

PROFORMA FOR ANNUAL REPORT OF KVKs 2021 (January- December)

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	
KVK Zunheboto, Nagaland University, Lumami, P.O. Lumami PIN-798627			kvkzunheboto@gmail.com

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

Address	Telephone		E mail
	Office	FAX	
Vice-chancellor, Nagaland University, Lumami PIN-798627	(0369)2268248	(0369)2268248	vc@nagalanduniversity.ac.in

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Rakesh Kumar Chaurasia		09856072100	<a href="mailto:rchaurasia_2004@yahoo.co.in">rchaurasia_2004@yahoo.co.in</a>

1.4. Year of sanction: 2005

1.5. Staff Position (As on 31<sup>st</sup> December 2021)

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	Pr. Scientist & Head	Dr. Rakesh Kumar Chaurasia	Principal Scientist & Head	Animal Science	Level 14	162300	24/04/2007	Permanent	OBC
2	Subject Matter Specialist	Wapangtoshi Longkumer	CTO	Plant Protection	Level 12	88400	17/04/07	Permanent	ST
3	Subject Matter Specialist	Dr. Kundan Kumar	SMS	Agril. Extension	Level 10	82400	19/04/07	Permanent	Others

4	Subject Matter Specialist	Edenly Chishi	CTO	Horticulture	Level 12	88400	20/04/07	Permanent	ST
5	Subject Matter Specialist	Dr. Visakho Shunyu	CTO	Agronomy	Level 12	88400	14/05/07	Permanent	ST
6	Subject Matter Specialist	Sentimenla	SMS	Agril. Chemistry & Soil Science	Level 10	65000	10/10/12	Permanent	ST
7	Subject Matter Specialist	Dr. Z. Nongothung Ezung	SMS	Animal Science	Level 10	69000	3/3/14	Permanent	ST
8	Programme Assistant	Narola Anichari	T.O. (Home Science)	Home Science	Level 6	46200	25/10/12	Permanent	ST
9	Computer Programmer	Imnameren	Sr. TO (Computer)	IT	Level 10	60400	02/04/07	Permanent	ST
10	Farm Manager	Naropongla	T.O. (Farm)	Soil and water conservation	Level 6	46200	17/10/12	Permanent	ST
11	Accountant / Superintendent	Katovi Shohe	Accountant / Superintendent		Level 7	58600	08/08/07	Permanent	ST
12	Stenographer	Tiarenla	Jr. Steno. Cum Compt Operator		Level 4	33300	3/10/12	Permanent	ST
13	Driver	Wepretso Marhu	Driver cum mechanic		Level 4	36400	22/06/07	Permanent	ST
14	Supporting staff	Kekhriengulie	Skilled Supporting staff		Level 2	29300	2/4/07	Permanent	ST
15	Supporting staff	Shumben Patton	Skilled Supporting staff		Level 2	29300	2/4/07	Permanent	ST

**Note: No column in the table must be left blank**

- 1.6. a. Total land with KVK (in ha) : 20
- b. Total cultivable land with KVK (in ha): 17.75
- c. Total cultivated land (in ha): 5.50

S. No.	Item	Area (ha)
1	Under Buildings	1
2.	Under Demonstration Units	1.006
3.	Under Crops (Cereals, pulses, oilseeds etc.) (Pl. specify separately) i. Spices	0.04
4.	Under vegetables	0.005
5.	Orchard/Agro-forestry	2

6.	Others (specify)	1.5
----	------------------	-----

### 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	April 2014	550	110.51			
2.	Farmers Hostel							
3.	Staff Quarters (2)	ICAR	April 2014	144				
4.	Demonstration Units							
5	Fencing							

#### B) Vehicles

Type of vehicle	Regd. No.	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Bolero	NL 10 C- 758	2017	750696	58081	Working
Mini Tractor with trolley	NL 07- A2068	2006	369126/-	320	Working
Power tiller		2010	296200/-	250hrs	Working
Power tiller		2016	197500/-	New	Working

#### C) Equipments & AV Aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Camera	2017	51300/-	Working
Photo copier	2010	95000/-	Needs Repairing
Generator	2012	337000/-	Needs Repairing
PC	2016	43590/-	Working
PC	2016	43590/-	Working
PC	2016	43590/-	Working
Laptop	2016	47590/-	Working

Laptop	2017	76700/-	Working
Scanner	2016	9350/-	Working
Generator	2016	129800/-	Working
PC	2021	52000/-	Working
PC	2021	52000/-	Working
LCD Projector	2020	45000/-	Working

1.8. A). Details SAC meeting\* conducted in 2021 : **Date of SAC meeting (22<sup>nd</sup> of June 2022)**

Name and Designation of Participants	Salient Recommendations	Action taken on last SAC recommendation
Prof. Pardeshi Lal (Vice Chancellor)	1. Soybean variety suitable for location specific must be introduced to farmers of different blocks. 2. To create awareness among all kiwi growers for protection of kiwi leaves and flowers from hail stones 3. Adoption of villages for transfer of technologies 4. Construction of water harvesting structures for irrigation of crops during lien period 5. Construction of contour bunding for conservation of soil moisture 6. Preservation techniques of chow chow may be imparted to the farmers 7. Impart training on how to prepare compost pig manure before using it as organic fertilizer and formulation of pesticides from ashes of wood and cow dung 8 Training on Feeding techniques for poultry and pigs and correct selection	1. Liming in soil at the recommended dose if soils are acidic.: Done 2. Use of copper Oxychloride @3 gm/litre for foliar spray to control leaf spot disease in Soybean: Disease not reported 3. Organic farming to be initiated. : Done 4. Wet towel method should be adopted to observe seed germination % before conducting OFT: Done 5. Selection of location specific HYV seeds which are resistant to disease pest infestation: Done 6. The technologies selected to be tested in control environment or as package of practices.: Done 7. Input/output ratio needs to be calculated: Done 8. Timely supply of inputs should be done so that farmers can sow the crops in right time: Done
Dr. Rakesh Kumar Chaurasia (Principal Scientist & Head)		
Hetoho Y Sumi (DSCO & PD, ATMA)		
Vikaho Chopi (Dy. PD, ATMA)		
Dr. Visakho Shunyu (CTO, GPB)		
Edenly Chishi (CTO, horticulture)		
Kakuto Assuim (Progressive Farmer)		
Huloto Ayemi (Progressive Farmer)		
Khesheli Chishi (Farmer)		
Ghukhali Awomi (Farmer)		
Dr. Kundan Kumar (SMS, Agril Extn)		
Dr. Z. Nongothung Ezung (SMS, Animal Sc.)		
Imnameren (STO)		
Narola Anichari (TO)		
Bokavi (Media)		
Aghuato H Aye Media)		
Limasunep Jamir (AI)		
Akaito Kiba (HEA)		
Naropongla (TO)		
Toito N Sumi		

	<p>of poultry and pig breeds may be imparted</p> <p>9. To impart training on adoption of location specific technologies for different crops.</p> <p>10. Inclusion of SHGs for survey works.</p> <p>11. Wider consultation among Agri and allied department should be carried out while forming and promoting FPO to avoid duplication of PM schemes</p> <p>12. Training on Techniques for production of fingerlings</p>	
--	---	--

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

### **Meeting minutes of 12<sup>th</sup> SAC Meeting of KVK Zunheboto Nagaland University.**

The 12<sup>th</sup> SAC meeting of Krishi Vigyan Kendra, Zunheboto, Nagaland University was held on 22<sup>nd</sup> June 2022, 11:00 AM at KVK, Nagaland University Conference Hall

#### **Attendance appended**

The meeting was chaired by Honorable Vice Chancellor of Nagaland University Prof. P. Lal. Dr. Visakho Shunyu, CTO (GPB, KVK NU) welcomed all the members and briefed the members about the importance and the purpose of SAC. Members present during the 12<sup>th</sup> SAC were DSCO and PD ATMA, Zunheboto, Deputy PD ATMA, Zunheboto, AI department of Agriculture, HEA Department of Horticulture, Farmers representative from different villages viz. Sutemi, Alaphumi, Tichipami and Litta New along with the staff of KVK, Zunheboto. During the meeting Dr. Rakesh Kumar Chaurasia Principal

Scientist and Head KVK, NU., Zunheboto presented the Annual report of KVK for the year 2021 while Dr. Kundan Kumar SMS (Agril. Extension) KVK NU, Zunheboto presented the Annual Actin Plan for the year 2022 before the members and sought suggestion and recommendation from the members.

Suggestions/recommendations and action to be taken are as follows:

Sl.No.	Recommendation/Resolutions	Action to be taken
1	Soybean variety suitable for location specific must be introduced to farmers of different blocks.	OFT on different varieties of soybean to be conducted at different locations: CTO (GPB)
2	To create awareness among all kiwi growers for protection of kiwi leaves and flowers from hail stones	FLD on 50% shade net on kiwi: CTO (Horticulture)
3	Adoption of villages for transfer of technologies	Phase wise adoption of villages: KVK
4	Construction of water harvesting structures for irrigation of crops during lien period	2 to 3 farmers will be considered as per the availability of funds: KVK
5	Construction of contour bunding for conservation of soil moisture	Department of soil and water conservation, Zunheboto govt. of Nagaland
6	Preservation techniques of chow chow may be imparted to the farmers	Training for Preservation and value addition of chow chow: TO (Home Science)
7	Impart training on how to prepare compost pig manure before using it as organic fertilizer and formulation of pesticides from ashes of wood and cow dung	Training how to prepare compost pig manure before using it as organic fertilizer and formulation of pesticides from ashes of wood and cow dung: SMS (Soil Science) and CTO (Plant Protection)
8	Training on Feeding techniques for poultry and pigs and correct selection of poultry and pig breeds may be imparted	Training on Feeding techniques for poultry and pigs and correct selection of poultry and pig breeds: SMS (Animal Science)
9	To impart training on adoption of location specific technologies for different crops.	Training on adoption of location specific technologies for different crops: KVK
10	Inclusion of SHGs for survey works.	Survey work on performance of different group size of SHG on annual savings will be taken up in Block Akaihato: SMS (Agril Extension)

11	Wider consultation among Agri and allied department should be carried out while forming and promoting FPO to avoid duplication of PM schemes	To assist the district administration in formation and promotion of FPO: SMS (Agril Extension)
12	Training on Techniques for production of fingerlings	Training on Techniques for production of fingerlings: Experts form department of Zoology NU

## 2. DETAILS OF DISTRICT

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

Sl. No	Farming system/enterprises
1	Agri + horti
2	Agri + horti + Animal husbandry
3	Agri + Animal husbandry

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

Sl. No	Agro-climatic Zone	Characteristics
1	Agro Ecological Sub Region (ICAR)	Warm to hot moist (humid to per humid eco sub region), Tropical to sub-tropical (D2 A9)
2	Agro-Climatic Zone (Planning Commission)	Eastern Himalayan Region
3	Agro Climatic Zone (NARP)	Upper Brahmaputra Valley zone, Sub tropical hill zone (2,3)

### 2.3 Soil types

Sl. No	Soil type	Characteristics	Area in ha
1	Deep sandy loam to loamy soils	Akhuhuta series, Fine, mixed, thermic, typic Dystrudepts	36600
		Langposeries, Fine loamy, mixed, thermic, Dystric Eutrudepts	2040

### 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	9200	18321	20
2	WTRC Paddy	5850	16910	29
3	Maize	10115	20080	20
4	Small millet	821	931	11.3
5	Rajma/Kholar	948	1212	12.7

6	Rice beans/ Naga Dal	482	553	11.4
7	Pea	602	669	11.1
8	Soybean	5986	7586	12.6
9	Perila	225	135	0.6
10	Rapeseed mustard	2169	2169	10.2

Source: Statistical handbook of Nagaland 2021

## 2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)
		Maximum	Minimum	
<b>January</b>	4.4	13.4	4.8	87.4
February	12.8	16.6	6.4	81.2
March	41.4	19.6	9.4	82.3
April	11.8	23.1	12.9	80.5
May	94	22.6	13.6	84.4
June	270.2	24.5	15.4	86.5
July	258.6	24	15.2	86.4
August	322.2	24	15.1	88.7
September	133.6	24.8	15.3	86.9
October	102.8	23.9	14.4	85.5
November	00	21.5	11.2	75.3
December	25	16.6	5.7	80.4

Source: Soil and water conservation department. Government of Nagaland

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

Category	Population	Production	Productivity
<b>Cattle</b>			
<i>Crossbred</i>	1205		
<i>Indigenous</i>	9996		
Buffalo	9		
Mithun	23123		
<b>Sheep</b>			
Crossbred	0		
<i>Indigenous</i>	361		



Goats	31602		
<b>Pigs</b>			
<i>Crossbred</i>	27067		
<i>Indigenous</i>	12671		
Rabbits	57729		
<b>Poultry</b>			
Hens	2655157		
<i>Desi</i>			
<i>Improved</i>			
<b>Ducks</b>	165092		
Turkey and others			

Source: Statistical handbook of Nagaland 2021

## 2.7 Details of Operational area / Villages (2021)

Sl. No.	Taluk/ Eleka	Name of the block	Name of the village	Major crops & enterprises	Major problem Identified	Identified thrust area
1		Akuluto, Satakha, Atoizu, Suruhuto, VK, Zunheboto, Agunato	Shichimi, Sumi settsu, Mukhami, Izhetu, Phishumi, Litta New, Yesholutomi, Sukhai, Aotsakilimi, Shenaxa Old, Kholeboto, Tichipami, Lumithsami, Maromi, Litta Old, Akuluto, Sutemi, Suruhuto, Lumami, Ajiquami, Mapulumi, Lotisa Old, Lochomi, Kholeboto, Sasthami, Kheltomi, Akuluto, Mukhami, Satakha, Ajiquami, Izhetu	Pineapple, banana, orange, chilli, colocassia, ginger, maize, paddy, Soybean, cucumber, Large cardamom, Kiwi, Ginger, Tomato, Bambooshoot, Chilli, Soybean, Gooseberry, Citrus, Chow chow, Poultry, Piggery	1. Lack of improved Varieties and cultivation practices. 2. Lack of post harvest management 3. Poor performance by local indigenous chickens 4. Poor performance by indigenous variety of pigs, feeds 5. Irrigation facilities 6. Fall army worm 7. Damping off of chillies	1. Improved production of horticulture crops 2. Value Addition 3. Poultry production 4. Piggery production 5. High capacity energy water pump for custom hiring 6. Improvement of existing farming system with scientific intervention 7. Straw and crop residue management

### 3. TECHNICAL ACHIEVEMENTS

#### 3. A. Details of target and achievements of mandatory activities by KVK during 2021-22

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
Agronomy	2	1	4	2	1	1	15	21
Horticulture	2	2	3	3	2	2	14	14
Home Science	2	2	40	92	2	2	40	54
Plant Protection	2	2	6	6	2	2	3	3
Animal Science	2	2	15	15	2	2	15	15
Agril. Extension	1	1	30	30	1	1	50	50
<b>Total</b>	<b>11</b>	<b>10</b>	<b>98</b>	<b>148</b>	<b>10</b>	<b>10</b>	<b>137</b>	<b>157</b>

Note: Target set during last Annual Zonal Workshop

Training (including sponsored, vocational and other trainings carried under Rainwater Harvesting Unit)					Extension Activities			
Number of Courses			Number of Participants		Number of activities		Number of participants	
Clientele	Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
Agronomy								
Farmers	10	17	250	452	12	12	48	96
Rural youth	4	1	100	25				
Extn. Functionaries	1	NIL	25	NIL				
Hort								
Farmers	12	12	300	255	3	3	75	68
Rural youth	2	2	50	47				
Extn. Functionaries								
PP								
Farmers	10	7	250	168	10	10		247
Rural youth								
Extn. Functionaries								

<b>Total</b>	<b>39</b>	<b>39</b>	<b>975</b>	<b>947</b>	<b>25</b>	<b>25</b>	<b>123</b>	<b>411</b>
Seed Production (ton.)					Planting material (Nos. in lakh)			
Target		Achievement			Target		Achievement	
4		8.7 (At farmers field)						

Note: Target set during last Annual Zonal Workshop

### 3. B. Abstract of interventions undertaken during 2021

Sl. No	Thrust area	Crop/ Enterprise	Identified problems	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	Intervention of existing farming system with scientific methods	Soybean	Low yield		CFLD on Soybean	Package and practices of soybean		Field visit	600kg
2	Intervention of existing farming system with scientific methods	Maize	Low yield		FID on Maize	Package and practices of maize		Field visit	150kg
3	Intervention of existing farming system with scientific methods	Field pea	Low yield		CFLD on Field pea	Package and practices of field pea		Field visit	800kg
4	Varietal evaluation	Soybean	Low yield	Varietal evaluation of Soybean		Package and practices of soybean			
5	Fruit production	Kiwi	Low yield due to physical damage of flowers and new vegetative growth by heavy rainfall and hailstones	Partial protection for organic kiwi production		Protected cultivation			Green shade net

6	Vegetable production	King Chilli	Low productivity due to poor nutrient management in king chilli	To study the effect of organic manure on growth and yield of King Chilli		Package and practices of king chilli cultivation			Organic manure, saplings
7	Vegetable	Onion	Moisture stress during bulb formation		Use of pusa hydrogel for management of moisture stress in Onion		Onion cultivation practices		Onion seeds 5kgs
8	Value addition	Bamboo shoot	Lack of value addition in bamboo shoot		ITK on Bamboo shoot pickle	ITK on bamboo shoot pickle		Method demonstration on bamboo shoot pickle	Spices and oils
9	IPM	Brinjal	Incidence of fruit and shoot borer on brinjal	Assessment on application of Arka Neem Soap against fruit and shoot borer infestation on Brinjal				Field visit	Seeds of brinjal
10	IPM	Vegetables	Insect pest infestations on vegetables	Assessment on use of wood and cow dung ash as pesticides on vegetable (Mustard)		IPM on winter vegetables		Field visit	Seeds of vegetable seeds (Mustard, Cabbage)
11	IPM	Potato			Popularization for management of white grub in potato			Field visit	Potato tubers
12	Mushroom Cultivation	Oyster Mushroom	Minimum cultivation of Mushroom		Popularization of Oyster Mushroom	Mushroom Cultivation		Field visit	Mushroom spawn

13	Value addition	Lemon & ginger	Lack of knowledge on processing and preservation	Blended beverages (citrus and ginger)					
14	Value addition	Chow chow	Lack of post harvest technology	Preparation of tutti frutti from Chow Chow					
15	Value addition	Gooseberry	Lack of knowledge on processing and preservation		Processing and value addition of gooseberry	1. Preparation of gooseberry RTS 2. Preparation of gooseberry pickle 3. Preparation of Amla candy			
16	Drudgery reduction	Citrus	1.Damage /injury of fruits while harvesting 2.Energy and time consumption		Popularization of fruit harvester for Drudgery reduction				
17	Social Concept	Social Concept	Low crop Intensity	Development of PERT & CPM for different Crops of Villages					
18	Social Concept	Social Concept	Less opportunity of marketing Channel		A Scale to measure Attitude of Farmers towards Marketability of Farm Produce				
19	Poultry production	Rainbow Rooster(Ku roiler)	Rainbow rooster	Backyard Poultry Farming with Rainbow Rooster		Poultry production and management		Diagnostic visit, field visit, treatment. Etc.	

20	Piggery production	Hampshire cross pigs (75%)	Poor performance by indigenous variety of pigs	Performance trial on Hampshire cross pigs (75%) under; local feeding condition		Economic swine production		Diagnostic visit, field visit, treatment. Etc.	
21	Feeding Management	Computed Ration	Poor feeding practices	Performance of Hampshire crossbred pigs (50%) under local feeding condition		Piggery feeding and management	--	Diagnostic visit, field visit, treatment. Etc.	
22	Nutritional Management	Mineral mixture (Vimicon)	Poor knowledge of health supplements in feed		Demonstration of Mineral mixture Supplementation in Pig feed	Piggery feeding and management	--	Diagnostic visit, field visit, treatment. Etc.	
23	Disease management	Poultry Vaccines- Marek's disease, Ranikhet Disease, IBD.	Poor health management		Popularization of Routine Deworming of Poultry Using Broad Spectrum Anthelmintic	Common poultry diseases	--	Diagnostic visit, field visit, treatment. Etc.	
24	Disease management	Ivermectin for Poutry	Poor health management		Popularization of routine deworming of pigs Using Broad Spectrum Anthelmintics	Common poultry diseases	--	Diagnostic visit, field visit, treatment. Etc	
25	Poultry Production	Rainbow rooster	Poor performance by local indigenous chickens		Backyard Poultry Farming with Rainbow Rooster	Economics of poultry production	--	Diagnostic visit, field visit, treatment. Etc	

### 3.1 Achievements on technologies assessed and refined during 2021

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

[illegible]

<b>TOTAL</b>		<b>1</b>			<b>4</b>	<b>2</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.3. Abstract of the number of technologies assessed in respect of livestock / enterprises

Thematic areas	Cattle	Poultry	Sheep	Goat	Piggery	Rabbitery	Fisheries	TOTAL
Evaluation of Breeds		1			1			1
Nutrition Management								
Feeding management					1			1
Value Addition								
Production and Management								1
<b>TOTAL</b>		<b>1</b>			<b>2</b>			<b>3</b>

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

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

## 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)
						Parameters	T1	T2	T3			
1	Varietal evaluation of	Low yield	T1: VL63 T2: JS335	Soybea	2	* Crop duration *Yield/ha	*132 days *2000	*128 days	*134 days	Happy with the	Soybean VL63 can perform	T1: 3.6 T2: 2.8

	Soybean VL 63		T3: Farmers practice	n		*Gross return *Net return	*Rs. 160720 *Rs. 117120	*Rs.1763 *Rs.1234 10 *79810	*Rs.1419 *99330 *55730	technology	better in warmer places	T3: 2.2
2	Partial protection for organic kiwi fruit production	Low yield due to physical damage of flowers and new vegetative growth due to heavy rainfall and hailstones	T1: 50% agro shade net to be mount on kiwifruit vines at the end of Feb to May T2: Farmers practice (Without Shade net	Kiwi	1	<b>Technology:</b> *Fruit set percentage *Fruit yield <b>Farmers practice:</b> *Fruit set percentage *Fruit yield	*65%  *7t  *50%  *5.6t			Satisfied with technology provided	50% agro shade net as partial protection was helpful so it can be taken up for FLD	T1: 1.68 T2: 1.45
3	Effect of organic manure on growth and yield of king chilli	Low productivity due to poor nutrient management	T1.FYM @6t/ha T2: Pig manure@5t/ha T3: Vermicompost@4 t/ha T4: Control: Farmers Practice	King Chilli	2	Enclosed in Annexure A				Satisfied with FYM treated plants	FYM treated plants were recorded maximum in growth and yield attributes	
4	Assessment on application of Arka Neem Soap against fruit and shoot borer infestation on Brinjal	Incidence of fruit and shoot borer on brinjal	<b>T1:</b> Application of Arka Neem Soap @4gm/lit of water, applying 4 sprays at 15 days interval <b>T2:</b> Sraying of Neem oil @5ml/Liter of water. <b>T3:</b> Farmers practice (No	Brinjal	3	1. Yield/ha 2. % infestation	*107q/ha *12%	*112q/ha a *11%	*86q/ha *19%			T1: 2.89 T2: 3.02 T3: 2.64

			management practices)									
5	Assessment on use of wood and cow dung ash as pesticides on vegetable (Mustard)	Insect pest infestations on vegetables	T1: Wood ash T2: Cow dung ash T3: Neem oil	Mustard	3	1. Yield/ha 2. % infestation 3. B.C. ratio	*88q/ha *17%	*89q/ha *17%	*97q/ha *12%			T1: 3.52 T2: 3.56 T3: 3.52
6	Blended beverages (citrus and ginger)	Lack of knowledge on processing and preservation	T1: Preparation of blended beverages (Citrus and ginger)	citrus and ginger	1	1. Acceptability 2. Shelf life	*30% * upto 6 months			Farmers are ready to adopt the technology	This technology has been employed to create quality product with minimal wastage of raw materials and also help generate income for the farmers.	1.3:1
7	Preparation of tutti frutti from Chow Chow	Lack of post harvest technology	T1: Preparation Tooty fruity from chow chow vegetables	Chow chow	3	*Adoption *Acceptability	*30% *65%			Farmers are ready to adopt the technology	The technology is very efficient and produced quality results with minimal wastage of raw materials.	2:1
8	Backyard Poultry Farming with Rainbow Rooster	Poor performance by local indigenous chickens	Rainbow Rooster (dual purpose)	Poultry	10	1. Average body weight at 32 <sup>nd</sup> week of a	M= 3.1kg, F=2.9 kg	M= 2.1 k g, f= 1.7kg	M=47.61, F=70.58	Happy to accept the technology and willing for	Satisfactory	3.4

										adoption		
						2. Average daily body weight gain at 32 <sup>nd</sup> week of age	M=14.2 g/day, F =13.2 g/day	M = 8.5 g/day, F = 7 g/day	M=67.05 F=8.57			
						3. Mortality and Disease incidence rate	4 % and 0% resp.	4 and 2 resp.	--			
						4. Age at 1 <sup>st</sup> laying of egg	6 months	7 months	16.67			
						5. Average egg production per bird per month (Nos.)	7	7	0			
						6. B:C Ratio	3.4	1.7	100			
						7. Net Return/bird (Rs)	716	265	170.18			
9	Performance trial on Hampshire cross pigs under local feeding condition (75%)	Poor performance by indigeneous variety of pigs	Hampshire cross pigs	Piggy	10	1. Average body weight at 14 months of age	M=90 kg, f=87 kg	M= 90 kg, f= 82 kg	M=0, F=6.09	No response whether to adopt or not	Results were satisfactory	2
						2. Average daily body weight gain at 14 months of age	M= 214.28 g/day, F =207.14 g/day	M = 214.28 g/day, F = 195.23 g/day	M =0, F =11.91			
						3. Mortality and	0% and 6%	2% and	2 and 8			

						Disease incidence rate	resp.	8%				
						4. Litter size	10-12 nos	8-10 nos	22.22			
						5. Age at maturity	8 months	9 months	12.5			
						6. B:C Ratio	2	1.9	5.2			
						7. Net Return/unit(Rs)	9,720	9,170	6			
10	Performance of computed swine feed ration	Non availability of good quality feeds	Computed Ration	Pigger y	5	1.Average Body weight gain at 7 months of age	M= 75 kg, F=69 kg	M= 68 kg, F= 61 kg	M= 10.29, F= 13.11			Ongoing
						2.Average daily Body weight gain (ADG) at 7 months of age	M=35.71 g/day, F=32.85 g/day	M=32.38 g/day, F= 29.04 g/day	M= 10.28, F= 13.11			

\*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

#### Annexure A

Parameters	T1.FYM @6t/ha	T2: Pig manure@5t/ha	T3: Vermicompost@4t/ha	T4: Control: Farmers Practice
1. Plant height	94.48	83.82	74.16	57.91
2. No of branches	16	15	13	10
3. Fruit length (cm)	6.2	6	6	4.8
4. Fruit diameter (cm)	3.6	3.4	3.05	2.8
5.Fresh weight of Fruits (g)	6.2	5.8	5.7	3.9
6.Yield per plant /per ha (g)	465	377	342	222
7. B.C ratio	4.65	3.77	3.42	2.37

### 3.2 Achievements of Frontline Demonstrations during 2021

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

List of technologies demonstrated during previous years and popularized during 2020-21 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	Maize + Beans	HQPM1 + Kholar (Rajma)	2	21	5
2	Soybean	JS9560	4	41	10
3	Field pea	Aman	3	36	10

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

## 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	SC/ST	Others	Total			N	P	K
1	Maize	Crop production	HQPM1	Kharif	5	5	21		21	-	Rainfrd	NA	NA	NA
2	Soybean	Crop production	JS9560	Kharif	10	10	41		41	-	Rainfrd	NA	NA	NA
3	Field pea	Crop production	Aman	Rabi	10	10	36		36	-	Rainfrd	NA	NA	NA

4	Onion	NM	Application of pusa hydrogel 1-1.5kg/acre at the time of final land ploughing	Rabi 2021	0.1	0.1	8		8		Rainfed			
5	Potato	IPM	Quinalphos @ 2ml/lit of water	Rabi 2021	0.1	0.1	3		3	NIL	Irrigated			

## c. Performance of FLD on Crops during 2021

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*			GC**	GR**	NR**	BCR* *	GC	GR	NR	BCR
									Demo	Local								
1	Maize	Crop production	5	68	56	21.4	72	64	-	-	47800	123000	84200	2.7	43600	66000	22400	1.5
2	Soybean	Crop production	10	19.5	17.3	12.7	21	18	-	-	55600	136500	80900	2.4	43600	121100	77500	2.7
3	Field pea	Crop production	10	14.25	10.75	32.5	16	12.5	-	-	46000	99750	53750	2.1	34000	75250	41250	2.2
4	Onion	NM	0.1	82	60	37.5	102	63			70400	165000	94600	2.34	71000	12000	71000	1.69
5	Potato	IPM	0.1	122	86	41%	133	110	1.1% infestation=5%	1.1% infestation=17%	95000	244000	149000	2.56	85000	172000	77000	2.02

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

d. Extension and Training activities under FLD on Crops

Sl.No.	Activity	No. of activities organised	Date	Number of participants			Remarks
				Gen	SC/ST	Total	
1	Field days	1	27/03/2021		44	44	
2	Farmers Training	7	22/02/21, 27/2/21, 7/5/21, 24/8/21, 8/2/21, 25/8/21, 11/11/21		178	178	
3	Media coverage						
4	Training for extension functionaries						
5	Any other (Pl. specify) Method demonstration	4	11/11/21, 25/8/2021, 25/8/2021, 25/10/2021		74	74	
	<b>Total</b>	<b>12</b>			<b>296</b>	<b>296</b>	

e. Details of FLD on Enterprises

(i) Farm Implements

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





			weight in feed/ dusting																	
3	Piggery	Disease manag ement	Iverme ctin (Neom ec injection/ endecti n Bolus) @0.2- 0.4mg/ Kg body weight, as injection S/c and orally resp.	10	10	10	Enclos ed in Annex ure D													Complete d
4	Poultry	Breed Introdu ction	Rainbo w Rooster (dual purpose )	10	10	500	Enclos ed in Annex ure E													Ongoing

Annexure B

Major Performance parameters / indicators	Demo	Check	% change in the parameter
Average body weight at 16 months of age	M= 105 kg, f=96 kg	M= 94 kg, f= 88 kg	M= 11.70, F=9.09
Average daily body weight gain at 16 months of age (g/day)	M=218.75, F =200	M = 195. 83, F = 183.33	M =12.17, F =9.09
Mortality and Disease incidence rate	02% and 2% resp	2% and 3%	0 and 50

Liter size	12-14 nos.	10-12 nos	18.18
Age at maturity	11 months	11 months	0

## Annexure C

Major Performance parameters / indicators	Demo	Check	% change in the parameter
1 .Average body weight gain at 3 months of age	M=2.2kg, F=2 kg	M= 1.4 kg, F=0.9 kg	57.14
2. rate of incidence of infestation (%)	20	50	150
3.Mortality rate (%)	0	0	Nil

## Annexure D

Major Performance parameters / indicators	Demo	Check	% change in the parameter
1. Susceptibility rate (%)	20	60	200
2.Mortality rate (%)	0	0	0

## Annexure E

Major Performance parameters / indicators	Demo	Check	% change in the parameter
Average body weight at 16th weeks of age	M= 2.7 kg, f=2.5 kg	M= 1.8 k g, f= 1.4 kg	M=50 ,F=78.57
Average daily body weight gain at 16th weeks of age (g/day)	M=22.5, F =20.8	M = 15, F = 11.6	M =50 , F =79.31
Mortality and Disease incidence rate	2 % and 0% resp	2% and 1% resp.	--
Age at 1st laying of egg	178 days	--	--
Average egg production per bird per month (Nos.)	7-8	--	--

## (iii) Fisheries

Sl. No.	Category, e.g. Common carp, ornamental fish etc.	Thematic area	Name of Technology	No. of farmers	No. of units	No. of fish/fingerlings	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*	BCR*	GC	GR	NR	BCR	
1																				

\*\* 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.



						months Amla RTS upto 1 month Amla pickle upto 6 months B.C ratio - 1.75:1													
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

\*\* 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**	BC R**	GC	GR	NR	BCR

\*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 during 2021

**\*\* (Attached separate in Excel format)**

**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 (From – to)	Duration in days	Venue	(Farmer & Farm women/ RY/ EP and NGO Personnel)	General participants			SC/ST			Grand Total		
							M	F	T	M	F	T	M	F	T
Agril Extension	FPO formation	Formation and Promotion of FPO	08-03-2021	1	On Campus	PF				9	17	26	9	17	26
Home Science	Value addition	Training on importance of nutrition in our daily life	26-08-2021	1	On Campus	PF				6	28	34	6	28	34
Animal Science	piggery	Economic swine production	22-03-2021	1	On Campus	PF				6	17	23	6	17	23

**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 (From – to)	Duration in days	Venue	Please specify 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
Agril. Extension	FPO formation	Formation and Promotion of F.P.O	20-08-2021	1	Mukhami	Farmers & Farm women				1	11	12	1	11	12
Agril. Extension	FPO formation	Formation and Promotion of F.P.O	26-08-2021	1	Izheto	Farmers & Farm women				11	4	15	11	4	15
Agril. Extension	FPO formation	Formation and Promotion of F.P.O	27-08-2021	1	Phishumi	Farmers & Farm women				12	0	12	12	0	12
Agril. Extension	FPO formation	Formation and promotion of F.P.O	27-08-2021	1	Litta New	Farmers & Farm women				5	16	21	5	16	21

Agril. Extension	FPO formation	Formation and Promotion of FPO	11-03-2021	1	Maromi	Farmers & Farm women				13	0	13	13	0	13
Agril. Extension	FPO formation	Formation and Promotion of FPO	04-03-2021	1	Litta Old	Farmers & Farm women				9	5	14	9	5	14
Agril. Extension	FPO formation	Formation and Promotion of F.P.O.	29-09-2021	1	Ajiquami	Farmers & Farm women				12	0	12	12	0	12
Agril. Extension	FPO formation	Formation and Promotion of F.P.O.	30-09-2021	1	Sasthami	Farmers & Farm women				12	0	12	12	0	12
Agril. Extension	FPO formation	Formation and Promotion of F.P.O	16-12-2021	1	V.K. Town	Farmers & Farm women				63	16	79	63	16	79
Agril. Extension	Capacity building and group dynamics	Food and Nutrition for Farmers	26-08-2021	1	Izheto	Farmers & Farm women				11	4	15	11	4	15
Agronomy	Organic farming	Intercropping of Maize and beans under organic management	07-07-2021	1	Keltomi village	Farmers & Farm women				8	7	15	8	7	15
Agronomy	Organic farming	Converting kitchen waste to organic manure	26-10-2021	1	Tichipami	Farmers & Farm women				0	25	25	0	25	25
Agronomy	Crop production	Package and practices of Maize	05-05-2021	1	Akuluto	Farmers & Farm women				5	7	12	5	7	12
Agronomy	Crop production	Package and practices on field pea	25-10-2021	1	Tichipami	Farmers & Farm women				1	25	26	1	25	26
Agronomy	Crop production	Training on package and practices of Maize	22-02-2021	1	Sena Old	Farmers & Farm women				18	27	45	18	27	45
Agronomy	Crop production	Importance of Rabi crops with special emphasis on field pea	10-08-2021	1	Shichimi	Farmers & Farm women				4	21	25	4	21	25
Agronomy	Crop production	Package and practices of Soybean	24-08-2021	1	Litta New	Farmers & Farm women				0	25	25	0	25	25
Agronomy	Resource Conservation technology	Crop residue management and creating wealth from the farm and home waste	06-10-2021	1	Shichimi	Farmers & Farm women				10	22	32	10	22	32
Agronomy	Resource Conservation technology	Nutri-cereals and its role in human health	17-09-2021	1	Suruhuto	Farmers & Farm women				0	44	44	0	44	44
Agronomy	Integrated water	Training on soil and water	10-11-2021	1	Litta New	Farmers & Farm women				14	11	25	14	11	25

	management	conservation													
Agronomy	Soil health and fertility mangement/IN M	Weed management	29-01-2021	1	Lumithsa mi	Farmers & Farm women				0	16	16	0	16	16
Agronomy	Soil health and fertility mangement/IN M	Measures to control soil salinazation	05-12-2021	1	Lotisa Old	Farmers & Farm women				16	13	29	16	13	29
Agronomy	IFS	Integrated farming system	25-08-2021	1	Sukhai	Farmers & Farm women				2	17	19	2	17	19
Agronomy	IFS	Integrated farming system	26-08-2021	1	Yesholuto mi	Farmers & Farm women				1	20	21	1	20	21
Agronomy	IFS	Integrated farming system	11-08-2021	1	Sumi settsu	Farmers & Farm women				11	18	29	11	18	29
Agronomy	Postharvest technology	Post harvest management of maiz crop	09-08-2021	1	Shichimi	Farmers & Farm women				4	16	20	4	16	20
Agronomy	Postharvest technology	Postharvest management of Field pea	27-03-2021	1	Lumithsa mi	Farmers & Farm women				4	40	44	4	40	44
Agronomy	Soil health fertility and management	Organic Grower	3/03/2021 to 4/04/021	32	Shichimi	Rural Youth				5	20	25	5	20	25
Animal Science	Piggery	Piggery feeding and management	29-01-2021	1	Lumithsa mi	Farmers & Farm women				0	16	16	0	16	16
Animal Science	Piggery	Important swine diseases	13-12-2021	1	Mapulumu	Farmers & Farm women				20	1	21	20	1	21
Animal Science	Poultry	Economics of poultry production	04-05-2021	1	Akuluto town	Farmers & Farm women				5	7	12	5	7	12
Animal Science	Poultry	Poultry Economics	06-05-2021	1	Yesholuto mi	Farmers & Farm women				2	21	23	2	21	23
Animal Science	Poultry	Poultry production and management	03-09-2021	1	Lumami	Farmers & Farm women				6	28	34	6	28	34



Animal Science	Poultry	Common poultry diseases	09-12-2021	1	Mapulumi	Farmers & Farm women				20	1	21	20	1	21
Animal Science	Poultry	Small poultry	24/02/2021 to 06/04/2021	40 (2 20 hrs)	Sumi settsu	Rural Youth				3	22	25	3	22	25
Home Science	Value addition	Trainning on preperation of Bamboo shoot pickle	24-08-2021	1	Sukhai	Farmers & Farm women				2	17	19	2	17	19
Home Science	Value addition	Trainning on preperation of Chilli pickle	25-08-2021	1	Sukhai	Farmers & Farm women				2	17	19	2	17	19
Home Science	Value addition	Training on preparation of ginger candy	22-02-2021	1	Sena Old	Farmers & Farm women				18	27	45	18	27	45
Home Science	Value addition	Training on preparation of tomato garlic pickle	22-02-2021	1	Sena Old	Farmers & Farm women				18	27	45	18	27	45
Home Science	Value addition	Training On Preparation Of Sweet Amla Candy	10-11-2021	1	Litta New	Farmers & Farm women				14	11	25	14	11	25
Home Science	Value addition	Preparation of Cho chow tutti frutti candy	30-11-2021	1	Sutemi	Farmers & Farm women				12	10	22	12	10	22
Home Science	Value addition	Preparation of Blended beverages ( citrus and ginger)	30-11-2021	1	Sutemi	Farmers & Farm women				12	10	22	12	10	22
Home Science	Value addition	Preparation of gooseberry pickle and gooseberry RTS	25-10-2021	1	Tichipami	Farmers & Farm women				1	25	26	1	25	26
Home Scince	Value addition	Preparation of tutti frutti candy	03-12-2021	1	Lochomi	Farmers & Farm women				6	20	26	6	20	26
Horticulture	vegetable crop	Training on onion cultivation practices	03-12-2021	1	Shichimi	Farmers & Farm women				0	10	10	0	10	10
Horticulture	vegetable crop	Production technology of french beans	24-08-2021	1	Litta New	Farmers & Farm women				0	25	25	0	25	25
Horticulture	vegetable crop	Production technology of Onion	25-08-2021	1	Sukhai	Farmers & Farm women				4	34	38	4	34	38
Horticulture	vegetable crop	Use of Pusa hydrogel on onion and its benefits	26-08-2021	1	Yesholuto mi	Farmers & Farm women				1	20	21	1	20	21

Horticulture	vegetable crop	Production techonology of Broccoli	26/08/2021	1	Aotsakili mi	Farmers & Farm women				6	9	15	6	9	15
Horticulture	vegetable crop	Training on summer vegetable cultivation practices	22-02-2021	1	Sena Old	Farmers & Farm women				18	27	45	18	27	45
Horticulture	vegetable crop	Training on organic cultivation practice of okra	22-02-2021	1	Kholeboto	Farmers & Farm women				9	17	26	9	17	26
Horticulture	Fruit	Training on partial protection for organic kiwi fruit production	19-04-2021	1	Aotsakili mi	Farmers & Farm women				3	4	7	3	4	7
Horticulture	Fruit	Training on protected cultivation of kiwi fruit	19-04-2021	1	Tichipami	Farmers & Farm women				3	12	15	3	12	15
Horticulture	Fruit	improved cultivation practices for litchi	02-11-2021	1	Lumithsa mi	Farmers & Farm women				6	17	23	6	17	23
Horticulture	Fruit	Improved package of practices for mango	09-11-2021	1	Shichimi	Farmers & Farm women				17	7	24	17	7	24
Horticulture	Preservation	Training on bambooshoot pickle	11-11-2021	1	Shichimi	Farmers & Farm women				0	6	6	0	6	6
Horticulture	Preservation	Training on value addition of orange fruit	04-12-2012	1	Sutemi	Rural Youth				14	11	25	14	11	25
Plant protection	IPM	IPM on winter vegetables	27-08-2021	1	Phishumi	Farmers & Farm women				12	0	12	12	0	12
Plant Protection	IPM	Training on IPM	27-08-2021	1	Litta new	Farmers & Farm women				10	34	44	10	34	44
Plant Protection	IPM	IPM on kiwi fruit and cardamom	01-03-2021	1	Aotsakili mi	Farmers & Farm women				10	8	18	10	8	18
Plant Protection	IPM	IPM on Fall Army Worm	07-05-2021	1	Litta Old	Farmers & Farm women				14	4	18	14	4	18
Plant protection	IPM	Training on IPM on winter vegetables	24-09-2021	1	Litta new	Farmers & Farm women				13	12	25	13	12	25
Plant protection	IPM	Training on IPM on jhum paddy	24-09-2021	1	Litta new	Farmers & Farm women				13	12	25	13	12	25
Plant Protection	Integrated water management	Training on importance of water in Agriculture	22-03-2021	1	Litta New	Farmers & Farm women				8	18	26	8	18	26

## (D) Vocational training programmes for Rural Youth

Crop / Enterprise	Date (From – To)	Durati on (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							
					M	F	T	M	F	T	M	F	T	Type of enterp rise ventur ed into	Numb er of units	Number of persons employe d	Avg. Annual income in Rs. generated through the enterprise	
Vegetables	01/12/2021	03/12/0221	Vegetable productio n	Organic cultivation of winter vegetables				12	10	22	12	10	22					

\*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		
OFF	RY	03/03/2021 to 04/04/2021	32 (200 hours)	Agronomy	Soil health fertility and management	Organic Grower				5	20	25				ASCI	
OFF	RY	24/02/2021 to 06/04/2021	40 (220 hrs)	Animal Science	Poultry	Small poultry				3	22	25				ASCI	

3.4.Extension Activities (including activities of FLD programmes) (Please mention specific Extension Activity conducted by the KVK such as Field Day, Kisan Mela, Exhibition, Diagnostic Visit, etc) during 2021

Sl. No.	Extension Activity	Topic	Date and duration	No. of activities	Participants											
					General (1)			SC/ST (2)			Extension Officials (3)			Grand Total (1+2)		
					M	F	T	M	F	T	M	F	T	M	F	T
1.	Diagnostic visits			5				7	1	8				7	1	8
2.	Celebration of important days			6				164	155	319				164	155	319
3.	Field Day			2				8	80	88				8	80	88
4.	Mass Awareness Campaign			1				60	46	106				60	46	106
5.	Method Demonstrations			7				47	91	138				47	91	138
6.	Scientists visit to farmers field			26				93	65	158				93	65	158

7.	Soil testing			45				182	161	343				182	161	343
8.	Farmers scientist interaction			2				13	11	24				13	11	24
9.	Animal Treatment			9				8	1	9				8	1	9
10.	JSA			6				69	56	125				69	56	125
11.	Swachhta Programme			6				91	133	224				91	133	224
12.	Distribution and Supply			28				335	471	806				335	471	806
1.	Research papers			4												
2.	TV Talks			3												
3.	Electronic media			1												
4.	Lecture delivered as resource person			1												
5.	Newspaper coverage			8												
6.	Technical bulletin			1												
7.	Folders			3												

### 3.5 Production and supply of Technological products during 2021

#### A. SEED MATERIALS

Major group/class	Crop wise	Variety	Quantity (qt)	Value (Rs.)	Number of recipient/ beneficiaries				
					General		SC/ST		Grand Total
					M	F	M	F	
Cereals	Maize	HQPM1	54 q	81000			40	40	80
Oilseeds	Soybean	JS9560	19 q	133000			35	35	70

Pulses	Field pea	Aman	14 q	98000			27	27	54
Vegetables	Okra	Kashi Pragiti, K Chaman	0.415				35	36	71
	Bottle gourd	Kashi Bahar	0.0357				30	20	50
	Delicious beans	Kashi Haritima	0.0235				35	36	71
	Ash gourd	Kashi Dhawal	0.0041				10	15	25
	Carrot	Kashi Arun	0.004				10	15	25
	Pumpkin	Kashi Harit	0.0035				8	12	20
	Cow pea	Kashi Kanchan	0.1625				10	15	25
	Brinjal	Kashi Uttam	0.015				8	12	20
	Onion	Bima super	0.10				65	80	145
	Cabbage	BC -76	51pkt				20	27	47
	Cauliflower	Fist Aga hani	35pkt				20	27	47
	Broccoli	Cream diamond 909	13pkt				20	27	47
	Chinese cabbage	Super No. 101	50pkt				20	27	47
	Coriander	Winner, Bliss	0.05				20	27	47
	French beans	Super Falconi	0.40				60	77	137
	IIVR kitchen Garden packets		50pkts				40	50	90
	Colocasia	Local	0.2 q				1		1
	Turmeric	Megha 1	4.5 q				1		1
	Ginger	Nadia	0.2 q				1		1

## A1. SUMMARY of Production and supply of Seed Materials during 2021

Sl. No.	Major group/class	Quantity (q) produced	Quantity (q) supplied	Value (Rs.) of quantity produced	Number of recipient/ beneficiaries				
					General		SC/ST		Grand Total
1	Colocasia	0.2		0.000800			1		1
2	Turmeric	4.5		0.009000			1		1
3	Ginger	0.2		0.000800			1		1

TOTAL	4.9		0.0106			3		3
-------	-----	--	--------	--	--	---	--	---

B. Production and supply of Planting Materials (Nos. in No.) during 2021

Major group/class	Crop	Variety	Quantity (In No.) produced	Quantity (In No.) supplied	Value (Rs.) of quantity produced	Number of recipient/ beneficiaries				
						General		SC/ST		Grand Total
						M	F	M	F	
Fruits	Litchi	Muzzafurpur	110	110				20	25	45
	Mango	Amrapalli	70	70				19	26	45
	Lime	Kagzi	205	205				18	27	45
	Guava	CISH lalit	65	65				16	24	40
	Apple	Royal delicious	400	400				20	43	63
	Passion fruit	Yellow	30	30				0	2	2

C. Production of Bio-Products during 2021

Major group/class	Product Name	Species	produced Quantity		Value (Rs.)	Number of Recipient /beneficiaries				
			No	(Kg)		General		SC/ST		Grand Total
						M	F	M	F	
BIOPRODUCTS										
Vermicompost	Vermicompost	Eisenia fetida		438	13070					
BIOFERTILIZERS										
BIO PESTICIDES										

D. Production of livestock during 2021

Sl. No.	Type/ category of livestock	Breed	Quantity		Value (Rs.)	Number of Recipient beneficiaries
			(Nos)	Kgs		

						General		SC/ST		Total
						M	F	M	F	
1	Cattle	HF cross	1							

### 3.6. Literature Developed/Published (with full title, author & reference) during 2021

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

(B) Articles/ Literature developed/published

Item	Title /and Name of Journal	Authors name	Number of copies	
			Produced/ published	Supplied/ distributed
Research paper	A study on the physicochemical properties of soils of jhum and terrace fields under rice cultivation in Kiphire district of Nagaland Journal: International Journal of Ecology and Environmental Sciences	Kihika G, Yabi Gadi, Sentimenla, AK Singh, SK Sharma		
	Study on the soil acidity and lime requirement in jhum fields under rice cultivation Journal: International Journal of Ecology and Environmental Sciences	Kihika G, Sentimenla, Yabi Gadi		
	Paper Contribution on “Effect of IPM Practices for Fall Armyworm Management in Zunheboto district, Nagaland.” Integrated Pest Management: Opportunities and Challenges. PP. 40-44	Rakesh Kumar Chaurasia, Wapangtoshi Longkumer, Mukesh Sehgal, Meenakshi Malik and Subhash Chander		
	Pictorial guide book on “Photo laga modod pora	Mohammad idris, Rakesh K. Chaurasia, Mukesh Sehgal,		



	chuha ke kaineke sabo (Local Language)”	Meenakshi Malik, Subhash Chander, Wapangtoshi Longkumer		
Technical Bulletin	IPM on jhum paddy under Zunheboto district	Wapangtoshi Longkumer and Rakesh Kumar Chaurasia		
Extension folder	Rodents and its Management	Wapangtoshi Longkumer, Rakesh Kumar Chaurasia, Mukesh Sehgal, Meenakshi Malik and Subhash Chander		
	IPM on rice	Wapangtoshi Longkumer, Rakesh Kumar Chaurasia, Mukesh Sehgal, Meenakshi Malik and Subhash Chander		
	IPM on citrus	Wapangtoshi Longkumer, Rakesh Kumar Chaurasia, Mukesh Sehgal, Meenakshi Malik and Subhash Chander		

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
1.		Agri folk Song	Uploaded in Youtube ( <a href="https://youtu.be/qpeHanZLoSw">https://youtu.be/qpeHanZLoSw</a> )

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

*(a) Success Story on Doubling Farmers income at Lumami village*



- i. **Profile of the farmer:** Mr. Tokhuvi Zhimomi,  
P.O. : Lumami, Dist. Zunheboto,  
India PIN -798627
  - ii. **Category:** Doubling farmers income through plantation crop and adoption of livestock
  - iii. **Background:** Mr. Tokhuvi Zhimomi of Lumami village possess 21 acres of land where he uses to cultivate paddy, maize, chilli, colocasia in a small patch of land i.e. only 1.9 acre of land was utilized by hi for cultivation purpose during 2016-17. He was rearing a small poultry and piggery unit. However, with the technical support of KVK he started cultivating 2.5 ACRES OF LAND DURING 2020-21.
  - iv. **Training and motivational support:** During the period KVK provided training and demonstration on cultivation of soybean, maze, banana, pineapple and rearing of pigs and poultry after demonstration he was able to increase his net income from Rs. 55650.00/ year to Rs. 239225.00. The support provided by KVK helped him to increase his income by nearly 330%.
  - v. **Impact in the area:** He has been able to motivate like minded farmers who have been practicing traditional method of farming. He use to visit their farms and guide them to improve the cultivation methods to be practiced.
  - vi. **Awards & recognitions:** Nil
  - vii. **Contributing/enabling Factors:** KVK, Zunheboto has been playing a significant role in technology transfer with respect to doubling of farmers income through various technological intervention. The KVK replaced the paddy cultivation of the farmer with soybean as it was found that soybean was more profitable than paddy. Likewise, their farmer was motivated to go for banana and pineapple cultivation which fetches premium price in the local market. Local breeds of pig and poultry birds were replaced with dual purpose breed like Vanaraja and Hampshire cross breed to improve productivity of these livestock's.
- 3.8 Give details of innovative methodology/technology developed and used for Transfer of Technology during the year
  - 3.9 Give details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photographs)

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

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

3.11 Field activities

i. Number of villages adopted :

ii. No. of farm families selected :

iii. No. of survey/PRA conducted :

3.12. Activities of Soil and Water Testing

Status of establishment of Lab : NIL

1. Year of establishment :

2. List of equipments purchased with amount :

Sl. No	Name of the Equipment			Qty.	Cost
	S&WT lab	Mini lab/ Mridaparikshak	Manufacturer		
1					
Total					

3. Details of samples analyzed (2021) :

Details	No. of Samples analysed	No. of Farmers	No. of Villages	Amount ( In Rupees) realized
Soil Samples	45	343	5	
Water Samples				
Plant Samples				
Petiole Samples				

Total	45	343	5	
-------	----	-----	---	--

1. Details of Soil Health Cards (SHCs) (2021)

- No. of SHCs prepared: 343
- No. of farmers to whom SHCs were distributed: 343
- Name of the Major and Minor nutrients analysed: NPK and Zinc and Boron
- No. of villages covered: 5

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	6	3139	3	1281					13	6726	2	1276	24	12422
Voice only														
Voice and Text both														
Total	6	3139	3	1281					13	6726	2	1276	24	12422

3.14 Contingency planning for 2021

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
	Introduction of new variety or crop			77	77
	Introduction of Resource Conservation Technologies				
Drought	Distribution of seeds and planting materials	100		200	200
Insects infestation outbreak	Distribution of pesticides & IPM kits	100		200	200

## a. 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
Poultry	500	1	2	500		10	10
Piggery	30	1	2	30		15	15

## 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)

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

## 4.2. Cases of large-scale adoption

i) Soybean: Before KVK intervention into farming system of Zunheboto district, farmers used to mixed cropped soybean with paddy, maize and other vegetables. However, with the intervention of KVK into the farming system through trainings, method demonstration, OFT, FLD's of high yielding varieties of soybean, today many farmers have adopted mono cropping of soybean in large scale.

ii) Maize: Maize is also considered as one of the most important crop in the district of Zunheboto where maize is grown in kitchen garden, in bunds of jhum paddy field but not in large scale. But today through OFT and FLDs of high yielding varieties of maize by KVK, Zunheboto, farmers have started cultivating maize on large scale basis and is increasing year after year.

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

## 5.0. LINKAGES ESTABLISHED

## 5.1 Functional linkage with different organizations established during 2021

Name of organization	Nature of linkage
1.Nagaland University	Scientific & Administrative
2. ATMA, DAO, DVO, DHO, DRDA, DFO, DSCO, DPO	Scientific, participation in meeting, Administrative and financial
3. NABARD	Scientific, participation in meeting, Administrative and financial
4. ASCI	Skill Training, financial
5. NCIPM	Scientific and joint implementation
6. NCIPM	Scientific, financial

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

5.2 List special programmes undertaken by the KVK, which have been financed by State Govt./Other Agencies during 2021

Name of the scheme/ special programme	Activity	Date/ Month of initiation	Funding agency	Amount (Rs.)
KSHAMTA	Supply of poultry birds	October 21	ICAR	25000
NARI	Nutri garden		ICAR	25000
National Institute of Pest management (NCIPM)	Training, supply of critical inputs, demonstrations and Farm adoption	March 2021	NCIPM	200000
IMD – DAMU			ICAR	
Swachhta Action Plan	Constructed vermicompost unit	12/12/2021	ICAR	41880
Skill Development Training Programme of 200 hours on “Organic grower” under ASCI	Skill training	03/03/2021 to 04/04/2021	ASCI	220000
Skill Development Training Programme of 220 hours on “Small Poultry Farmer” under ASCI	Skill training	24/02/2021 to 06/04/2021	ASCI	264000
Cluster Frontline Demonstrations on Oilseeds	Demonstration, Seed distribution, Field Day	June 2021	ICAR	45000
Cluster Frontline Demonstrations on Pulses	Demonstration, Seed distribution	27/03/2021	ICAR	38850

Capacity building of Farmers through Training Programmes on Profitable Dairying Farming and Livestock Management			ICAR	200000
TSP Network project	Data collection		ICAR	10000

### 5.3 Details of linkage with ATMA

a) Is ATMA implemented in your district : YES

Sl. No.	Programme	Nature of linkage	Remarks
1	Training	Resource person	

### 5.4 Give details of programmes implemented under National Horticultural Mission

S. No.	Programme	Nature of linkage	Constraints if any

### 5.5 Nature of linkage with National Fisheries Development Board

S. No.	Programme	Nature of linkage	Remarks

## 6. PERFORMANCE OF INFRASTRUCTURE IN KVK DURING 2021

### 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	IFS	2018	1ha	Refer Annexure F					
2	Nutritional garden	2020	0.005	Vegetables	Fresh fruits	90kg	3000	4000	

## Annexure F

Var/Spec/ Breed	Type of produce	Qty	Cost of inputs	Gross income
HF cow	Fresh milk	453.5l	37720	27210
	Manure	200qt		
	Calf	1		
Broiler chicken	Meat	760kg	67308	121000
Banana Var. Grannd naine	Fruits	1000 nos	2000	2360
Mango Var. Amarpali	Fruits	30kg	2000	2500

## 6.2 Performance of instructional farm (Crops) including seed production during 2021

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty. (Nos)	Cost of inputs	Gross income	
King Chilli	23/03/2021	15/06/2021	0.0001	Local	Fruits	300	6000	9000	
Lime	18/05/2017	28/06/2021	0.0001	Kagzi	Fruits	700	2000	3000	
Turmeric	23/03/2021	24/01/2022	0.0001	Megha turmeric 1	Powder	21.7kg	4000	6510	

## 6.3 Performance of production Units (bio-agents / bio pesticides/ bio fertilizers etc.) during 2021

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1	Vermicompost	438kg	5000	13100	

## 6.4 Performance of instructional farm (livestock and fisheries production) during 2021

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	
1	Cattle	HF cross	Milk	453.5l	37720	27210	
			Manure	200qt			
			Calf	1			



## 6.5 Rainwater Harvesting

Training programmes conducted by using Rainwater Harvesting Unit/ structure during 2021

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

## 6.6 Utilization of hostel facilities (Month-Wise) during 2021

Accommodation available (No. of beds):

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)
Total					

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 KVK	SBI	Lumami	32196734473
Revolving fund	SBI	Lumami	31674931931

### 7.2 Utilization of funds under CFLD on Oilseeds and Pulses (Rs. In Lakhs) if applicable during 2021

Item	Released by ICAR/ATARI (in lakh)		Expenditure (in lakh)		Unspent balance as on 31 <sup>st</sup> March, 2018
	Amount	Amount	Amount	Amount	

Oilseeds	0.45		1.6		(-215242) Taken over from last two financial years
Pulses	0.38850		1.2		(-113750) Taken over from last two financial years
<b>TOTAL</b>	<b>0.8385</b>		<b>2.8</b>		

### 7.3 Utilization of KVK funds during the year 2021

S. No.	Particulars	Sanctioned (in Lakh)	Released (in Lakh)	Expenditure (in Lakh)
<b>A. Recurring Contingencies</b>				
1	Pay & Allowances	216.06	216.06	215.04
2	Traveling allowances	2.25	2.25	1.28
3	Contingencies	18.25	18.25	18.65
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			
	Working Capital			
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			
K	KSHAMTA	0.25	0.25	0.25
L	NARI	0.25	0.25	0.25
M	HRD	0.50	0.50	0.50
<b>TOTAL (A)</b>		<b>237.56</b>	<b>237.56</b>	<b>235.97</b>
<b>B. Non-Recurring Contingencies</b>				

1	Works	4.0	4.0	4.0
2	Equipments including SWTL & Furniture	5.5	5.5	5.5
3	Vehicle (Four wheeler, please specify)	NIL	NIL	NIL
4	Library (Purchase of assets like books & journals)	NIL	NIL	NIL
TOTAL (B)		9.5	9.5	9.5
C. REVOLVING FUND				
GRAND TOTAL (A+B+C)		247.06	247.06	245.47

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)
April 2019 to March 2020	2.90	0.55	0.10	3.35
April 2020 to March 2021	3.35	0.23	00	3.85
2021-2022	3.85	2.27	0.83	5.29

Note: No KVK must leave this table blank

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)

(a) Administrative:

(b) Financial

i) Funds for farm development may be released separately.

ii) Provision of funds for construction of demonstration unit at KVK.

iii) Provision of funds for construction of remaining 4 numbers of staff quarters.

(c) Technical

(Signature)  
Principal Scientist cum Head