ANNUAL PROGRESS REPORT

(April 2022 – March 2023)

KRISHI VIGYAN KENDRA, LEH

DIRECTORATE OF EXTENSION
S.K.UNIVERSITY OF AGRICULTURAL SCIENCES AND TECHNOLOGY (K)
SHALIMAR CAMPUS, SRINAGAR -191121

ANNUAL REPORT 2022-23

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	
KrishiVigyanKendra, SKUAST(K), Post Box: 146 LehLadakh – 194101 Tele/Fax: 01982-267389	01982-252308	01982267389	kvkleh@gmail.com, kvkleh@yahoo.co.in

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

Address	Telephone		E mail
	Office	FAX	
Sher –e- KashmirUniversity of Agricultural Sciences and Technology (SKUAST-K) , Shalimar Campus Srinagar 191121	0194-2462160 2462159	0194-2462160	vcskuastk@gmail.com

1.3. Name of the Programme Coordinator with phone, mobile No & e-mail

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Feroz Din Sheikh	Pologround, Near SP Office LehLadakh	6005564775	aizar22@gmail.com

1.4. Year of sanction:**No. 5-5/93-KVK-AF II Dated: 11-10-1994**

1.5. Staff Position (as on 31st March2023)

Sl. No.	Sanctioned post	Name of the incumbent	Age	Discipline with highest degree obt.	Pay Band & Grade Pay (Rs.)	Date of joining in KVK	Permanent /Temporary	Contact No	Category (SC/ST/ OBC/ Others)
1	Programme Coordinator	Dr. Feroz Din Sheikh		Animal Science	144200-218200 RL-14	15/10/2020	Permanent	Mob: 600556477 Email: aizar22@gmail.com	ST
2	Subject Matter Specialist	Dr. SabiyaAsmat		Home Science	144200-218200 RL-13A	13/8/2020	Permanent	Mob:9419177614 Email: asmatsabiya@gmail.com	ST
3	Subject Matter Specialist	Dr. KunzangLamo	39	Veg. Science	57700-182400 RL-10	2/8/2017	Permanent	Mob: 7051222181 Email: kunzanglamo@gmail.com	ST
4	ProgrammeAs	RigzinSaf	44		35400-112400	3/1/2013	Permanent	Mob:9797461244	ST

	sistant	al			L-6			Email: rigsafa@gmail.com	
5	Computer Programmer	Sonam Angchuk	49		57700-182400 RL-10	27/10/2002	Permanent	Mob: 9419219676 Email: angchuks@gmail.com	ST
6	Farm Manager	Jigmet Laskit	37		35400-112400 L-6	3/1/2013	Permanent	Mob:9906124407 Email:jamielhas@gmail.com	ST
9	Driver	Mr. TashiGyalpo	55		35400-112400 L-6	01/03/1997	Permanent	Mob: 9906677815	ST
10	Supporting staff	Mr. TseringDorjay	48		14800-47100 L-1	01/10/1998	Permanent	Mob:9622032141	ST
11	Supporting staff	Mrs. TseringChondol	36		35400-112400 L-6	19/11/2013	Permanent	Mob: 9622983343	ST

1.6. Total land with KVK (in ha) :

S. No.	Item	Area (ha)
1	Under Buildings and roads	1.00
2.	Demo Units	0.51
3.	Fodder Production	4.10
4.	Agroforestry	11.70
5.	Cereal crops	1.30
6.	Uncultivated/Undulated land	1.39
	Total (ha)	**20.00**

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	8/2005	1036	20,90,000			Complete
2.	Farmers Hostel							Not constructed
3.	Staff Quarters							-do-
4.	Demonstration Units							-do-
5	Fencing							-do-
6	Rain Water harvesting system							-do-
7	Threshing floor							-do-
8	Farm godown							-do-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Ford 3600 (Tractor +	1995-96	2,47000.00	61231hrs	Need replacement

Accessories)				
Tata Sumo JK-10 -2132	2002	439600.00	213342kms	Need replacement
Motor Cycle (Hero Honda Passion Plus)	2011	48410.00	19996kms	In good condition

C) Equipments& AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Type writer	16.04.1996	9,861	Working
Xerox machine	07.09.1996	15,924	-do-
Computer PC (Multimedia)	07.03.2003	51,370	-do-
Printer LaserJet	15.03.2003	21882	-do-
UPS	24.3.2003	9899	-do-
Fax	6-10-2005	14,062	-do-
Photocopier	16-03-2006	75,906	-do-
Digital camera	24-03-2006	17,000	-do-
Sony Memory Stic 256 MB	24-03-2006	2,200	-do-
Pen Drive 512 MB Transcend	24-03-2006	391	-do-
Pen Drive 2GB	10/1/2007	2000	
Pen Drive 8GB	25/3/2014	500	
UPS 1 KVA Microtek	26/3/2007	4850	
Pen Drive 4GB (2 Nos)	25/3/2008, 28/3/2012	1500, 750	
DVD Writer Samsung	19/8/2009	1700	-do-
Laser Printer	13-03-2006	30600	-do-
Scanner	13-03-2006	2600	-do-
Inkjet printer	13-03-2006	14300	-do-
Kjeldal digestion cum distillation unit (2)	16-03-2006	18,562.05	-do-
Ph. Meter (1)	16-03-2006	13,387.50	-do-
Shakers (2)	16-03-2006	13,680.00	-do-
Oven Hot air (1)	16-03-2006	19,800.00	-do-
Refrigerator (1)	16-03-2006	15,250.00	-do-
Digital Electronic balance (1)	16-03-2006	87,750.00	-do-
Digital Electronic balance (1)	16-03-2006	12,336.75	-do-
Digital Conductivity meter(1)	16-03-2006	8,437.00	-do-
Plant grinder (1)	16-03-2006	25,851.35	-do-
UV-VIS Spectophotmeter (1)	16-03-2006	99,000.00	-do-
Hot plate (1)	16-03-2006	21,375.00	-do-
Quartz double distillation apparatus (1)	16-03-2006	1,06,762.05	-do-
Flame photometer (1)	16-03-2006	39,065.62	-do-
Toshiba TDPT-100, Multimedia Projector	2006-07	94639.00	-do-
5 Frontech Head Phone	2009	@Rs.88.40	Working
5 Frontech Web Cam	2009	@Rs460	-do-
5 Frontech Speakers	2009	@ Rs239	-do-
Online UPS 3 KVA	2009		-do-
HP lazerjet Printer	2009		

HP G3110 Scanner	2009		-do-
Monitor 17’	2009		-do-
Desktop Del computers (5)	2009		-do-
256 Kbps VSAT	2010		-do-
1 Server	2010		Not installed
5 Desktop Del PCs	2010		Working
5 650 VA lienUPS	2010		-do-
1 24 Port Switch			
Stabilizer 4KVA	11/3/2011	6500	
NetgearWirless N 150 Router	11/3/2011	2500	-do-
18 Port Switch D Link	14/3/2011	3400	-do-
HP Laptop Power Adapter	16/3/2011	1000	
DG Set 7KVA Single Phase	25/3/2011	72500	-do-
Son 4 GB Pen Drive	22/6/2011	1150	-do-
VGA Cable 30mtr	29/1/2012	1400	
HP Officejet Pro 8100 Printer	29/3/2014	10200	-do-
External Hardisk 500GB	27/3/2012	4990	-do-
Canon Digital Camera	27/3/2013	9500	-do-
NetgearWifi range extender	25/3/2013	4000	-do-
Network cable tester	25/3/2013	250	-do-
Network tools	25/3/2013	150	-do-
Wireless Mouse logiteck	25/3/2013	950	
Canon Inkjet Printer with ink tank set	20/3/2014	6800	Not working
Inverter 1600VA SEB2 Microtek	27/3/2015	9000	Working
Knal Sack Sprayer	29/6/2015	1790	-do-
Mridaparikshak Soil Testing Mini Lab	10/3/2016	75600	-do-
Photostat Machine Make Sharp AR6020 (2Nos)	5/3/2016	45700	-do-
LCD Projector	2016		-do-
Video Camera	2016		-do-
Canon Camera Power Shot	2016	25000	-do-
Pillar Speaker System with 1 No FM Mic Make GACT Model GS9610	2016	25000	-do-
Thermo meter Digital	2016	4500	-do-
Apricot Solar Drier 142kf LEHO Model	24/3/2017	20100	-do-
Solar Apricot Drier	24/3/2017	32500	-do-
HP Labtops (3 Nos)	25/3/2017	52250	-do-
Milk AalyzerLactoscan-SA 1 No	30/3/2017	165452	-do-
Laminar Airflow Horizontal Labotack BDI-129 1 No	30/3/2017	97325	-do-
BOD Incubator Labotack BDI-55 2 Nos	30/3/2017	78000each	-do-
Double Door Refigerator Samsung 360ltrs	30/3/2017	41449	-do-

Deep Freezer Blue Star 300 ltrs with Stabilizer 1KVA 2Nos	30/3/2017	45513	-do-
Data logger Model E24SV-2 5 Nos	30/3/2017	11420 each	-do-
Water bath Labotech BDI-60 1 No	30/3/2017	29000	-do-
Hot plate Labotech BDI-75	30/3/2017	6100	-do-
Hot Air Oven with Vacumm Pump Labotech BDI-53	30/3/2017	68700	-do-
Heat Pillar Volmax (5Nos)	21/11/2017	3500 each	-do-
UPS Online (100VA) Luminous 5 No		3772 each	-do-
Cabinet Speaker Ahuja (SRX-250DX) 2 Nos	30/3/2018	7487 each	-do-
Amplifier Ahuja TZA-4000BPM 1No		216039	-do-
Combos Ahuja WA-625 DPR 1No	30/3/2018	16533	-do-
Micro Phone Ahuja AWM-900UH 1 No	30/3/2018	9881	-do-
AC DC Adapter AWM-900UH 1 No		550	-do-
Microphone Ahuja PGM-625 2 Nos		1779 each	-do-
HP Printer-LJ1108 2 Nos	30/3/2018	9990 eacj	-do-
LPG Heater with Regulator 3 Nos	30/3/2018	10830 each	-do-
HP Desktop All in One PC 1 No	3/3/2018	32200	-do-
Soil Hydrometer Zeal Made	31/3/2018	7700	-do-
CCTV Camera 1 set of 4 Camera Hardisk 2TB	31/3/2018	28000	-do-
Pulper-100 B-Sen & Berry & Co 1 No	31/3/2018	25600	-do-
Crown Corking Machine B-Sen & Berry & Co 1 No		9600	-do-
Printer HP Pro MFP-M126 WM 1 No		16000	-do-
Heat Pillar Gopi	1/12/2018	4000 each	-do-
HP Laserjet All in One Model 1138 2 No	17/5/2019	14500 each	-do-
Land leverllerAgroking	25/3/2019	25000	-do-
MB Plough To Fro Agroking	25/3/2019	42857	-do-
Disk Plough TO Fro Agroking		41071	-do-
Cultivator 9 Tine Agroking	25/3/	22321	-do-
Hedge Shear Falcon Modelr FNS999 (P) 3 Nos	28/3/2019	675 each	-do-
Sickle SPS (P) 3030 Falcon 10 Nos		165 each	-do-
Garden Hoe Falcon FGWM-200 10 Nos		370each	-do-
Spring Raji Falcon FSBR-48 3 Nos		490 each	-do-
Rake Falcon FRWN-12 3 Nos		365 each	-do-
Hand Tool Falcon SPS-200 10 Nos		110 each	-do-
Falcon FW-900 11 Nos		90 each	-do-

Falcon FWT-2002 10 Nos		125 each	-do-
Falcon FWT-2003 10 Nos		95 each	-do-
Falcon FCN-305 9 Nos		95 each	-do-
Falcon Hedge Trimmer FEGS-103 1 No		6590	-do-
Showerl Falcon FRS-3000 5 Nos		1045 each	-do-
Spade Falcon SPRL-25 6 Nos		305 each	-do-
Spade SPKW-50 6 Nos		495 each	-do-
Budding Graft FPGT-2004 1 No	30/3/2019	1100	-do-
SLOT Graft FPGT-2002 1 No	30/3/2019	925	-do-

1.8. A). Details SAC meeting* conducted in the year2022-23

Sl. No.	Date	Name and Designation of Participants		No. of absentees	Salient Recommendations	Action taken
1	6/09/2022	Prof. (Dr.) N. A Ganai,	Hon'ble Vice Chancellor (HVC) SKUAST-K.		Annexure 1 enclosed	
2		Sh. Ravinder Kumar	IAS Secretary to HLG & Secretary (PDD/Animal & Sheep/Coop/Youth & Sports)			
		Sh. Stanzin Chosphel,	Executive Councillor (Agriculture.) LAHDC-Leh			
2		Sh. Tashi Namgyal Yakzee	Executive Councillor (Animal) LAHDC Leh			
		Prof. (Dr.) Dil Muhammad Makhdoomi	Director Extension, SKUAST-K			
3		Dr. D. Namgyal	Associate Director (R&E) HMAARI			

2. DETAILS OF DISTRICT (2022-23)

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

S. No	Farming system/enterprise
1	Irrigated (borewell) : NA
2	Irrigated (canal): Agri – Horti. System, Agri – Pastoral System
3	Tank Irrigated: NA
4	Rainfed: NA
5	Enterprises: NA

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

S. No	Agro-climatic Zone	Characteristics
1	Cold Arid Zone	1. Heavy snowfall
		2. Low/Negligible rainfall
		3. Dry, Harsh winter
		4. Short growing season (3 -7 month)
		5. Harmful UV radiations
		6. Sharp fluctuation in temperature (-37^{o}C to +38^{0}C)
		7. High altitudes (8500-15000ft ASL-Inhabited villages)
		Characteristics
		a) 11,800-15000 ft
		b) Agri. - pastoral area
		a) 10,000 -11,800 ft
		b) Single cropped area
		a) <10,000 ft
		b) Double cropped area

2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
1	Sandy loam (majority of area)	1. Coarse texture, permeable & desert in nature	
		2. Saline reaction pH ranges from & 7.5 to 9.5	
		3. Nutrient & water holding capacity low	
		4. Soil surface is marked by temperature fluctuation of high degree	
2	Silt clay (very limited patches)	5. Nutrient status poor	
		6. Due to poor structure, texture & freezing in winter soil micro flora population is sparse.	
3	Clay loam (very limited patches)	7. Sand content is high while clay content is very low	
		8. Crust formation after irrigation is common.	
		9. Soil development proceeds slowly.	

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

S. No	Crop	Area (ha)	Production (Qtls)	Productivity (Qtls /ha)
1	Barley and millets	4491	21465	6.73
2	Wheat	2509	12900	5.7
3	Pulses	267	4798	17.1
4	Oilseed	105	6.15	17.1
5	Other Millets	318	4.00	50.0
6	Vegetables		1326.00	

7	Fodder	2112	1188.00	
	Spices	6		
8	Apricot	654.6	3139.63 (MT)	
9	Apple	358.66	3816.83 (MT)	
10	Pear		8.46 (MT)	
11	Peach		7.45 (MT)	
12	Plum		0.52 (MT)	
13	Grapes		9.43 (MT)	
14	Almond		0.51 (MT)	
15	Walnut		111.91 (MT)	
16	Cherry		0.08 MT)	
	Others	41.242		

2.5. Weather data (2022-23)

Month	Rainfall (mm)	Temperature (^{0}C)		Relative Humidity (%)
		Maximum	Minimum	
January	0.3	-2.56	-14.79	53.87
February	1.5	10.00	-22.00	42.94
March	0.5	11.10	-5.60	29
April	0	16.13	-0.08	27.53
May	0	19.24	2.70	30.77
June	0	22.54	7.71	46.16
July	0	25.35	11.33	48.91
August	0	26.21	11.85	48.55
September	0	23.14	8.26	48.38
October	0	12.86	-1.38	34.33
November	0	7.12	-7.6	44.11
December	2	1.25	-14.16	42.30

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

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

Category	Population	Production	Productivity
Cattle			
Crossbred	**12567**	8500 MT	600 lit/lact/cow/ Dzomo
Indigenous	**34240**		
Buffalo			
Sheep			
Crossbred	**1459**		
Indigenous	**81192**		
Goats	**222028**		
Pigs			
Crossbred			
Indigenous			
Rabbits			
Poultry			
	34483		

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Camel	214		
Horses and Ponnies	5066		
Donkeys	5667		
Yaks	16357		
Hens			
Desi			
Improved			
Ducks			
Turkey and others			

Category	Population	Production	Productivity
Cattle			
Crossbred	8529	8500 MT	600 lit/lact/cow/ Dzomo 250 lit/lact./Demo
Indigenous	24659		
Yak/Demo	18904		
Yak-hybrids	10725		
Horses	8141		
Donkeys	8204		
Sheep			
Indigenous : a. Changluk b. Malluk c. Crossbred	 62622 42932 13570	Wool (lac kgs) 1.34	 1.300 kg/animal
Goats		Pashmina (lac. Kg)	
Pashmina	196345	0.39	150g/animal
Malra	63589		
Angora Crossbred	2004		
Alpine	1967		
Poultry	7567		
Camel (Double humped)	109		
Ducks			
Turkey and others			

Category	Area	Production	Productivity
Fish			
Marine			
Inland			
Prawn			
Scampi			
Shrimp			

2.7 Details of Operational area / Villages (2022-2023)

Sl.No.	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1	Leh	Leh	Saboo, Shey, Phyang, Nimoo, Thiksay, Basgo, Ranbirpura	Barley, Wheat, Oilseed, Pulse, fruits, vegetables, Fodder, Livestock rearing.	➢ Non availability of quality planting material both in agricultural as well as Horticulture crops. ➢ Lack of assured irrigation and power supply. ➢ Poor Soil fertility status. ➢ Lack of marketing facility for agricultural produce. ➢ Lack of mechanization in agriculture. ➢ Inaccessibility of village impedes transfer of technology.	Improved crop production, fruit/veg. processing techniques, off season vegetable production technology, floriculture, Dairying, Revival of local crafts.
1	Leh	Chushot	Chushot, Matho, Stok		-do-	Improved crop production, fruit/veg. processing techniques, off season vegetable production technology, Dairying

2	Leh	Khaltsi	Saspol, Domkhar, Skurbuchan, Khaltsi, Hanu, Domkhar	Barley, Wheat, fruits, Oilseed, Pulse, Livestock, Fodder,	-do-	Improved crop production of Oilseed, Pulse technologies, Raising fruit nurseries, fruit/vegetable, Off season vegetable production technologies, Dairying, local crafts and revival of second crops.
3	Leh	Kharu	Shara, Stakna, Martselang, Igoo, Sakti Chemday, GyaMeru	Barley, Oilseed, Pulse, Livestock, Fodder, Vegetables, Wheat and fruit crops	-do-	Improved crop production technologies, Pulse and Oilseed production, Dairying, local crafts, off season vegetable production technology.
4	Leh	Nubra	Diger, Tangyar, Khema, Bogdang, Turtuk, Hunder, Sumoor, Kagar Panamic, Charasa	Fodder, Wheat, Barley, Oilseed, Livestock, Pashmina, Sheep, Yak	-do-	Improved crop production of Oilseed, Pulse technologies, Raising fruit nurseries, fruit/vegetable, Off season vegetable production technologies, Dairying, local crafts and revival of second crops.

2.8 Priority/thrust areas

Crop/Enterprise	Thrust area
Crop Production.	• Enhancing productivity of cereal crops. • Efficient use of water for enhanced crop production • Pulse and Oilseed production. • Fodder and pasture development. • INM and IPM
Horticulture	• Raising vegetable and fruit nurseries. • Rejuvenation of old orchards/fruit trees • Fruit and vegetable processing technologies. • Off season trench vegetable production technology. • Management of apple codling moth and apricot gummosis. • Introduction of new horticultural crops/ varieties in the region.
Agroforestry	• Raising of tree saplings. • Adoption of suitable agro-forestry models.
Animal Sciences	• Economical and balanced feeding of milch animals • Vaccination of animal against FMD and CCPP. • Poultry farming. • Breeding improvement. • Dairy farming.
Home Science	• Preservation and processing of seasonal vegetable and fruits including seabuck thorn. • Training in local crafts, tailoring, knitting, carpet making.
Allied Subjects	• Vocational training courses for unemployed rural youth. • Apiculture and Mushroom production. • Medicinal Plants • Vermiculture

3. TECHNICAL ACHIEVEMENTS

3.A. Details of target and achievements of mandatory activities by KVK during 2022-23

OFT (Technology Assessment and Refinement)				FLD (Oilseeds, Pulses, Cotton, Other Crops/Enterprises)			
1				2			
Number of OFTs		Number of Farmers		Number of FLDs		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
3	3	12	12	4	3	114	27

Training (including sponsored, vocational and other trainings carried under Rainwater Harvesting Unit)					Extension Activities			
3					4			
Number of Courses			Number of Participants		Number of activities		Number of participants	
Clientele	Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
Farmers	54	66	1195	2961	56	95	2560	7473
Rural youth	8	0	210	0				
Extn. Functionaries	1	0	25	0				

Seed Production (Qtl.)	Planting material (Nos.)

5		6	
Target	**Achievement**	**Target**	**Achievement**
-	-	2.25lac	107325

Livestock, poultry strains and fingerlings (No.)		**Bio-products (Kg)**	
7		**8**	
Target	*Achievement*	***Target***	***Achievement***
-	-	2.0qtls	3650.35kgs

3.B. Abstract of interventions undertaken

S. No	*Thrust area*	*Crop/ Enterprise*	*Identified Problem*	*Interventions*										
				Title of OFT if any	*Title of FLD if any*	*Number of Training (farmers)*	*Number of Training (Youths)*	*Number of Training (extension personnel)*	*Extension activities (No.)*	*Supply of seeds (Qtl.)*	*Supply of planting materials (No.)*	*Supply of livestock (No.)*	*Supply of bio products*	
													No.	*Kg*
1														
2														
3	Horticulture (vegetable)	Onion		Evaluation of Onion Varieties Under Ladakh conditions		2			4		45			
		Potato	Low yield	Evalution of potato varieties under Ladakh conditions		3			4		450 seedlings			
		Cucumber	Low yield and frost injury		Demonstration of Cucumber Hybrid- Aviva	3			2					
		Broccolli	Lack of suitable varieties for the region		Demonstration of Broccoli hybrid- Fantasy	4			3					

3.1 Achievements on technologies assessed and refined

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

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

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

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

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Varietal Evaluation										
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										
TOTAL										

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

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

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

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

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

3.2. Achievements on technologies Assessed and Refined

3.2.1. Technologies Assessed under various Crops

Thematic areas	*Crop*	*Name of the technology assessed*	*No. of trials*	*Number of farmers*	*Area in ha (Per trail covering all the Technological Options)*
Integrated Nutrient Management					
Varietal Evaluation		Evaluation of Potato Varieties Under Ladakh conditions	5	5	0.25
		Evaluation of Onion Varieties Under Ladakh conditions	6	6	0.043
Integrated Pest Management					
Integrated Crop Management					
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					

Thematic areas	*Crop*	*Name of the technology assessed*	*No. of trials*	*Number of farmers*	*Area in ha (Per trail covering all the Technological Options)*
Storage Technique					
Mushroom cultivation					
Total					

3.2.2. Technologies **Refined** under various **Crops**

Thematic areas	*Crop*	*Name of the technology assessed*	*No. of trials*	*Number of farmers*	*Area in ha (Per trail covering all the Technological Options)*
Integrated Nutrient Management					
Varietal Evaluation					
Integrated Pest Management					
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Seed / Plant production					
Total					

3.2.3. Technologies assessed under Livestock and other enterprises

Thematic areas	*Name of the livestock enterprise*	*Name of the technology assessed*	*No. of trials*	*No. of farmers*
Evaluation of breeds				
Nutrition management				
Disease management				
Value addition				
Production and management		OFT on clean milk production by use of potassium permanganate (KMnO4) and portable milking Machine	1	4
Feed and fodder				
Small scale income generating enterprises				

3.2.4. Technologies Refined under Livestock and other enterprises

Thematic areas	*Name of the livestock enterprise*	*Name of the technology assessed*	*No. of trials*	*No. of farmers*
Evaluation of breeds				
Nutrition management				
Disease management				
Value addition				
Production and management				
Feed and fodder				
Small scale income generating enterprises				
Total				

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

A. Technology Assessment

Trial 1

Title	:	Evaluation of Potato Varieties Under Ladakh conditions
Problem diagnose/defined	:	Lack of suitable variety affecting potential yield
Details of technologies selected for assessment	:	Fo: Farmers Practice (K. Chandramukhi) F1: KufriPukhraj F2: KufriHimalni
Source of Technology	:	ICAR-CPRI
Production system and thematic area	:	Planting tubers in Flat bed system and channel irrigation
Thematic Area	:	Horticulture
Performance of the Technology with Performance indicators		KufriHimalini performed best compared to KufriPukraj and Farmers Practice (KufriChandramukhi). It gave an av. Yield of 31.6T/ha. Also K. Pukraj had less acceptability due to purplish colouration of the flesh
Final recommendation for micro level situation	:	KufriHimalini better than both K. Pukhraj and K. Chandramukhi (Farmers' practice)
Constraints identified and feedback for research	:	Availability of seeds and their transportation
Process of farmers participation and their reaction	:	Very happy and satisfied with the results. Though Himalini and Pukhraj had almost similar yields and storahe, acceptability was more in Himalini due to uniformity in fleshcolour

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Potato	Flatbed and irrigated	Lack of suitable variety affecting potential yield	Evaluation of Potato Varieties Under Ladakh conditions	5	Fo: Farmers Practice (K. Chandramukhi) F1: KufriPukhraj F2: KufriHimalni	Yield and storability	1) 24.4t/ha 2) 31.6t/ha, good storer 3) 31t/ha, good storer	KufriHimalini performed best compared to KufriPukraj and Farmers Practice (KufriChandramukhi). It gave an av. Yield of 31.6T/ha. Also K. Pukraj had less acceptability due to purplish colouration of the flesh	. Very happy and satisfied with the results. Though Himalini and Pukhraj had almost similar yields and storahe, acceptability was more in Himalini due to uniformity in flesh colour

Technology Assessed	*Production per unit(ha)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
1) Varietal evaluation of Potato	1) 24.4t	599400	5.52
	2) 31.6t	815400	7.14
	3) 31t	797400	7.01
	1. 39.2t/ha, good storer	1075200	11.67
	2. 42t/ha, medium storer	1159200	12.5
	3. 50.1t/ha, medium	1402200	14.9
	4. 52.8t/ha, good storer	1483200	15.71

Trial 2

Title	:	Evaluation of Onion Varieties Under Ladakh conditions
Problem diagnose/defined	:	Lack of suitable open pollinated variety
Details of technologies selected for assessment	:	T1: B. Safed T2: B. Shakti T2: B. super T3: B. Shewta T5: B. Kiran T6: B. Raj T7: B. Shubra T8: B. L. Red
Source of Technology	:	ICAR-DOGR, Pune
Production system and thematic area	:	Seedling transplanting in flat beds and channel irrigated
Thematic Area	:	Horticulture
Performance of the Technology with Performance indicators	:	Bheema Shakti performed best with an average yield of Bheema Shakti performed best with an average yield of 56.2t/ha followed by Bheema Light Red 52.8 t/ha. BheemaKiran gave the least yield 39.2 t/ha) among bheema varieties. Farmers variety (local) gave an average yield of 34.5t/ha performing far below the DOGR varieties
Final recommendation for micro level situation	:	Bheema Shakti,Bheema Light Red and Bheemashewtaare the best with regards to yield and storability
Constraints identified and feedback for research	:	Availability of suitable open pollinated affordable onion seeds
Process of farmers participation and their reaction	:	Very happy and satisfied with the results. Farmers can now produce their own seeds and their dependency on hybrids would lessen in the coming years

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Onion	Transplanted and irrigated	Lack of suitable open pollinated variety	Evaluation of Onion Varieties Under Ladakh conditions	5	T1: B. Safed T2: B. Shakti T3: B. super T4: B. Shewta T5: B. Kiran T6: B. Raj T7: B. Shubra T8: B. L. Red	Yield and storability	1) 42.5t/ha, good storer 2) 56.2t/ha, good storer 3) 45.5t/ha, good storer 4) 50.3t/ha, good storer 5) 39.2t/ha, good storer 6) 42t/ha, mediumstorer 7) 50.1t/ha, medium 8) 52.8t/ha, good storer	Bheema Shakti performed best with an average yield of 56.2t/ha followed by Bheema Light Red 52.8 t/ha. BheemaKiran gave the least yield 39.2 t/ha) among bheema varieties. Farmers variety (local) gave an average yield of 34.5t/ha performing far below the DOGR varieties	Very happy and satisfied with the results. Farmers can now produce their own seeds and their dependency on hybrids would lessen in the coming years

Technology Assessed	*Production per unit(ha)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
2) Varietal evaluation of onion	5. 42.5t/ha, good storer	1174200	11.64
	6. 56.2t/ha, good storer	1585200	16.72

	7. 45.5t/ha, good storer	1264200	13.54
	8. 50.3t/ha, good storer	1408200	14.97
	9. 39.2t/ha, good storer	1075200	11.67
	10. 42t/ha, medium storer	1159200	12.5
	11. 50.1t/ha, medium	1402200	14.9
	12. 52.8t/ha, good storer	1483200	15.71

Trial:3

Title	:	OFT on clean milk production by use of potassium permanganate (KMnO4) and portable milking Machine
Problem diagnose/defined	:	Unhygienic Milk Production and occurrence of odour in milk and mastitis.
Details of technologies selected for assessment	:	Clean milk production using KMnO4 and Portable milking machine
Source of Technology	:	Applied Research Findings
Production system and thematic area	:	Livestock Production
Thematic Area		Milk Production
Performance of the Technology with Performance indicators		Decrease in bacterial load in milk as indicated by Low Standard Plate count/ml and Increase in milk production.
Final recommendation for micro level situation	:	Recommended one unit for 5 dairy cows for hygienic milk production.
Constraints identified and feedback for research	:	Lack of awareness, knowledge and non-availability among farmers of Leh
Process of farmers participation and their reaction	:	Very enthusiastic and positive regarding milk quality improvement.

Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Milk Production	Lack of Knowledge about Hygienic Milk Production and occurance of bad odour in milk and mastitis	Presence of bad odour in milk and mastitis	Demonstration on clean milk production by use of potassium permanganate ($KMnO_4$) and portable milking Machine	4	Clean milk production using $KMnO_4$ and Portable milking machine	Standard plate count of milk for accessing bacterial load.	Standard plate count per ml and lactation yield	Not more than 200000 per ml	Visible improvement in milk (quality and quantity) production

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
Clean milk production using $KMnO_4$ and Portable milking machine	Extra 135litres of milk per lactation in treated cows	Rs 5400/animal/year	3.8:1

PART 4 - FRONTLINE DEMONSTRATIONS

4.A. Summary of FLDs implemented during 2022-23

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/ breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
	Oilseeds													
	Pulses													
	Cereals													
	Millets													
	Vegetables													
	Cucumber	Irrigated	Kharif 2022	Cucumber		Aviva		Demonstration of Cucumber Hybrid- Aviva	0.0040	0.0045	10		10	Maximum yield and sweet fresh fruits
	Broccoli	Irrigated	Kharif 2022	Broccoli		Fantasy		Demonstration of Broccoli hybrid- Fantasy	0.008	0.018	10		10	Compact and uniform yield
	Flowers													
	Fruit													
	Melon													
	Apricot													
	Apple													
	Spices and condiments													
	Commercial													
	Medicinal and aromatic													
	Fodder													
	Dairy		Kharif 2022	Jersey Cows	Jersey Cows			Effect of Dosing on Gastrointestinal Parasite in Dairy Cows			4		4	

Sl. No.	*Category*	*Farming Situation*	*Season and Year*	*Crop*	*Variety/ breed*	*Hybrid*	*Thematic area*	*Technology Demonstrated*	*Area (ha)*		*No. of farmers/ demonstration*			*Reasons for shortfall in achievement*
									Proposed	*Actual*	*SC/ST*	*Others*	*Total*	
	Poultry													
	Piggery													
	Sheep and goat													
	Button mushroom													
	Vermicompost													
	IFS													
	Apiculture													
	Implements													
	Others (specify)													

4.A. 1. Soil fertility status of FLDs plots during 2022-23

Sl. No.	*Category*	*Farming Situation*	*Season and Year*	*Crop*	*Variety/ breed*	*Hybrid*	*Thematic area*	*Technology Demonstrated*	*Status of soil (Kg/Acre)*			*Previous crop grown*
									N	*P*	*K*	
	Oilseeds											
	Pulses											
	Cereals											
	Buckwheat											
	Millets											
	Vegetables											
		Irrigated	Kharif 2022	Cucumber		Aviva		Demonstration of Cucumber Hybrid- Aviva	205	10	125	
		Irrigated	Kharif 2022	Broccoli		Fantasy		Demonstration of Broccoli hybrid-Fantasy	220	10	130	
	Flowers											
	Fruit											
	Melon											
	Spices and condiments											
	Commercial											
	Medicinal and aromatic											

Sl. No.	*Category*	*Farming Situation*	*Season and Year*	*Crop*	*Variety/ breed*	*Hybrid*	*Thematic area*	*Technology Demonstrated*	*Status of soil (Kg/Acre)*			*Previous crop grown*
									N	*P*	*K*	
	Fodder											
	Dairy	Irrigated	2022		Jersey Cows			Effect of Dosing on Gastrointestinal Parasite in Dairy Cows.				
	Poultry											
	Piggery											
	Sheep and goat											
	Button mushroom											
	Vermicompost											
	IFS											
	Apiculture											
	Implements											
	Others (specify)											

B. Results of Frontline Demonstrations

4.B.1. Crops

Crop	*Name of the technology demonstrated*	*Variety*	*Hybrid*	*Farming situation*	*No. of Demo.*	*Area (ha)*	*Yield (q/ha)*				*% Increase*	**Economics of demonstration (Rs./ha)*				**Economics of check (Rs./ha)*			
							Demo			*Check*		*Gross Cost*	*Gross Return*	*Net Return*	*** BCR*	*Gross Cost*	*Gross Return*	*Net Return*	*** BCR*
							H	L	A										
Oilseeds																			
Pulses																			
Cereals																			
Buckwheat																			
Millets																			
Vegetables																			
Broccoli	Demonstration on Broccoli Hybrid Fantasy		Fantasy	Irrigated	10	0.0108	311	307	309	210	47.00	550000	1236000	686000	2.24	515000	840000	325000	1.63
Cucumber	Demonstration on cucumber Hybrid Aviva		Aviva	Irrigated	10	0.0045	948	942	945	486	94	1208595	3780000	2548108	2.16	1085000	1701000	616000	1.6
Tomato/Melon																			
Flowers																			
Fruit																			
Melons																			
Apricot																			

Crop	*Name of the technology demonstrated*	*Variety*	*Hybrid*	*Farming situation*	*No. of Demo.*	*Area (ha)*	*Yield (q/ha)*				*% Increase*	**Economics of demonstration (Rs./ha)*				**Economics of check (Rs./ha)*			
							Demo			*Check*		*Gross Cost*	*Gross Return*	*Net Return*	*** BCR*	*Gross Cost*	*Gross Return*	*Net Return*	*** BCR*
							H	L	A										
Apple																			
Spices and condiments																			
Commercial																			
Medicinal and aromatic																			
Fodder																			

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST ; H – Highest Yield, L – Lowest Yield A – Average Yield

Data on additional parameters other than yield (viz., reduction of percentage in weed/pest/ diseases etc.)

Data on other parameters in relation to technology demonstrated					
Crop	***Technology to be demonstrated***	***Variety/ Hybrid***	***Parameter with unit***	***Demo***	***Check***

4.B.2. Livestock and related enterprises

Type of livestock	*Name of the technology demonstrated*	*Breed*	*No. of Demo*	*No. of Units*	*Yield (q/ha)*				*% Increase*	**Economics of demonstration Rs./unit)*				**Economics of check (Rs./unit)*			
					Demo			*Check if any*		*Gross Cost*	*Gross Return*	*Net Return*	*** BCR*	*Gross Cost*	*Gross Return*	*Net Return*	*** BCR*
					H	L	A										
Dairy	Effect of Dosing on Gastrointestinal Parasite in Dairy Cows.	Jersey Cross	4	2					10	500	5000	4500	10:1	500	5000	4500	10:1
Poultry																	
Rabbitry																	
Pigerry																	
Sheep and goat																	
Duckery																	
Others (pl.specify)																	

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST

Data on additional parameters other than yield (viz., reduction of percentage diseases, increase in conceiving rate, inter-calving period etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	***Demo***	***Check if any***
Milk production in litres and fecal egg count in numbers	Two potential Deworming Agent Fasinex (10 %Triclabendazole) and Nilzan (6% Oxyclozanide and 3% Levamisole Hydochloride were used in dairy cattle to improve animal health and milk production.	Extra 125-140 litre milk per lactation in treated cows

4. B.3. Fisheries

Type of Breed	*Name of the technology demonstrated*	*Breed*	*No. of Demo*	*Units/ Area (m^2)*	*Yield (q/ha)*				*% Increase*	**Economics of demonstration Rs./unit) or (Rs./m2)*				**Economics of check Rs./unit) or (Rs./m2)*			
					Demo			*Check if any*		*Gross Cost*	*Gross Return*	*Net Return*	*** BCR*	*Gross Cost*	*Gross Return*	*Net Return*	*** BCR*
					H	L	A										
Common carps																	

Others (pl.specify)																		

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST
H-High L-Low, A-Average

Data on additional parameters other than yield (viz., reduction of percentage diseases, effective use of land etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	***Demo***	***Check if any***

4.B.4. Other enterprises

Enterprise	*Name of the technology demonstrated*	*Variety/ species*	*No. of Demo*	*Units/ Area {m^2}*	*Yield (q/ha)*				*% Increase*	**Economics of demonstration (Rs./unit) or (Rs./m2)*				**Economics of check (Rs./unit) or (Rs./m2)*			
					Demo			*Check if any*		*Gross Cost*	*Gross Return*	*Net Return*	*** BCR*	*Gross Cost*	*Gross Return*	*Net Return*	*** BCR*
					H	L	A										
Button mushroom																	
Vermicompost																	
Apiculture																	
Others (pl.specify)																	

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST
H-High L-Low, A-Average

Data on additional parameters other than yield (viz., additional income realized, employment generation, quantum of farm resources recycled etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	***Demo***	***Local***

4.B.5. Extension and Training activities under FLD

Sl.No.	***Activity***	***No. of activities organized***	***Number of participants***	***Remarks***
1	Field days	2	32	
2	Farmers Training	14	210	
3	Media coverage	5		
4	Training for extension functionaries	1	17	
5	Others (Please specify)			

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

A) **ON Campus**

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
(A) Farmers & Farm Women										
I Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Water management										
Seed production										
Nursery management										
Integrated Crop Management										
Fodder production										
Production of organic inputs	1			0	3	39	42	3	39	42
Others										
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops										
Off-season vegetables										
Nursery raising										
Exotic vegetables like Broccoli										
Export potential vegetables										
Grading and standardization										
Protective cultivation (Green Houses, Shade Net etc.)										
Others	2			0	10	62	72	10	62	72
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										

Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
f) Spices										
Production and Management technology										
Processing and value addition										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
III Soil Health and Fertility Management										
Soil fertility management										
Soil and Water										

Conservation										
Integrated Nutrient Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Soil and Water Testing										
IV Livestock Production and Management										
Dairy Management	4			0	38	144	182	38	144	182
Poultry Management										
Piggery Management										
Rabbit Management										
Disease Management										
Feed management	2			0	14	68	82	14	68	82
Production of quality animal products	1			0	7	33	40	7	33	40
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition										
Income generation activities for empowerment of										

rural Women										
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care	1			0	0	19	19	0	19	19
VI Agril. Engineering										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
VII Plant Protection										
Integrated Pest Management										
Integrated Disease Management										
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others	1				10	43	53	10	43	53
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										

Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
IX Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Others (Natural Farming, Jalshkti Abhiyan)	5			0	20	179	199	20	179	199
X CapacityBuilding and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR										

issues										
Others	1			0	3	39	42	3	39	42
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
TOTAL	**18**	**0**	**0**	**0**	**105**	**626**	**731**	**105**	**626**	**731**
(B) RURAL YOUTH										
Mushroom Production										
Bee-keeping										
Integrated farming										
Seed production										
Production of organic inputs										
Integrated Farming										
Planting material production										
Vermi-culture										
Sericulture										
Protected cultivation of vegetable crops										
Commercial fruit production										
Repair and maintenance of farm machinery and implements										
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Value addition										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Para vets										
Para extension workers										
Composite fish										

culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
TOTAL										
(C) Extension Personnel										
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Formation and Management of SHGs										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Care and maintenance of farm machinery and implements										
WTO and IPR issues										
Management in farm animals										
Livestock feed and fodder production										
Household food										

security										
Women and Child care										
Low cost and nutrient efficient diet designing										
Production and use of organic inputs										
Gender mainstreaming through SHGs										
TOTAL	-	-	-	-	-	-	-	-	-	-

B) **OFF Campus**

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
(A) Farmers & Farm Women										
I Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Water management										
Seed production										
Nursery management										
Integrated Crop Management										
Fodder production										
Production of organic inputs										
Others	3			0	2	94	96	2	94	96
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops	1			0	3	23	26	3	23	26
Off-season vegetables				0			0	0	0	0
Nursery raising	2			0	2	30	32	2	30	32
Exotic vegetables like Broccoli				0			0	0	0	0
Export potential vegetables				0			0	0	0	0
Grading and standardization				0			0	0	0	0
Protective	4			0	34	110	144	34	110	144

cultivation (Green Houses, Shade Net etc.)										
Others	7			0	48	165	213	48	165	213
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
f) Spices										
Production and Management technology										
Processing and value addition										
g) Medicinal and Aromatic Plants										
Nursery management										

Production and management technology										
Post harvest technology and value addition										
III Soil Health and Fertility Management										
Soil fertility management	1			0	0	21	21	0	21	21
Soil and Water Conservation				0			0	0	0	0
Integrated Nutrient Management				0			0	0	0	0
Production and use of organic inputs	1			0	4	30	34	4	30	34
Management of Problematic soils				0			0	0	0	0
Micro nutrient deficiency in crops	1			0	19	41	60	19	41	60
Nutrient Use Efficiency	1			0	1	23	24	1	23	24
Soil and Water Testing										
IV Livestock Production and Management										
Dairy Management	2			0	7	53	60	7	53	60
Poultry Management	1			0	0	57	57	0	57	57
Piggery Management				0			0	0	0	0
Rabbit Management				0			0	0	0	0
Disease Management				0			0	0	0	0
Feed management	4			0	40	113	153	40	113	153
Production of quality animal products	1			0	5	14	19	5	14	19
Others	3				28	21	49	28	21	49
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet	2			0	1	44	45	1	44	45
Designing and development for high nutrient efficiency diet	1			0	10	6	16	10	6	16

Minimization of nutrient loss in processing	2			0	4	60	64	4	60	64
Gender mainstreaming through SHGs				0			0	0	0	0
Storage loss minimization techniques				0			0	0	0	0
Value addition	1			0	0	8	8	0	8	8
Income generation activities for empowerment of rural Women				0			0	0	0	0
Location specific drudgery reduction technologies				0			0	0	0	0
Rural Crafts				0			0	0	0	0
Women and child care	2			0	3	80	83	3	80	83
Others	3			5	61	28	89	61	28	89
VI Agril. Engineering										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
VII Plant Protection										
Integrated Pest Management	5			0	20	116	136	20	116	136
Integrated Disease Management	3			0	41	81	122	41	81	122
Bio-control of pests and diseases	1				19	41	60	19	41	60
Production of bio control agents and bio pesticides										
VIII Fisheries										
Integrated fish farming										
Carp breeding and										

hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
IX Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production	1				3	15	18	3	15	18
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Others (Natural Farming)	2			0	11	60	71	11	60	71
X CapacityBuilding and Group Dynamics										

Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
TOTAL	**55**	**0**	**0**	**5**	**366**	**1334**	**1700**	**366**	**1334**	**1700**
(B) RURAL YOUTH										
Mushroom Production										
Bee-keeping										
Integrated farming										
Seed production										
Production of organic inputs										
Integrated Farming										
Planting material production										
Vermi-culture										
Sericulture										
Protected cultivation of vegetable crops										
Commercial fruit production										
Repair and maintenance of farm machinery and implements										
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Value addition	1				0	2	2	0	2	2
Production of quality animal products										
Dairying										
Sheep and goat rearing										

Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Para vets										
Para extension workers										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
TOTAL	**2**				**0**	**2**	**2**	**0**	**2**	**2**
(C) Extension Personnel										
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Formation and Management of SHGs										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Care and										

maintenance of farm machinery and implements										
WTO and IPR issues										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Women and Child care										
Low cost and nutrient efficient diet designing										
Production and use of organic inputs										
Gender mainstreaming through SHGs										
TOTAL										

C) Consolidated table (ON and OFF Campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
(A) Farmers & Farm Women										
I Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Water management										
Seed production										
Nursery management										
Integrated Crop Management										
Fodder production										
Production of organic inputs	1			0	3	39	42	3	39	42
Others	3			0	2	94	96	2	94	96
II Horticulture										
a) Vegetable Crops										
Production of low volume and high	1			0	3	23	26	3	23	26

value crops										
Off-season vegetables				0			0	0	0	0
Nursery raising	2			0	2	30	32	2	30	32
Exotic vegetables like Broccoli				0			0	0	0	0
Export potential vegetables				0			0	0	0	0
Grading and standardization				0			0	0	0	0
Protective cultivation (Green Houses, Shade Net etc.)	4			0	34	110	144	34	110	144
Others	9			0	58	227	285	58	227	285
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
e) Tuber crops										
Production and Management technology										
Processing and										

value addition										
f) Spices										
Production and Management technology										
Processing and value addition										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
III Soil Health and Fertility Management										
Soil fertility management	1			0	0	21	21	0	21	21
Soil and Water Conservation				0			0	0	0	0
Integrated Nutrient Management				0			0	0	0	0
Production and use of organic inputs	1			0	4	30	34	4	30	34
Management of Problematic soils				0			0	0	0	0
Micro nutrient deficiency in crops	1			0	19	41	60	19	41	60
Nutrient Use Efficiency	1			0	1	23	24	1	23	24
Soil and Water Testing										
IV Livestock Production and Management										
Dairy Management	6			0	45	191	236	45	191	236
Poultry Management	1			0	0	57	57	0	57	57
Piggery Management				0			0	0	0	0
Rabbit Management				0			0	0	0	0
Disease Management				0			0	0	0	0
Feed management	6			0	54	181	235	54	181	235
Production of quality animal products	2			0	12	47	59	12	47	59
Others	3				28	21	49	28	21	49
V Home Science/Women empowerment										
Household food										

security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet	2			0	1	44	45	1	44	45
Designing and development for high nutrient efficiency diet	1			0	10	6	16	10	6	16
Minimization of nutrient loss in processing	2			0	4	60	64	4	60	64
Gender mainstreaming through SHGs				0			0	0	0	0
Storage loss minimization techniques				0			0	0	0	0
Value addition	1			0	0	8	8	0	8	8
Income generation activities for empowerment of rural Women				0			0	0	0	0
Location specific drudgery reduction technologies				0			0	0	0	0
Rural Crafts				0			0	0	0	0
Women and child care	3			0	3	99	102	3	99	102
Others	3			5	61	28	89	61	28	89
VI Agril. Engineering										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
VII Plant Protection										
Integrated Pest Management	5			0	20	116	136	20	116	136

Integrated Disease Management	3			0	41	81	122	41	81	122
Bio-control of pests and diseases	1				19	41	60	19	41	60
Production of bio control agents and bio pesticides										
Others	1				10	43	53	10	43	53
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
IX Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production	1				3	15	18	3	15	18
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and										

implements										
Production of livestock feed and fodder										
Production of Fish feed										
Others (Natural Farming Jalshakti Abhiyan)	7			0	31	239	270	31	239	270
X CapacityBuilding and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others	1				3	39	42	3	39	42
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
TOTAL	**73**	**0**	**0**	**5**	**471**	**1954**	**2425**	**471**	**1954**	**2425**
(B) RURAL YOUTH										
Mushroom Production										
Bee-keeping										
Integrated farming										
Seed production										
Production of organic inputs										
Integrated Farming										
Planting material production										
Vermi-culture										
Sericulture										
Protected cultivation of vegetable crops										
Commercial fruit production										
Repair and maintenance of										

farm machinery and implements										
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Value addition	1				0	2	2	0	2	2
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Para vets										
Para extension workers										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
TOTAL	**2**				**0**	**2**	**2**	**0**	**2**	**2**
(C) Extension Personnel										
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										

Protected cultivation technology										
Formation and Management of SHGs										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Care and maintenance of farm machinery and implements										
WTO and IPR issues										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Women and Child care										
Low cost and nutrient efficient diet designing										
Production and use of organic inputs										
Gender mainstreaming through SHGs										
TOTAL										

(D) Vocational training programmes for Rural Youth

Crop / Enterprise	Date	Training title*	Identified Thrust Area	Duration (days)	No. of Participants			Self employed after training			Number of persons employed else where
					Male	Female	Total	Type of units	Number of units	Number of persons employed	
1	20-22nd May 2022	Scientific Management of Sheep and Goat		3	40	0	40				
2	26-9-2022 to 5/10/2022	Scientific Management of Sheep and Goats in Mountains Under DST STI Hub Project on Production, Improvement, Sustainable Development and Livelihood Improvement of Threatened Tribal Nomads of Ladakh Through Scientific Sheep and Pashmina Goat Rearing		10	4	6	10				
3											
		Total (2)			**44**	**6**	**50**				

(E) Sponsored Training Programmes

Sl. No	Date	Title	Discipline	Thematic area	Duration (days)	Client (PF/RY/EF)	No. of courses	No. of Participants									Sponsoring Agency	Amount of fund received (Rs.)
								Others			SC/ST			Total				
								Male	Female	Total	Male	Female	Total	Male	Female	Total		
1	22/5/2022	Value addition of Milk and Milk Production	Animal Science		1		1				0	8	8	0	8	8	DST Sheep	
2	23/5/2022	Scientific management of Sheep and Gat	Animal Science		1		1				18	0	18	18	0	18	DST Sheep	
3	24/5/2022	Health benefit of milk and milk products	Animal Science		1		1				0	20	20	0	20	20	DST Sheep	
4	22/6/2022	Awareness programme on cultivation of high yielding varieties of wheat and barly	Crop Production		1		1				0	57	57	0	57	57	TSP IIWBR	
5	9/8/2022	Insect Pest Management	Plant Protection		1		1				0	15	15	0	15	15	NICRA	
6	9/8/2022	Mulching Technology and application	Veg. Science		1		1				0	15	15	0	15	15	NICRA	
7	12th - 13th November 2022	Scientific Management of Sheep and Goats			2		1				10	0	10	10	0	10	DST Sheep and Goat	

8	14th – 15th Nov 2022	Scientific Management of Sheep and Goats			2		1				0	21	21	0	21	21	DST Sheep and Goat	
							8				**28**	**136**	**164**	**28**	**136**	**164**		
Total																		

6. Extension Activities (including activities of FLD programmes)

Sl. No.	Nature of Extension Activity	Purpose/ topic and Date	No. of activities	Participants											
				Farmers (Others) (I)			SC/ST (Farmers) (II)			Extension Officials (III)			Grand Total (I+II+III)		
				Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1.	Field Day		2				6	13	19	3	4	7	9	23	32
2.	Field Day														
3.	Field day														
	Total		2				6	13	19	3	4	7	9	23	32
4.	KisanMela	26/4/2022, 7/9/2022, 31/12	3				1001	834	1835	7	10	17	1008	844	1852
5.	KisanMela														
	Total		3				1001	834	1835	7	10	17	1008	844	1852
6.	KisanGhosthi		1			0	0	27	27	1	4	5	1	31	32
7.	Exhibition		6			0	1895	2034		7	5	12	1902	2039	3941
8.	Film Show														
9.	Method Demonstrations		13				120	261	381	9	14	23	129	275	404
10.	Farmers Seminar														
11.	Workshop														
12.	Group meetings														
13.	Lectures delivered as resource persons		13				116	191	307	11	16	27	127	207	334
14.	Newspaper coverage														
15.	Radio talks		7												
16.	TV talks														
17.	Popular articles														
18.	Extension Literature														
19.	Advisory Services		13				6735	8675	15392	4	9	13	8682	15401	15405
20.	Scientific visit to farmers field		23				17	67	84	7	13	20	24	80	104
21.	Farmers / Student visit to KVK		19				173	200	373	10	25	35	183	225	408
22.	Diagnostic visits		11				7	12	19	3	4	7	10	19	29
23.	Exposure visits		6				111	165	276	9	11	20	120	176	296
24.	Ex-trainees Sammelan														
25.	Soil health Camp														
26.	Animal Health Camp		8				84	97	181	13	10	23	94	204	298
27.	Agri mobile clinic														
28.	Soil test campaigns														
29.	Farm Science Club Conveners meet														

30.	Self Help Group Conveners meetings														
31.	MahilaMandals Conveners meetings														
32.	Celebration of important days (International Yoga Day, 94th ICAR Foundation Day, 76th Independence Day, Poshan Abhiyan and Tree Plantation, Kisan Samman Sammelan, World Soil Day, KVK Annual Day, Kisan Diwas, PM Kisan Samman Nidhi Yojna, 1st InternationMillet Conference)	26/4, 16/7, 15/8, 17/9, 17/10, 5/1,2/ 18/12/, 23/12, 27/2, 18/3	10				128	232	360	18	22	40	250	382	532
	Grand Total		**138**	**0**	**0**	**0**	**11394**	**13642**	**21062**	**109**	**157**	**266**	**13547**	**20750**	**25519**

6. B. Kisan Mobile Advisory Services

Kisan Mobile Advisory									
Name of the KVK	No. of farmers Covered	No. of Messages (Text)	Type of messages						
			Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	Any other
KVK Leh	15392	13	Yes	Yes	Yes		Yes		

6.C. DETAILS OF TECHNOLOGY WEEK CELEBRATIONS during 2022-23

No. of Technology week celebrated	Types of Activities	No. of Activities	Number of Participants	Related crop/livestock technology
	Gosthies			
	Lectures organized			
	Exhibition			
	Film show			
	Fair			
	Farm Visit			
	Diagnostic Practicals			
	Distribution of Literature (No.)			
	Distribution of Seed (q)			
	Distribution of Planting materials (No.)			
	Bio Product distribution (Kg)			
	Bio Fertilizers (q)	Vermicompost and Compost	Used at KVK farm	
	Distribution of fingerlings			
	Distribution of Livestock specimen (No.)			
	Total number of farmers visited the technology week			

7. Production and supply of Technological products

A) SEED MATERIALS

Major group/class	Crop	Variety	Quantity (qtl.)	Value (Rs.)	Provided to No. of Farmers
CEREALS					
Wheat					
OILSEEDS					
Mustard					
PULSES					
VEGETABLES					
FLOWER CROPS					

OTHERS (Specify)					
Mushroom Spawn Seed	Mushroom	Dhingri	0.35kg	3500	40

B) PLANTING MATERIALS

Major group/class	Crop	Variety	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
FRUITS					
SPICES					
VEGETABLES					
	Onion		87400	40920	73
	Cabbage		4850	1890	16
	Cauliflower		7650	3060	32
	Tomato		2300	1840	17
	Broccolli		1750	1750	14
	Kale		1750	700	9
	Knolkhol		1400	420	11
	Capsicum/Chillies		150	150	3
	Brinjal		50	50	1
	Cucurbits		27	540	6
FOREST SPECIES					
ORNAMENTAL CROPS					
PLANTATION CROPS					
	Willow Saplings (Sticks)	**Selchang Local**	**1000 cuttings**	**30000**	**50**
Others (specify)					
	Alfalfa		**66qtls**	**66000**	**(Fed to the dairy unit at KVK Leh)**
	Mushroom	**Dhingri**	**0.3kg**	**7200**	**37**

C) BIO PRODUCTS

Major group/class	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			No	(kg)		
BIOAGENTS						
1						
2						
3						
4						
BIOFERTILIZERS						
1	**Vermicompost and Compost**			**300kgs**	**1200**	**50**

2	**Earth worms**			**50**	**2000**	**50**
3	**Cowdung wet**			**3650**		
4						
BIO PESTICIDES						
1	**Trichoderma**			**20 kgs**		**40**
400						
3						
4						

D) LIVESTOCK

Sl. No.	Type	Breed	Quantity		Value (Rs.)	Provided to No. of Farmers
			(Nos	Kgs		
		Jersey	**2**		**160000**	
		Calves	**1**		**13000**	
SHEEP AND GOAT						
POULTRY		**Vanraja**	**300**		**150000**	**120**
FISHERIES						
Others (Specify)						

PART 8 – PUBLICATION, SUCCESS STORY, SWTL, TECHNOLOGY WEEK AND DROUGHT MITIGATION

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

(A) KVK News Letter – (Name, Date of start, periodicity, number of copies distributed, etc.)

(B) Literature developed/published

Item	*Title*	*Authors name*	*Number of copies*
Research papers			

Item	*Title*	*Authors name*	*Number of copies*
Book-Chapter			
	Plant Diseases in Cold Arid Region Ladakh and Their Integrated Management 116-135: In: Good Agriculture Practices In Cold Arid Region Pages: 250 (2021)	**Vikas Gupta**, StanzinDorjey, Anil Kumar, Vishal Gupta, UrgyanChorol, PhuntsogTundup and JigmetYangchan	Book-Chapter
	Good Agriculture Practices in Cold Arid Region 1-11: In: Good Agriculture Practices In Cold Arid Region. Pages: 250 (2021)	**Vikas Gupta**, StanzinDorjey and M.S. Raghuvanshi	Book-Chapter
	Good Agriculture Practices in Cold Arid region Ladakh. Aknik Publications. Pages 1-258	**Vikas Gupta** and F. D. Sheikh (2021)	Edited Book
	Production Technology of oats (*Avena Sativa* L.) in High Himalayan Region of Ladakh	**H. L. Verma,** M.S. Kanwar, Parveen Kumar and G.S. Pradhan	Book Chapter
	Socio-Technological Interventions for Cold Arid Agriculture	Parveen Kumar, Brinder Singh, **H. L. Verma**, F.D. Sheikh and SonamAngchuk	Book Chapter
Technical reports			
Technical bulletins			
Popular articles			

Item	*Title*	*Authors name*	*Number of copies*
1	Status of World's Unique Animal Genetic Resource of Ladakh	Feroz Din Sheikh	Research Paper
2	PIT 1 gene polymorphism and seasonility affect milk production traits in dairy cattle of Kashmir	RM Shah, N A Ganai, H M Khan, **F D Sheikh**, S Shahnawaz, N N Khan	Research Paper
3	Breed description of Chanthangi Sheep	Malik Asma Altaf, Khan H.M, Mir M.S. Farooq Javid, **F.D.Sheikh**, Mir A.Q, Abdullah Muzamil, Ayman Niha	Research Paper
4	Occurrence of GI parasites in ruminants of Kashmir	A Ashraf, S.Rtramboo, I Maqbool, **F.D Sheikh**, K H Bulbul, R A Shahnawaz	Research Paper
5	Offseason Broccoli (Brassica Oleraceae Varitalica) Cultivation under Low Tunnel in Eastern Ladakh	Sonam Spaldon, M.S.Kanwar, **Jigmet Laskit**, Anwar Hussan and Kunzes Angmo	Research Paper
6	Technoligical Intervention in Production of Cole crops under Low Tunnel in Cold Arid Changthang Region of Ladakh (UT)	Sonam Spaldon, **Jigmet Laskit**, M.S.Kanwar, , Phuntsog Tundup and Kunzes Angmo	Research Paper
Training Manual			
Extension literature			
Folders /leaflets			
TOTAL			

(C) Details of Electronic Media Produced

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

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

1. Details of demonstration conducted

S. No.	Name of Horticulture Technology	No. of demonstration conducted			
		2019-20	2020-21	2021-22	2022-23
1.	Vermicompost unit with worms	51	72	46	15

Brief Profile of the Technology

Success story on "Cucumber cultivation under protected conditions"

Situation analysis and Problem.

Protected cultivation is a time tested technology for cultivation of warm season crops in Ladakh where open conditions hinder their cultivation. Protected cultivation is a potential technology that can economically uplift small and marginal farmers especially under hilly terrains by increasing their per unit returns as it can increase the yield manifolds and improve the quality of the produce as per the demand of the market.

Cucumber is an important vegetable cash crop under protected conditions. Cucumber cultivation is gaining popularity as locally grown cucumbers are very new to this region. Open conditions hinder fruit development and maturation and protected cultivation is the only option for a successful crop of cucumber. Low production due to lack of pollinizers and poor quality (bitterness) have been a major issue with this crop due to lack of suitable hybrids/varieties in the region.

Intervention, Technology Implementation and support

Cucumber hybrid Aviva is agynocious, parthenocarpic and an early hybrid. KVK Leh conducted on farm trials on Aviva under protected condition in 2020 and 2021. Hybrid Aviva is early with 98% fruitingand harvesting continued for almost five months .The results were quite impressive and in 2022 the crop was put under FLD trials at different locations in Saspol, Likir, Tukcha, Chemday villages of District Leh. The average productions from all the villages have been summarized and presented as average yield under greenhouse conditions in Ladakh.

Output and Outcome

Aviva cucumber spaced at 60cmx1m under greenhouse recorded an average yield of 94.5 t/ha as compared to Farmers practice (48.6 t/ha only). Economic analysis of demonstrated technology in comparison to farmer's variety revealed that an average net return of Rs. 2548108/- ha^{-1} was obtained under the demonstrated technology which was 313% higher than Farmer's practice. The fruits obtained were sweet andhad very good taste and flavor. All the fruits were marketable and uniform in size and shape.

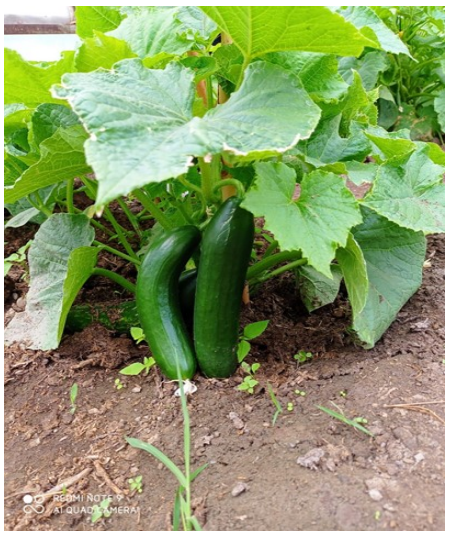
Technology demonstrated	**Average yield (q ha^{-1})**	**Increase over farmer's practice (%)**	**Net returns (Rs ha^{-1})**	**B:C ratio**
Aviva Cucumber (greenhouse)	945	94	2548108	2.1
Farmer's Practice (green house)	486	-	616000	1.6

Note: 1.Yield here refers to both marketable and unmarketable fruits.

Uptake and Impact

Cucumber cultivation under greenhouse conditionsis a remunerative technology option for the farmers of Ladakh region. Apart from higher yields in comparison to farmer's practice, the fruits were sweeter anduniformin size and shape. The first year of OFT trials itself inspired many farmers of the trial locations and they demanded and bought Aviva seeds themselves through sources from outside Ladakh for sowing next year. About 0.25 hectare area in the district (population and land holding - very less) have been under cultivation in 2022 resulting in Rs.6,37027 estimated net returns to the farmers in the

district (low population). In view of its performance, cultivation of cucumber Aviva could be further intensified by bringing larger areas under cultivation as there are huge demands for the fruits from restaurants and hotelsetc. This crop is sure to fetch good price making farmers self-reliant and self sustaining.



VERMI COMPOSTING: TURNING WASTE INTO WEALTH

Situation analysis:

The Union Territory of Ladakh also called as cold desert witnesses' wide diurnal and seasonal fluctuations in temperature with -30°C in winter and +35°C in summer. Precipitation is very low mainly in the form of snow. The farming season is confined here for about half of the year from April-May to Sep-October. This is because of the freezing cold winter. The entire area is devoid of any natural vegetation. Largely monocropping is prevalent in the region. Wheat and Barley being the principal crops grown in the short growing season, vegetable production and livestock are also a major source of livelihood for the peoples of this region.

Technology Implementation and support:

As Livestock constitutes a major production system of Ladakh region. KrishiVigyan Kendra-Leh in its endaveour towards sustainable agriculture and to recycle the animal dung, kitchen and farm waste provided vermi beds along with the Efficient worms (EiseniaFoetida) to the farming community in different villages of Leh district. These vermi beds measuring 4*2*2 feet were provided under its Tribal Sub Plan. As Leh consists mostly of peoples religiously affiliated to Buddhism there was an initial reluctance by them to take on this enterprise, but later on as a result of the motivation and awareness by KVK-Leh regarding its health and economical benefits they agreed to go for vermi composting. Practical demonstrations on how to produce vermi compost to motivate them to recycle their farm and kitchen waste were conducted on farmers' fields by experts from KVK-Leh.

APR 2


Uptake, Spread and Benefits:

The vermi beds provided to 135 No's of farmers in different villages of Leh district by KVK-Leh under Tribal Sub Plan and its various schemes has brought a considerable area in this district under organic cultivation. Crops including vegetables and Cereals like wheat and Barley are grown on about 35 hectares of land by the farmers using the vermi compost. The household waste is now being properly recycled through vermi composting. The cost of cultivation has also been reduced by about 15-20 percent as the farmers do not have to spend on chemical fertilizers. An increase in the yield has also been reported. Many farmers are also selling the vermi compost at a price of rupees 25 to 30 per kilogram thereby augmenting their income. As a result of the continuous guidance and monitoring, farmers of the region are successfully producing vermi compost as well as raising worms. The worms reared in the demo units are being provided to many other farmers resulting in a horizontal spread of the technology. Some of the farmers are taking it as an enterprise. This initiative of KVK-Leh has brought many hectares of land under organic cultivation and the produce is also organic one. Vermi compost has also made farming more remunerative for them as it has considerably reduced their cost of cultivation and increased the yields. This is helping realize the government's ambitious goal of doubling farm income by 2022.

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

9.C. 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

9.D. Indicate the specific training need analysis tools/methodology followed for

- Identification of courses for farmers/farm women
- Rural Youth
- Inservice personnel

9.E. Field activities

i. Number of villages adopted: 2
ii. No. of farm families selected: 86
iii. No. of survey/PRA conducted: - 1

9.F. Activities of Soil and Water Testing Laboratory / Plant Health Clinic

Status of establishment of Lab : Established
1. Year of establishment : 2006
2. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost
1	Kjdal digestion cum distillation unit combined Make: Poplar India	2	18562 each
2	pH meter Microprocessor based 0.01 digital data storage 16x12 LCD display EC	1	13387
3	Shakers Toshiba Make 18x18inch, digital display and adjustable speed	2	13680 each
4	Hot air oven Toshiba make Temperature up 250oC double walled, digit temperature controller cum indicator, size: 605x605x910mm Cap. 336ltr.	1	19800
5	Refrigerator Model 26 Deluxe, 260ltr double door	1	15250

6	Digital electronic balance Sartorius (Germany) Weighing cap. 320g, A adapter and operator manual	1	87750
7	Digital electronic balance Make: Globus Cap. 3000g, Platform si 220x280mm	1	12336
8	Digital conductivity meter Make: Poplar India	1	8437
9	Plant grinder Make Behls India, S.S. 1/2 HP, 100x500mm	1	25851
10	UV-VIS SpectophotometerElico	1	99000
11	Hotplate with thermostat and pyrometer size: 455x605mm	1	21375
12	Quartz double distillation apparatus 2.5ltr/hr Make Poplar India	1	106762
13	Flame photometer Make: Systronix	1	39065
14	Mridaparikshak	2	172000
Total		17	685497

3. **Details of samples analyzed / Soil Health Cards issued during 2022-23 :**

Details	No.	No. of Farmers	No. of Villages	Amount realized
Soil Samples				
Water Samples				
Plant Samples				
Soil Health Cards Issued				

4. Status of mini soil testing labs/kit : Functional
5. Year of procurement of lab/kit :2015, 2017
6. No. of mini labs with the KVK :2
7. Type of mini labs (Name of lab/Kkt) : Mridaparikshak

8. **Details of samples analyzed through mini soil kit / Soil Health Cards issued during 2022-23 :**

Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized
Soil Samples				
Water Samples				
Soil Health Cards Issued				

10. IMPACT

10.1 Impact of KVK activities (Not to be restricted for reporting period).

Name of specific technology/skill transferred	*No. of participants*	*% of adoption*	*Change in income (Rs.)*	
			Before Rs./acre)	*After (Rs./acre)*
1. Trench Off season vegetable production	41	20%	2000/- = (22'x14'x1 ½')	14000
2. Mulching	15	15%	2000/- (6'x4'6')	3400
3. Composting	13	15%	- (12'x10')	2000
4 Vermicomposting	46	17%		40/kg

11.B. Cases of large scale adoption

- Trench off season vegetable production.
- Use of high yielding varieties in cereals and vegetables.
- Improved Dairying and their efficient cooperative marketing.
- Fodder development.
- Mulching.
- Compost making
- Protected cultivation.

11.C. Details of impact analysis of KVK activities carried out during the reporting period

Name of specific technology/skill transferred	*No. of participants*	*% of adoption*	*Change in income (Rs.)*	
			Before Rs./acre)	*After (Rs./acre)*
1. Trench Off season vegetable production	6	21%	2000/- = (22'x14'x1 ½')	12000
2. Mulching	15	15%	2000/- (6'x4'6')	2900
3. Composting	12	15%	- (12'x10')	900
1. Apricot Harvesting Net	15	12%	2000/per plant	3500/plant

PART XII - LINKAGES

12.A. Functional linkage with different organizations

S. No.	Programme	Nature of linkage	Remarks
1	Ladakh Autonomous Hill Development Council	Participation in meetings, Joint diagnostic team visits, organizing demonstrations, organizing field days/KisanGosthi and training programmes, Financial assistance	
2	Department of Agriculture, Horticulture, Anima Husbandary, Sheep Husbandary, Forest		
3	DIHAR (DRDO)		
4	Desert Development Agency		
5	District Rural Development Agency (DRDA)		
6	Watershed Development Projects		
7	NGOs i. LNP (Leh Nutrition Project) ii. LEHO (Ladakh Environmental and Health organization). iii. LEDeG. iv. G.B. Pant National Institute of Himalayan Environment Ladakh Region		

12.B. List special programmes undertaken by the KVK and operational now, which have been financed by State Govt./Other Agencies

Name of the scheme	*Date/ Month of initiation*	*Funding agency*	*Amount (Rs.)*
Trench Off season vegetable production	2006	LAHDC, Leh	-
Apricot Harvesting Net	2012	LEHO Leh	

11.3 Details of linkage with ATMA

a) Is ATMA implemented in your district Yes

S. No.	Programme	Nature of linkage	Remarks
1	Farmer Scientist Interaction	Resource Person	
2	LadakhAgri/HortiMela	As Judges and stall exhibition by KVK	
3	Exposure visit	At various demo unit of KVK	

Coordination activities between KVK and ATMA during 2022-23

S. No.	*Programme*	*Particulars*	*No. of programmes attended by KVK staff*	*No. of programmes Organized by KVK*	*Other remarks (if any)*
01	Meetings				
02	Research projects				
03	Training programmes	Farmer ScientisInteractin	5		
04	Demonstrations				
05	Extension Programmes				
	KisanMela	LadakhAgriHortiMela	1		
	Technology Week				
	Exposure visit	Farmer Exposure (f)	At KVK		
	Exhibition	AgriHortiMela	1		
	Soil health camps				
	Animal Health Campaigns				
	FFS				
06	**Publications**				
	Video Films				
	Books				
	Extension Literature				
	Pamphlets				
	Others News coverage				
07	**Other Activities**				

11.4 Give details of programmes implemented under National Horticultural Mission

S. No.	Programme	Nature of linkage	Constraints if any

11.5 Nature of linkage with National Fisheries Development Board

S. No.	Programme	Nature of linkage	Remarks

11.6. Details of linkage with RKVY

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks

12. PERFORMANCE OF INFRASTRUCTURE IN KVK

12.1 Performance of demonstration units (other than instructional farm)

Sl. No.	Demo Unit	Year of estt.	Area	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
	Trench (8)				Seedlings	230043		92423	
					Water melon	84		3360	
					Musk melon	62		3100	
					Tomato	98		3430	
					Brinjal	25		1000	
					Total			**103313**	
	Chinese green house(summer)				Tomato	225		7875	
					Bottle gd.	42		840	
					Capsicum	54		2430	
					Total			**3270**	
	Local commercial centre(summer)				Cucumber	83		4150	
					Capsicum	34		1530	
					Total			**5680**	
	Local (summer)				Tomato	74		2590	
					Brinjal	32		1280	
					Total			**3870**	
	Main field				Onion	2500		62500	
					Cabbage	535		10700	
					cauliflower	274		9590	
					Broccoli	86		3870	
					Carrot	12		360	
					Radish	17		340	
					Total			**87360**	

	Low Tunnel(2)				Water melon	62		2480	
					Musk melon	38		1900	
					Summersquash	72		1080	
					Total			**5460**	
	Dairy Unit				Milk			**24370**	

2.2 Performance of instructional farm (Crops) including seed production

Name Of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.	Cost of inputs	Gross income	Remarks
Cereals									
Pulses									
Oilseeds									
Fibers									
Spices & Plantation crops									
Floriculture									
Fruits									
Newly planted Apple Orchards	-	-	0.5	Delicious	Fruits	-	-	-	-
Vegetables									
Cabbage			0.2		Vegetables	2.5qtl.	3000	7500	
Cauliflower					Vegetable	0.42qtl	800	1470	
Broccoli						0.45qtl	1200	1800	
Onion					Bulb	2.5 qtl	12000	36000	
Leafy vegetables						0.7qtls		2100	
Tomato					Fruit	0.5qtl	850	1750	
Summer Squash					Vegetables	0.20qtl	370	800	
Cucumber					Vegetable	0.20qt	370	800	
Forestry			1.2		Cuttings	2040 cuttings	8160	71400	
Fodder			2.10		Fodder	85qtls	4600	22500	
Others (specify)									

12.3 Performance of production Units (bio-agents / bio pesticides/ bio fertilizers etc.,)

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
	Spawn (*PleurotusSpp)*	*49kgs*		2431	

12.4 Performance of instructional farm (livestock and fisheries production)

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1	Jersey Cows	Jersey	Milk	609.25ltrs		24370	

12.5 Utilization of hostel facilities:

Accommodation available (No. of beds) =

Months	***No. of trainees stayed***	***Trainee days (days stayed)***	***Reason for short fall (if any)***
April 2015			
May 2015			
June 2015			
July 2015			
August 2015			
September 2015			
October 2015			
November 2015			
December 2015			
January 2016			
February 2016			
March 2016			

12.6. Database management

S. No	***Database target***	***Database created by the KVK***

12.7 Rainwater Harvesting

Training programmes conducted using Rainwater Harvesting DemonstrationUnit

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

Demonstrations conducted using Rainwater Harvesting Demonstration Unit

Date	Title of the Demonstration	Client (PF/RY/EF)	No. of Demos.	No. of Participants including SC/ST			No. of SC/ST Participants		
				Male	Female	Total	Male	Female	Total

Seed produced using Rainwater Harvesting Demonstration Unit

Name of the crop	Quantity of seed produced (q)

Plant materials produced using Rainwater Harvesting Demonstration Unit

Name of the crop	Number of plant materials produced

Other activities organized using Rainwater Harvesting Demonstration Unit

Activity	No. of visitors
Visit of farmers	
Visit of officials	

13. FINANCIAL PERFORMANCE
FINANCIAL PERFORMANCE

13.1 Details of KVK Bank accounts

Bank account	Name of the bank	Location	Account Number
With Host Institute			
With KVK	Jammu and Kashmir Bank	Leh	0069010100001045

13.2 Utilization of KVK funds during the year 2022-23 (up to March 2023)

S. No.	Budget Head	Opening Balance as on 01.04.2022	Revised Estimate				Expenditure				Closing Balance as on 31.03.2023
			other than TSP, SCSP, NEH	TSP	SCSP	Total	other than TSP, SCSP, NEH	TSP	SCSP	Total	
	Grants for creation of Capital Assets (CAPITAL)					**0**					
1	Works					**0**					
	(i) Office Building					**0**					
	(ii) Residential Building					**0**					
	(iii) Minor Works					**0**					
2	Equipment			230000		**230000**		224499			**5501**
3	Information Technology					**0**					
4	Library Books and Journals					**0**					
5	Vehicle & Vessels					**0**					
6	Livestock					**0**					
7	Furniture & fixtures					**0**					
8	Others					**0**					
	Total - CAPITAL	**0**	**0**	**230000**	**0**	**230000**	**0**	**224499**	**0**	**0**	**5501**
9	**Pay & Allowances**	**0**	**20050000**			**20050000**	**20050000**				**0**
	Grants in Aid – General					**0**					
10	Travelling Allowance (Domestic)		101000			**101000**	101000				**0**
11	A. Research Expenses	14624	316376			**331000**	330995				**5**
	B. Operational Expenses		420000			**420000**	419376				**624**

	C. Infrastructure (Rent,Electricity, Water charges, Veh running exp, insurance)		126000			**126000**	125831				**169**
	D. Communication ((Postage and telephone)		21000			**21000**	8770				**12230**
	E. Others (excluding TA)(Printing and stationery consumable, Advertising, Legal Professional charges)		150000			**150000**	149810				**190**
	F. Publicity & Exhibitions		0			**0**					
	G. Guest House-Maintenance (recurring only)		0			**0**					
	H Other Miscellaneous		150000			**150000**	154520				**-4520**
	I. Repair & Maintenance					**0**					
	(i) Equipment , Vehicle & Others		25000			**25000**	24943				**57**
	(ii) Office building		30000			**30000**	30000				**0**
	(iii) Residential building		0			**0**					
12	Revolving Fund					**0**					
	Total Recurring Contingency	**0**				**0**					
	Grants in Aid-General (RC+TA)	**14624**	**1339376**	**0**	**0**	**1354000**	**1345245**	**0**	**0**	**0**	**8755**
	Grand Total (Capital + Salary +General)	**14624**	**21389376**	**230000**	**0**	**21634000**	**21395245**	**224499**	**0**	**0**	**14256**

3.3 Status of revolving fund (Rs. in lakhs) for the last four years

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year
April 2018 to March 2019	1163043.01	297533.00	0.00	1460576.01
April 2019 to March, 2020	1460576.01	723898.00	696880.00	1487594.01
April 2020 to March, 2021	1487594.01	300770.00	645101.00	1143263.01
April 2021 to March 2022	1143263.01	329822.00	8,86,900.00	5,86,185.01
April 2022 to March 2023	793167.00	593096.00	383129.00	1003134.00

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14. Details of HRD activities attended by KVK staff during 2022-23

Name of the staff	*Designation*	*Title of the training programme*	*Institute where attended*	*Date*

15. Please include any other important and relevant information which has not been reflected above (write in detail).

Annexures

District Profile – I

Although, Leh district is one of the largest districts of the country in terms of area, it has the lowest population density across the entire country. The district borders Pakistan occupied Kashmir and Chinese occupied Ladakh in the North and Northwest respectively, Tibet in the east and Lahoul-Spiti area of Himachal Pradesh in the South. The district of Leh forms the Northern tip of the Indian Sub Continent. According to the Geographical experts, the district has several other features, which make it unique when compared with other parts of the Indian Union. The district is the coldest and most elevated inhabited region in the country with altitude ranging from 2300 meters to 5000 meters. As a result of its high altitude locations, annual rainfall is extremely low. This low status of precipitation has resulted in scanty vegetation, low organic content in the soil and loose structure in the cold desert. But large-scale plantation has been going in the district since 1955 and this state of affairs is likely to change.

LOCATION AND PHYSICAL FEATURES

Leh district is situated roughly between 32 to 36 degree North latitude and 75 to 80 degree East longitude. The district covers approximately an area of 45100 Sq.kms on this side of line of control, which makes it the 2nd largest district in the country. The district is one of the coldest and most elevated inhabited regions in the country. The high mountain peaks, kissing the blue sky ranging from 18000 ft. to 26000 ft. in the

district are oriented in parallel ranges namely the Karakoram Range and the Zanskar ranges. The world highest motor able road viz**Khardongla** at an elevation of 18380 ft. links Nobra valley.

RIVERS

The Indus, the Shayok and the Zanskar rivers flow between the three mountain ranges resulting in the concentration of the population in the valleys in these rivers.

CLIMATE AND RAINFALL

District Leh experience extremes of climate temperature ranges from 30 degree Celsius in the short summer to minus 35 degree Celsius at the height of the winter at some places. Precipitation is very low averaging around 9 cm to 10 cm annually. The winter is always severe and makes the region inaccessible as roads link from Srinagar as well as Himachal Pradesh remain closed due to closure of Zojila, Rahtang and other passes due to heavy snowfall.

AGRICULTURE AND ALLIED ACTIVITIES

1.1AGRICULTURE

Agriculture is the backbone of the district economy as it engaged over 70% of the working force mostly as cultivators, agricultural labourers and livestock rearers, yet this sector has been now affected by the service sector especially Tourism as it attracts the people constantly. According to 2001 census, the work participation has reduced by 0.3%. Only 37.92% of the working force constitutes Cultivator whereas 4.85% (1981 census) are engaged in Livestock, hunting and forestry.

According to Village papers, the district has a reporting area of 51786 hectares out of which 9874 hectares has been brought under cultivation of various crops during 2011-12. Whole of the cultivated area is irrigated and mono cropped with main source of irrigation is canal/ khuls. Double cropping is undertaken in some parts of Khaltsi and Nubra blocks.

Crop wise area brought under cultivation during the year 2011-12 is tabulated below:-

AREA UNDER DIFFERENT CROPS.(2011-12)

S.No	Crop		Area
1.	Wheat	Hect.	2595
2.	Grim	Hect.	4488
3.	Pulses	Hect.	243
4.	Vegetable	Hect.	280
5.	Fodder	Hect.	1991

Technology Inventory and Activity Chart - III

Include

1. Krishi Vigyan Kendra, SKUAST-K Leh-1
2. Inventory of latest technology available * nil

Sl. No	Technology	Crop/enterprise	Year of release or recommendation of technology	Source of technology	Reference/citation
1.	Trench	Tomato (PunjanChhuhara)	Trench (1998) PunjanChhuhara (1987)	1KVK-Leh 2. PAU Ludhiana	-
2.	Low tunnel	Watermelon (Kalia)	2016	Rizwan Seed Company	-
3.	Low tunnel	Nursery raising	2007	KVK-Leh	-
4	NSC-105B	Broccoli	2016	NSC	-

3. Activity Chart

Crop/Animal/Enterprise	Problem	Cause	Solution	Activity	Reference of Technology
Tomato	Low productivity of tomato under cold arid –leh district	Weed problem, low soil temperature and moisture under cold arid-Leh district	Black polythene mulching	Training and FLD programme on mulching technology in tomato in different parts of Leh district	SKUAST Kashmir, DIHAR leh

Annexure –I

Subject: Minutes of 18h Scientific Advisory Committee Meeting of KVK Leh

MINUTES OF MEETING OF 19TH SAC MEETING OF KVK-LEH HELD ON SEPTEMBER 6, 2022, CHAIRED BY HON'BLE VICE CHANCELLOR, SKUAST-K

The 19th Scientific Advisory Committee (SAC) meeting of KVK- Leh was held on 6thSeptember 2022, at SKUAST-K Stakna. The meetingwas chaired by Prof. (Dr.) N.A.Ganai, Hon'ble Vice Chancellor (HVC) SKUAST-K. Sh. StanzinChosphel, Executive Councillor (Agriculture.) LAHDC-Leh was the Chief guest while Sh. Ghulam Mehdi Executive Councillor (Horticulture) LAHDC-Leh, Sh. TashiNamgyalYakzee, Hon'ble Executive Councillor (Animal/Sheep) and Shri Ravinder Kumar, IAS, Commissioner Secretary, Agriculture Production UT Ladakh were the Guest of honourson this occasion. The meeting was also attended by Worthy Director Extension, SKUAST-K Prof. (Dr.) Dil Muhammad Makhdoomi, Registrar, Comptroller, Head KVK Pulwama, Dy. Registrar of SKUAST-K, officers from the line departments and progressive farmers. At the onset, Dr. D. Namgyal Associate Director (R&E) HMAARI, Leh welcomed the chief guest and other dignitaries. Dr. Feroz Din Sheikh, Professor and Head KVK Lehpresented the Action Taken Report of 19th SAC, Annual Progress Report

(2021-22) and Action Plan (2022-23) of KVK Leh. He gave a detailed presentation on all the activities of last year including the Action Taken Report and work done under all ongoing externally funded projects. In his presentation, he presented the important achievements of KVK-Leh and the thrust areas where the Kendra is focusing. About 133 officials/farmers participated in the meeting.The important points came up during the discussion were as under.

Prof. Nazir Ahmad Ganai, Hon'ble Vice Chancellor SKUAST- K address:

- Appraised the work done by KVK Leh, especially in promoting Integrated Farming System, Livestock Production, Protected Cultivation and value addition of various locally produced agriculture crops for the benefits of tribal farmers of Ladakh region.
- KVK-Leh has presented itself as a role model for other KVKs of the University and he congratulate all the staff of KVK-Leh for achieving this excellence.
- Special remarks and satisfaction shown towards the externally funded ongoing research projects taken up by KVK-Leh during the past 2 years.
- Route map of future development programme has been developed, now there is need for proper follow-up with dedication.
- More emphasis should be laid on commercial production of vegetables owing to high photo intensity and less prone to diseases.
- Special attention to be given for organic farming in which KVK-Leh should play a role model for the entire Ladakh region.
- Imparting trainings on the latest technologies in agriculture to the field functionaries of line departments.
- Popularization of Value addition, development of more and more numbers of entrepreneurs and branding of produce among the local farmers.

Sh. Ravinder Kumar, IAS Secretary to HLG & Secretary (PDD/Animal & Sheep/Coop/Youth & Sports) address:

- Every effort should be made in increasing the farmers' income.
- Share the technologies related to pashmina production with line departments.
- Indigenous conservation of local crop varieties and livestock should be given priority.
- Popularization of bio pesticides among the farmers should be done.

Sh. StanzinChosphel, Executive Councillor (Agriculture.) LAHDC-Leh address:

- Acknowledged and praised the role of KVK-Leh in the overall development of farming system in Leh district.
- Need of fish farming to be taken up by KVK-Leh and in this matter fisheries department were told to open up two fish units (One trout and one carp unit) at KVK-Leh to study its performance.
- Submission of a project proposal related to organic agriculture.
- Trainings on value addition to the extension workers.
- Popularization of Honey production in Ladakh
- Praised the work done in understanding and documentation of various petroglyph art taken up by KVK-Leh and ask to submit a project proposal on Petroglyph in Ladakh

Sh. TashiNamgyalYakzee, Hon'ble Executive Councillor (Animal/Sheep) address

- Need to address the issue related to feed and fodder scarcity for the livestock of Ladakh region.
- Pasture development programmes should be included and submission of project on pasture development.

Prof. DilMohdMakhdoomi, Worthy Director Extension:

- Need to include newer crop varieties in the region taking the advantage of global warming
- Told the house about the hard work and dedication taken by the staff of KVK-Leh in outreaching programmes, developing entrepreneurs and value addition.
- Praised the ongoing livestock research and development programmes for the benefit of farming community of Ladakh through various schemes and externally funded project.
- Fish farming to be added in the present integrated farming system model of KVK-Leh in collaboration with fisheries department UT Ladakh.

Representatives from Agriculture Department LAHDC Leh

- Formulate a crop sequence for Ladakh greenhouse.
- Popularization of IFS model.
- Testing varieties of Red Rajma for organic production.
- High yielding varieties of wheat and barley varieties should be introduced.

Representatives from Animal Husbandry Department LAHDC Leh

- Involvement of line departments in Animal Health camps organized by KVK Leh
- Knowledge sharing with line departments.

Progressive farmers and Farm Women:

- Appreciated the role of KVK-Leh in technology dissemination at the grassroots level, providing inputs, necessary advice, diagnostic services, developing progressive farmers and all other relevant information as required by them from time to time

Sd/-
Professor and Head
KVK Leh

Annexure –I

S.No	Name	Designation and Address
1	Prof. (Dr.) N. A Ganai,	Hon'ble Vice Chancellor (HVC) SKUAST-K.
2	Sh. Ravinder Kumar	IAS Secretary to HLG & Secretary (PDD/Animal & Sheep/Coop/Youth & Sports)
3	Sh. Stanzin Chosphel,	Executive Councillor (Agriculture.) LAHDC-Leh
4	Sh. Tashi Namgyal Yakzee	Executive Councillor (Animal) LAHDC Leh
5	Prof. (Dr.) Dil Muhammad Makhdoomi	Director Extension, SKUAST-K
6	Dr. D. Namgyal	Associate Director (R&E) HMAARI
7	Dr. JigmetYangchen	PC KVK Nyona
8	Scientists	HMAARI, SKUAST-K Leh
9	SMSs	KVK Leh
10	Director CAZRI	CAZRI Leh
11	Head	G B Pant Leh
12	Official of Line Departments	
13	Progressive Farmers	
14	KVK Staff	
15	HMAARI Staff	
16		
17		
18		

Annexure II

Details of Training Programmes and other Extension Activities conducted during 2022-23

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

Date	Clientele	Title of the training programme	Discipline	Thematic area	Duration in days	Venue (Off / On Campus)	Number of other participants			Number of SC/ST			Total number of participants		
							Male	Female	Total	Male	Female	Total	Male	Female	Total
21/4/2022		Awareness programme on cause effect and solution to food security			1 day	On Campus				3	39	42	3	39	42
		Organic Farming			1 day	On Campus				3	39	42	3	39	42
		Feeding Management of dairy cattle			1 day	On Campus				3	39	42	3	39	42
26/4/2022		Kisan Bhagidhari Prathmikta Hmari campaign under Azadi ka Amrit Mahotsav			1 day	On Campus				49	118	167	49	118	167
13/5/2022		Scientific Crop Cultivation								0	19	19	0	19	19
13/5/2022		Mother and Child health issues and strategies								0	19	19	0	19	19
22/5/2022		Value addition of Milk and Milk Production (Sponsored programme under DST Sheep)								0	8	8	0	8	8
23/5/2022		Scientific management of								18	0	18	18	0	18

		Sheep and Gat (Sponsored programme under DST Sheep)													
24/5/ 2022		Health benefit of milk and milk products (Sponsored programme under DST Sheep)				Off campus				0	20	20	0	20	20
28/5/ 2022		Live telecast of the Innauguration programme on the World Ist Nano Urea (Liquid) at IFFCO by Hon'ble Prime Minister				On Campus				8	21	29	8	21	29
31/5/ 2022		Kisan Samman Nidhi Yojna Live Telecas				On Campus									
20-22nd May 2022		Scientific Management of Sheep and Goat			3 days	Off campus				40	0	40	40	0	40
21/6/ 2022		Healthy Diet			1 day	Off Campus				1	23	24	1	23	24
21/6/		Importance of			1 day	Off Campus				1	23	24	1	23	24

2022		vegetable in Diet													
21/6/ 2022		Animal Health			1 day	Off Campus				1	23	24	1	23	24
21/6/ 2022		Awareness on balanced use of fertilizer/Region Specific Agroforestry			1 day	Off Campus				1	23	24	1	23	24
22/6/ 2022		Scientific cultivation of Vegetables			1 day	Off Campus				0	57	57	0	57	57
22/6/ 2022		Adolescent Health issues			1 day	Off Campus				0	57	57	0	57	57
22/6/ 2022		Poultry rearing under Cold Arid conditions			1 day	Off Campus				0	57	57	0	57	57
22/6/ 2022		Awareness programme on cultivation of high yielding varieties of wheat and barly (IIWBR)			1 day	Off Campus				0	57	57	0	57	57
23/6/ 2022		Technological Intervention in vegetable crops			1 day	Off Campus				3	20	23	3	20	23
23/6/ 2022		Women and Chile Health care			1 day	Off Campus				3	20	23	3	20	23

23/6/2022		Repeat breeding in cows			1 day	Off Campus				3	20	23	3	20	23
4/7/2022		Baking of Multigrain cake and cookies			1 day	Off Campus (Ayee)				4	30	34	4	30	34
4/7/2022		Organic cultivation techniques			1 day	Off Campus (Ayee)				4	30	34	4	30	34
4/7/2022		Management of Dairy Cattle			1 day	Off Campus (Ayee)				4	30	34	4	30	34
4/7/2022		Animal Health Camp			1 day	Off Campus (Ayee)				8	5	13	8	5	13
5/7/2022		Promoting the neglected and underutilized crops to include in diet			1 day	Off Campus (Yarma)				20	28	48	20	28	48
5/7/2022		Importance and concept of organic farming			1 day	Off Campus (Yarma)				20	28	48	20	28	48
5/7/2022		Management of Parasitic diseases in livestock			1 day	Off Campus (Yarma)				20	28	48	20	28	48
6/7/2022		Scientific vegetable cultivation techniques			1 day	Off Campus (Phukpochey)				0	21	21	0	21	21
6/7/2022		Awareness on balance diet and			1 day	Off Campus (Phukpochey)				0	21	21	0	21	21

		nutrient content in local food													
6/7/2022		Management of diseases in dairy cattle			1 day	Off Campus (Phukpochey)				0	21	21	0	21	21
		Cultivation of High Yielding varieties of Wheat and barley (IIWBR)			1 day	Off Campus (Phukpochey)				0	21	21	0	21	21
7/7/2022		Awareness programme on food security			1 day	Off Campus (Panamic)				5	14	19	5	14	19
7/7/2022		Importance of vegetables in nutritional security			1 day	Off Campus (Panamic)				5	14	19	5	14	19
7/7/2022		Feeding Management in dairy cattle			1 day	Off Campus (Panamic)				5	14	19	5	14	19
7/7/2022		Animal Health Camp			1 day (	Off Campus (Panamic)				6	17	23	6	17	23
16/7/2022		94th ICAR Foundation Day			1 day	On Campus				12	43	55	12	43	55
8/8/2022		Processing of Tomatoes (Puree and Chutney)			1	Off campus (Matho)				0	30	30	0	30	30
8/8/2		Mulching			1	Off campus (Matho)				0	30	30	0	30	30

022		Technology and application													
8/8/2022		Insect Pest Management in Vegetable Crops			1	Off campus (Matho)				0	30	30	0	30	30
9/8/2022		Insect Pest Management (Under NICRA Project)			1	Off Campus (Chuchot)				0	15	15	0	15	15
9/8/2022		Mulching Technology and application(Under NICRA Project)			1	Off Campus (Chuchot)				0	15	15	0	15	15
1/9/2022		Mulching and Low tunnel technologies for vegetable production								19	25	44	19	25	44
1/9/2022		Integrated Pest and Disease Management								19	25	44	19	25	44
2/9/2022		Scientific Vegetable Cultivation								13	16	29	13	16	29
2/9/2022		Integrated Pest and Disease Management								13	16	29	13	16	29
15/9/		Nutrition and								10	6	16	10	6	16

2022		Vitamins present in different vegetables and their role													
15/9/ 2022		Nutrient present in local foods and their health benefits								10	6	16	10	6	16
17/9/ 2022		Role of greenhouse technology in sustaining year round nutritional security								15	40	55	15	40	55
17/9/ 2022		Insect Pest Management in vegetables								15	40	55	15	40	55
26-9-2022 to 5/10/ 2022		Scientific Management of Sheep and Goats in Mountains Under DST STI Hub Project on Production, Improvement, Sustainable Development and Livelihood Improvement of			10 days	Off Campus				4	6	10	4	6	10

		Threatened Tribal Nomads of Ladakh Through Scientific Sheep and Pashmina Goat Rearing													
7/9/2023		1stLadakhAgriExpo, KisanMelaKargil)													
		SAC Meeting								74	59	133	74	59	133
17/9/2022		PoshanMah								15	40	55	15	40	
5/10/2022		Soil Nutrient Management in collaboration with IFFCO			1	Off Campus				0	21	21	0	21	21
17/10/2022		Kisan Samman Sammelan			1	On Campus				12	25	37	12	25	37
26-9-2022 to 5/10/2022		Scientific Management of Sheep and Goats in Mountains Under DST STI Hub Project on Production, Improvement, Sustainable			10 days	Off Campus				4	6	10	4	6	10

		Development and Livelihood Improvement of Threatened Tribal Nomads of Ladakh Through Scientific Sheep and Pashmina Goat Rearing													
1st to 2nd November 2022		Farmers Outreach Progrmme on Natural Farming (2 days)			2 days	On Campus				0	40	40	0	40	40
3rd - 4th November 2022		Farmers Outreach Programme on Natural Farming (2 days)			2 days	On Campus				8	32	40	8	32	40
7th – 8th November 2022		Farmers Outreach Programme on Natural Farming (2 days)			2 days	On Campus				0	40	40	0	40	40
15/11/2022		One day Awareness programme on Jal Shakti Abhiyan			1 day	KVK Leh				0	28		0	28	28

25/11 /2022		Sensitization programme on Healthy Diet for healthy life			1 day	Off Campus (Chemdar y)				0	27		0	27	27
12th - 13th Nove mber 2022		Scientific Management of Sheep and Goats (Under DST STI Hub Project) (2 days)			2 day	Off Campus				10	0		10	0	10
14th – 15th Nov 2022		Scientific Management of Sheep and Goats (Under DST STI Hub Project) (2 days)			2 day	Off Campus				0	21		0	21	21
25/11/ 202		Kisan Gosthi			1 day	Off Campus (Chemday)				0	27	27	0	27	27
12/12 /2022		Awareness programme on formation of Fish Farmer Producer Organization								7	26	33	7	26	33
31/12		Training Cum								8	45	53	8	45	53

/2022		Awareness Programme on Natural Farming													
31/12		method demonstrations(Natural Farming)								8	45	53	8	45	53
		KisanMela under Jal Shakti Abhiyan								19	48	67	19	48	67
5/12/		World Soil Day								0	22	22	0	22	22
8/12/		KVK Annual Day								35	22	57	35	22	57
23/12		Kisan Diwas								20	17	37	20	17	37
3/1/2023		Storage concepts and storing vegetables for winter months								10	43	53	10	43	53
3/1/2023		Management of dairy animals during winter months								10	43	53	10	43	53
3/1/2023		Safe use of pesticides								10	43	53	10	43	53
3/1/2023		Mushroom Cultivation								10	43	53	10	43	53
7/1/2023		Importance of soil microbes in maintaining soil health								19	41	60	19	41	60

7/1/2023		Safe use of pesticides								19	41	60	19	41	60
7/1/2023		Management of yellow rust and loose smut in barley								19	41	60	19	41	60
7/1/2023		Preservation of feed and fodder								19	41	60	19	41	60
		Animal Health Camp													
		Animal Health Camp													
7/1/2023		method demonstrations (Natural Farming)								19	41	60	19	41	60
4/2/2023		Vermicomposting								3	15	18	3	15	18
4/2/2023		Management of Yellow Rust and Loose Smut in Wheat								3	15	18	3	15	18
4/2/2023		Integrated Pest Management								3	15	18	3	15	18
4/2/2023		Out scaling of Natural farming through Krishi Vigyan Kendras								3	15	18	3	15	18

24/2/		Webinar attend (Post Budget Webinar, PM Kissan Samman Nidhi)								23	42	55	23	42	55
27/2/		Webinar Kisan Samman Nidhi Yojna										37			37
18/3/ 2023		Importance of Millets								2	16	18	2	16	18
18/3/ 2023		Raising Healthy Vegetable Nursery								2	16	18	2	16	18
18/3/ 2023		Pest Management in Vegetable Crops								2	16	18	2	16	18
16/3/ 2023		Preparation of Rose Hip Jam								0	2	2	0	2	2
18/3/ 2023		Webinar attend (International Millet conferernce)								2	16	18	2	16	18