- ❖ Fund for farm infrastructure facilities such as farm fencing, electrification, go-downs, farm approach/internal roads and water connection.
- ❖ Additional fund for training, exhibition, Kisan Mela, OFT, FLD etc.
- ❖ Salary requirements for payment of remaining 7<sup>th</sup> CPC arrear.
- ❖ Increase fund for contingencies, TA etc
- ❖ Provision of fund for medical reimbursement.
- ❖ Provision of fund for employee allowances admissible to ICAR or state/central employees.
- ❖

(c) **Technical**

- ❖ Establishment of Farmers Service Centre, Information support system and plant nutrition diagnostic Centre with advance equipment.
- ❖ Establishment of disease free seedling production unit, Farm Shed, Go-down, working shed for seed and planting materials production.
- ❖ Establishment and development of model organic farm and herbal garden at KVK Demonstration Farm/unit.
- ❖ Provision of boundary wall fencing and development funds for establishment and development of farm approach roads and internal roads with farm electrification.
- ❖ Establishment of poly-house and high tech green houses
- ❖ Establishment of animal health clinic.
- ❖ Installation of KIOSK at block and village level
- ❖ MIS