PROFORMA FOR ANNUAL REPORT 2018-19

1. GENERAL INFORMATION ABOUT THE KVK

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

Address	Telephone		E mail
	Office	FAX	
Krishi Vigyan Kendra, Jammu, SKUAST-J, R.S.Pura Jammu 181 102	01923-252929	01923-252929	kvkjammu@gmail.com Website-www.kvkjammu.nic.in

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

Address	Telephone		E mail
	Office	FAX	
Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, Main Campus, Chatha, Jammu	0191-2262029	0191-2262029	vc@skuast.org

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Vacant		09419212421	kvkjammu@gmail.com

1.4. Year of sanction: 1992

1.5. Staff Position (as on 31st March 2018)

Sl. No.	Sanctioned post	Name of the incumbent	Age	Discipline with highest degree obt.	Pay Band & Grade Pay (Rs.)	Present basic (Rs.)	Date of joining at present post	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
1	Vacant								
2	Senior Scientist (SMS)	Dr. Rakesh Sharma	44	Ph.D Ag. Ext.	131400-217100 (Level 13 A)	139400	Oct 2014	Temporary	Gen
3	Senior Scientist (SMS)	Dr. Punit Choudhary	43	Ph.D Forestry	131400-217100 (Level 13 A)	139400	Oct 2014	Temporary	Gen
4	Subject Matter Specialist	Dr Sheetal Badyal	46	Ph.D Home Science	79800-211500 (Level 12)	98200	March 2016	Temporary	Gen
	Subject Matter Specialist	Dr Ravneet Kour	46	Ph D Vegetable Sciences	56100-177500 (Level 11)	89900	March 2019	Temporary	Gen
6	Subject Matter Specialist	Dr Prem Kumar	44	Ph.D Fisheries	68900-205500 (Level 11)	71000	May 2010	Temporary	Gen
7	Subject Matter Specialist	Vacant	-	-	-	-	-	-	-
8	Computer Programmer	Sh. Ashish Katoch	44	M. Tech	35400-112400 (Level 6)	60400	Dec.2003	Temporary	Gen
9	Programme Assistant (Farm)	Sh. Raju Gupta	38	Ph.D Agronomy	35400-112400 (Level 6)	47600	Aug.2008	Temporary	Gen
10	Programme Assistant (Trg)	Ms. Poonam Abrol	30	M.Sc. H. Science	35400-112400 (Level 6)	42300	June 2012	Temporary	Gen
11	Accountant / Superintendent	Sh. Ashok Kumar	58	MA LLB	44900-142400 (level 7)	53600	Jan 2019	Temporary	Gen
12	Stenographer	Sh. Samir Ji Raina	45	Gradation	25800-81100 (Level 4)	27100	Jan 2019	Temporary	Gen
13	Driver	Sh. Manohar Lal	48	Matric	25800-81100 (Level 4)	27900	Sept. 2015	Temporary	Sc
14	Driver	Sh Vijay Kumar	39	Matric	25800-81100 (Level 4)	27900	March 2019	Temporary	Gen
15	Supporting staff	Sh. Satnam Singh	43	Under Matric	14800-47100 (Level SL-1)	24800	April 2005	Temporary	Gen
16	Supporting staff	Vacant		-	-	-	-	Temporary	

1.6. Total land with KVK (in ha) : 11.5ha

S. No.	Item	Area (ha)
1	Under Buildings	570 m^2 (0.244 ha)
2.	Under Demonstration Units	144 m^2 (0.0016 ha)
3.	Under Crops	8 ha
4.	Orchard/Agro-forestry	0.1 ha
5.	Others (specify)	Crop cafeteria, fish pond, nursery (0.2 ha)

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	March 1999	582	30.62 lakh			
2.	Farmers Hostel	ICAR	March 2007	305	19.78			Complete
3.	Staff Quarters	ICAR	March 1994	140	08.23			Complete
	1	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-
	5	-	-	-	-	-	-	-
	6	-	-	-	-	-	-	-
4.	Demonstration Units	ICAR	December 1995	144	06.63	-	-	Complete
	1	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-
5	Fencing	ICAR			6.95			Complete
6	Rain Water harvesting system	-	-	-	-	-	-	-
7	Threshing floor	-	-	-	-	-	-	-
8	Farm godown	-	-	-	-	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Scooter	1996-97	26,777.00	59979.00	unserviceable
Jeep	2006-07	5,10,134.00	220358	Working
Tractor	2005-06	4,13,920.00	2496 (hrs)	Working

C) Equipments including Tractor & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Microscope	27.04.00	5,500.00	Working
Overhead Projector	03.08.95	7,425.00	Working
Slide Projector	25.05.96	12,327.00	Working
PA System (Ahuja)	09.06.99	19,788.00	Working
Blue Star AC (2 Nos.)	12.01.99	43116.00	Working
Photo Copier	26.03.02	66015.00	Working
Computer with UPS & Printer	21.02.05	69429.00	Working

OTG	17.03.05	5695.00	Working
Sony Handy Camera	31.03.05	33940.00	Not Working
Printer HP 5160	29.03.05	6200.00	Working
Genset	18.08.04	149200	Working
Panasonic KX-FT-903	05-09-05	10500	Working
Aqua Guard	30-09-05	8490	Not Working
LCD	29.05.04	1,00,366	Working
UPS Uniline 1KVA (2 No.)	31.01.07	9240	Working
Trolly for tractor	10.07.07	72800	Working
Leveller	22.06.05	8840	Working
Disc plough	22.06.05	21500	Working
Tiller tyne	22.06.05	15912	Working
Disc Harrow	22.06.05	21000	Working
Seed-cum-fertilizer drill	12.03.04	20000	Working
HP Laptop (2 no)	31-03-2017	115000	Working
SONY LCD projector SW631	31-03-2017	91800	Working
GMETEL Podium	31-03-2017	149900	Working
Handy Cam Sony	31-03-2017	21500	Working
SHARP digital XEROX machine82000	31-03-2017	82000	Working
Globus ceramic steel Board	31-03-2017	44655	Working
Electrowall mounting display panal	31-03-2017	66868	Working
Magzine rak	31-03-2017	81000	Working
Mrida Parikshak Soil testing Kits (2 no)	31-03-2017	90300	Working
Electronic Weighing Balance	31-03-2019	44716	Working
pH meter	31-03-2019	21000	Working
Electric Conductivity meter	31-03-2019	29610	Working
Voltas burepurer	31-03-2019	8750	Working
Brother all in one Printer	31-03-2019	13000	Working

1.8. A). Details SAC meeting* conducted in the year 2018-19

S. No.	Date	Name and Designation of Participants	No. of absentees	Salient Recommendations	Action taken
1.	26/03/2019	List enclosed as Annexure B	Nil	• KVK Jammu to expand its area of work in entire agriculture sectors involving livestock, apiculture, sericulture, fisheries etc. • Well planned action plan covering all sector of agriculture for mitigating and addressing farmer's issues. • Proper feedback of the training programmes imparted by KVKs and further documentation of constraints and success stories. • Maximum enrolment of the new farmers on the portal.	More training programme on different aspects of Agriculture, livestock framing and fisheries will be conducted.

**** Copy of SAC proceedings along with list of participants is attached as annexure B.***

2. DETAILS OF DISTRICT (2018-19)

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

S. No	Farming system/enterprise
1	Rice-Wheat
2	Maize-Wheat
3	Wheat -Mash-Rice
4	Maize-Toria-Wheat
5	Rice-Barseem-Vegetable

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

S. No	Agro-climatic Zone	Characteristics
	Sub-tropical Zone	Situated between 300- 450m above mean sea level having severe winter, rare occurrence of frost and a hot spell of summer with concentration of precipitation in summer months.
S. No	**Agro ecological situation**	**Characteristics**
1	*Rainfed*	The average rainfall of the District Jammu ranges between 750-900 mm. Agriculture in this area is complex, diverse and risk-prone and is characterized by low levels of productivity and low input usage. Vagaries of the monsoon result in wide variation and instability in yields.

2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
1	Sandy loam	pH 7.7-8.1, EC-0.15-0.23, organic carbon 0.35-0.44 (low), N- low, P- medium, K- medium	-
2	Loamy sand	pH 7.2-7.5, EC-0.15-0.20, organic carbon 0.45-0.55 (low), N- low, P- medium, K- high	-
3	Clay loam	pH 7.1-7.8, EC-0.18-0.22, organic carbon 0.40-0.50(low), N- low, P- medium, K- medium	-
4	Silty clay loam	pH 7.4-7.6, EC-0.16-0.20, organic carbon 0.42-0.50 (low), N- low, P- medium, K- medium	-

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

S. No	Crop	Area (ha)	Production (MT)	Productivity (q /ha)
1	Paddy	45100	1659680	36.80
2	Wheat	71000	155916	21.96
3	Maize	12010	33195	27.64
4	Pulses	8886	12650	14.24
5	Millets	3500	-	-
6	Oil seed	6750	4766	7.06
7	Fodders	10550	-	-
8	Vegetable	10450	25770	24.66

2.5 Weather data

Month	Rainfall (mm)	Temperature (^{0}C)		Relative Humidity (%)	
		Maximum	Minimum	Morning	Evening
April 2018	45.2	33.6	16.5	75	34
May 2018	14.4	38.3	20.5	55	24
June 2018	66.2	38.1	25.8	63	37
July 2018	244.1	34.5	26.3	85	61
August 2018	470.4	34.0	25.9	87	68
September 2018	202.4	32.2	22.9	87	63
October 2018	3.6	29.4	13.3	85	40
November 2018	14.8	25.6	10.1	93	44
December 2018	11.8	20.3	4.4	95	44
January 2019	64.2	17.4	5.2	93	55
Feburary 2019	155.4	19.3	8.1	91	58
March 2019	36.2	24.4	10.6	91	50

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

Category	Population	Production	Productivity
Cattle			
Crossbred	2.49	-	-
Indigenous	4.57	-	-
Buffalo	2.59	-	-
Sheep			
Crossbred	-	-	-
Indigenous	1.03	-	-
Goats	2.5	-	-
Pigs	0.1	-	-
Crossbred	-	-	-
Indigenous	-	-	-
Rabbits	-	-	-
Poultry			
Hens	7.85	-	-
Desi	-	-	-
Improved	-	-	-
Ducks	-	-	-
Turkey and others	-	-	-

Category	Area	Production	Productivity
Fish	-	-	
Marine	-	-	-
Inland	-	20.02	-
Prawn	-	-	-
Scampi	-	-	-
Shrimp	-	-	-

2.7 Details of Operational area / Villages (2018-19)

Sl.No.	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1	R.S.Pura	R.S.Pura	Shekachak Salher, Badyal, Raipur Sazda, Karotana, Suchetgarh	Paddy, Wheat, Oilseeds, Dairy, Marigold Mushroom Fodder crops	• Low productivity of cereals, oilseeds and pulses. • Improper adoption of Package of Practices • Problem of yellow rust in wheat • Old marigold varieties. • low milk yield and improper management practices in animals.	• Increasing production of cereals, oilseeds and pulses by replacing varieties. • Promotion of new and high yielding marigold varieties, • Dairy development • Value addition • Mushroom cultivation • Fodder
2	Akhnoor	Akhnoor Pargwal	Garkhal Kaleeth Sungal	Oil seed, Pulses, Mash, Maize Medicinal tree Wheat	• Low productivity of Wheat, maize and Pulses • Lack of knowledge about rain-fed crop varieties	• Increasing productivity of rain-fed crops. • Promotion of new varieties in cereals, pulses and oilseeds • Medicinal trees
3	Bishnah	Bishnah	Chak Bhagwana, Kotla Deoli Saidgarh	Paddy, Wheat, Mash, Oilseeds, Dairy, Fodder grasses	• Low productivity of cereals, oilseeds and pulses. • Problem of yellow rust in wheat • Lack of knowledge of Vaccination in cattle. • Low Milk Yield	• Increasing production of cereals, oilseeds and pulses by replacing variety. • Dairy development • Value addition • Fodder
4	Dansal	Nagrota Dansal	Sagoon Katal Batal Kathar	Paddy, Wheat, Maize, Marigold, Pulses and Oilseeds Fodder grasses Fisheries	• Low seed replacement rate • Lack of quality seed of paddy, wheat & maize • Low productivity of cereals • Old marigold varieties.	• Seed replacement • Increasing productivity of cereals • Promotion of new and high yielding marigold varieties, • Fodder
5	Bhalwal	Bhalwal	Jandiyal Mathwar Ranjan Kley	Maize, Wheat, Oilseed Pulses Medicinal trees Fodder grasses	• Low productivity of cereals, oilseeds and pulses • Low productivity of maize and Chickpea. • Lack of knowledge about rain-fed crop varieties	• Seed replacement • Increasing productivity of cereals • Promotion of new and high yielding varieties

2.8 Priority/thrust areas

Crop/Enterprise	Thrust area
Rice	Preservation and promotion of Basmati 370, Integrated Nutrient Management, Introduction of Pusa varieties in non-basmati growing areas.
Wheat	Introduction of High yielding varieties, Yellow rust resistant varieties. of wheat
Maize	High yielding hybrids, composite arieties, disease and pest management.
Oilseeds	Seed replacement, High yielding newly released short duration varieties.
Pulses	Weed Management, High yielding varieties, Diversification, INM
Oats, Perennial grasses	Fodder intensification, high yielding perennial grass species
Medicinal trees	Quality planting material production, production of superior clonal material
Fish farming	Promotion of composite fish culture, Ornamental fish farming and value addition
Mango, Amla, Ber, Citrus	Promotion of Horticulture in rain-fed areas
Dairy farming	Promotion of clean milk production, Milk preservation and processing.
Marigold	Introduction of high yielding varieties, increasing the area under cultivation.

3. TECHNICAL ACHIEVEMENTS

3.A. Details of target and achievements of mandatory activities by KVK during 2018-19

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
06	10	12	38	210	260	210	527

3.A.1 FLDs Conducted under CFLDs on Oilseed- NA

FLD (Oilseeds)			
Number of FLDs		Number of Farmers	
Targets	Achievement	Targets	Achievement

3.A.2 FLDs Conducted under CFLDs on Pulses

FLD (Pulses)			
Number of FLDs		Number of Farmers	
Targets	Achievement	Targets	Achievement
20.0	21.5	50	187

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	38	38	780	934	Kisan Kalyan Karyshala (1)	01	100	200
Rural youth	03	05	60	90	Breast feeding Week (1)	01	100	217
Extn. Functionaries	03	03	60	97	Parthenium Awareness Week (1)	01	50	63
					Swachta Pakhwara (1)	01	-	213
					PPVFRA Awareness programme (1)	01	100	103
					Plantation drive (1)	01	50	52
					Celebration of Important days	04	200	295
					Live webcasting prog	03	200	272

Seed Production (Qtl.)		Planting material (Nos.)	
5		6	
Target	**Achievement**	**Target**	**Achievement**
Paddy (B-370) :100 q	82.5 q	Napier (2000)	2000
Wheat (HD-3086): 100 q	160 q	Setaria (2000)	2000
		Harad (200)	200
		Aonla (200)	200
Livestock, poultry strains and fingerlings (No.)		**Bio-products (Kg)**	
7		8	
Target	***Achievement***	***Target***	***Achievement***
-	-	Vermicompost (50 q)	66.70 q
-	-	Mushrooms (0.60 q)	0.80 q

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.	Varietal Evaluation	Paddy	Low yield Lack of knowledge about improved varieties Shortage of labour and heavy weed infestation	Effect of bispyribac herbicide for broad spectrum weed management in direct seeded basmati rice Effect of different weed management practices on growth and yield of direct seeded rice	Promotion and demonstration of Basmati variety for yield potential Demonstration of improved Pusa varieties under irrigated condition.	02	-	-	01	2.08	-	-	-	
2	Varietal evaluation	Maize	Low yield Lack of knowledge about improved hybrid Lack of labour and heavy weed infestation	Effect of different herbicides mixture on weed density and weed biomass at 60 DAS in maize	Promotion of maize hybrid for yield. Promotion of Maize composite for higher productivity under rainfed conditins	01	-	-	01	2.10	-	-	-	
3	Clonal evaluation	Aonla Harad	Lack of superior clones	Assessment of superior clones of Aonla with respect to survival and establishment	Demonstration of vegetatively propagated superior clones of Harad and Aonla	06	02	01	03	-	500	-	-	

4	Fodder production	Berseem Bajra	Lack of improved varieties	Assessment of improved berseem varieties for herbage production	Demonstration	02	-	01	01	-	0.10	-	-	
5	Varietal Evaluation	Wheat	Low yield and incidence of yellow rust	Varietal evaluation of wheat in irrigated areas of Jammu district	Demonstration of high yielding rust resistant Wheat variety	01	-	-	01	10.0	-	-	-	-
6	Varietal evaluation	Oilseed	Lack of short duration high yielding varieties		Demonstration of short duration high yielding mustard and Gobi Sarson	01	-	-	01	0.31	-	-	-	-
7	Varietal evaluation	Gram	Lack of knowledge about variety		Promotion and demonstration of high yielding chickpea variety under rainfed conditions of Jammu and Samba	02	-	-	01	5.0	-	-	-	-
8	Varietal evaluation	Mash	Lack of knowledge about variety High weed infestation	Effect of herbicidal combination for weed management in mash	Promotion and demonstration of high yielding variety	01	-	-	01	2.32	-	-	-	-
9	Varietal evaluation	Moong	Lack of knowledge about variety		Promotion and demonstration of high yielding variety	-	-	-	-	0.24	-	-	-	-
10	Varietal evaluation	Marigold	Lack of Improved variety		Promotion and demonstration of high yielding variety	01		01	-	-	-	-	-	-
11	Varietal evaluation	Strawberry	Lack of Improved variety		Promotion and demonstration of high yielding variety	01	-	-	-	8000	-	-	-	-

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	Tuber Crops	TOTAL
Varietal Evaluation	01	-	-	-	-	01	-	-	02
Seed / Plant production	-	-	-	-	-	-	-	-	-
Weed Management	06	-	01	-	-	-	-	-	07
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	**07**	**-**	**01**	**-**	**-**	**01**	**-**	**-**	**9**

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

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	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	-	-	-	-	-	-	-	-	-

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	-	-	-	-	-	-	-	-
Feed and Fodder	-	-	-	-	-	-	-	-
Small Scale income generating enterprises	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	-

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	Wheat	Varietal evaluation of wheat in irrigated areas of Jammu district	3	3	1.0
	Aonla	Assessment of improved clones of Aonla under Rainfed conditions	5	5	2.0
Integrated Pest Management	-	-	-	-	-
	-	-	-	-	-
Integrated Crop Management	-	-	-	-	-
	-	-	-	-	-
Integrated Disease Management	-	-	-	-	-
	-	-	-	-	-

Thematic areas	*Crop*	*Name of the technology assessed*	*No. of trials*	*Number of farmers*	*Area in ha (Per trail covering all the Technological Options)*
Small Scale Income Generation Enterprises	-	-	-	-	-
	-	-	-	-	-
Weed Management	Wheat	Effect of broad weed management practices in wheat (Carfentrazone 20 g/ha)	3	3	0.15
		Effect of broad weed management practices in wheat (Metsulfuron 4 g/ha)	3	3	0.15
		Effect of weed management practices in wheat (Metsulfuron + Carfentrazone 25 g/ha)	3	3	0.15
	Paddy	Effect of bispyribac herbicide for broad spectrum weed management in direct seeded basmati rice	3	3	0.15
		Effect of different weed management practices on growth and yield of direct seeded rice	3	3	0.15
	Mash	Effect of herbicidal combination for weed management in mash	3	3	0.2
	Maize	Effect of different herbicides mixture on weed density and weed biomass at 60 DAS in maize	3	3	0.2
Resource Conservation Technology	-	-	-	-	-
	-	-	-	-	-
Farm Machineries	-	-	-	-	-
	-	-	-	-	-
Integrated Farming System	-	-	-	-	-
	-	-	-	-	-
Seed / Plant production	-	-	-	-	-
	-	-	-	-	-
Value addition	-	-	-	-	-
	-	-	-	-	-
Drudgery Reduction	-	-	-	-	-
	-	-	-	-	-
Storage Technique	-	-	-	-	-
	-	-	-	-	-
Mushroom cultivation	-	-	-	-	-
	-	-	-	-	-
Total	**9**		**29**	**29**	**4.0**

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 Crop Management	-	-	-	-	-
	-	-	-	-	-
Integrated Disease Management	-	-	-	-	-
	-	-	-	-	-
Small Scale Income Generation Enterprises	-	-	-	-	-
	-	-	-	-	-

Thematic areas	*Crop*	*Name of the technology assessed*	*No. of trials*	*Number of farmers*	*Area in ha (Per trail covering all the Technological Options)*
Weed Management	-	-	-	-	-
	-	-	-	-	-
Resource Conservation Technology	-	-	-	-	-
	-	-	-	-	-
Farm Machineries	-	-	-	-	-
	-	-	-	-	-
Integrated Farming System	-	-	-	-	-
	-	-	-	-	-
Seed / Plant production	-	-	-	-	-
	-	-	-	-	-
Value addition	-	-	-	-	-
	-	-	-	-	-
Drudgery Reduction	-	-	-	-	-
	-	-	-	-	-
Storage Technique	-	-	-	-	-
	-	-	-	-	-
Mushroom cultivation	-	-	-	-	-
	-	-	-	-	-
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	-	-	-	-
Feed and fodder	-	Assessment of berseem varieties for higher productivity	5	5
Small scale income generating enterprises	-	-	-	-
Total			5	5

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. Technology Assessment

A.1 Trial 1

	Title	:	**Effect of different weed management practices on growth and yield of direct seeded rice**
2.	Problem diagnose/defined	:	Non availability of labour for transplanting and high incidence of weed infestation for direct seed paddy
3.	Details of technologies selected for assessment/refinement	:	T 1: Anilophos + Ethoxysulfuron 375g/ha +15g/ha at 15 DAS **(Recommended Practice)** T 2: Pendimethalin @ 1.0 kg/ha (PE) *fb* bispyribac-sodium @ 30 g/ha at 25 DAS *fb* fenoxaprop-p-ethyl @ 60 g/ha (30 DAS) **(New Intervention)**
4.	Source of technology	:	SKAUST-J
5.	Production system thematic area	:	Irrigated cereal based system (Paddy - Wheat)
6.	Thematic area	:	Weed management
7.	Performance of the Technology with performance indicators	:	T2 recorded 18.48% increase in grain yield as compared to T1 with very less Weed Count (1.5) at 60 DAS (no./m2)
8.	Final recommendation for micro level situation	:	Pendimethalin @ 1.0 kg/ha (PE) *fb* bispyribac-sodium @ 30 g/ha at 25 DAS *fb* fenoxaprop-p-ethyl @ 60 g/ha (30 DAS) should be adopted during direct seeded paddy crop
9.	Constraints identified and feedback for research	:	Water scarcity at the time of sowing
10.	Process of farmers participation and their reaction	:	Farmers participated from seed to seed in laying out of the OFT. Moreover they fully cooperated in providing feedback and other data pertaining OFT.

Fig: Direct seeded rice sowing and crop monitoring

B 1: Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials	Technology Assessed	Parameters	Data on the Parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Paddy	Irrigated	Non availability of labour for transplanting and high incidence of weed infestation for direct seed paddy	Effect of different weed management practices on growth and yield of direct seeded rice	3	T 1: Anilophos + Ethoxysulfuron 375g/ha +15g/ha at 15 DAS **(Recommended Practice)**	Grain Yield B:C ratio Weed Count at 60 DAS (no./m2)	26.13 q/ha 2.84:1 15		Farmers satisfied with the yield potential Basmati varieties
					T 2: Pendimethalin @ 1.0 kg/ha (PE) *fb* bispyribac-sodium @ 30 g/ha at 25 DAS *fb* fenoxaprop-p-ethyl @ 60 g/ha (30 DAS) (**New Intervention)**		30.96 q/ha 3.16 1.5	18.48% increase in grain yield as compared to T1 with very less Weed Count (1.5) at 60 DAS (no./m2)	

Technology Assessed	**Weed Count at 60 DAS (no./m^2)**	Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14	15
T 1: Anilophos + Ethoxysulfuron 375g/ha +15g/ha at 15 DAS **(Recommended Practice)**	15	26.13 q/ha	72794	3.84:1
T 2: Pendimethalin @ 1.0 kg/ha (PE) *fb* bispyribac-sodium @ 30 g/ha at 25 DAS *fb* fenoxaprop-p-ethyl @ 60 g/ha (30 DAS) (**New Intervention)**	1.5	30.96 q/ha	89434	4.16:1

A.2 Trial 2

1.	Title	:	**Effect of bispyribac herbicide for broad spectrum weed management in direct seeded basmati rice**
2.	Problem diagnose/defined	:	Non availability of labour for transplanting and high incidence of weed infestation for direct seed paddy
3.	Details of technologies selected for assessment/refinement	:	T1: Anilophos + Ethoxysulfuron 375g/ha +15g/ha at 15 DAS **(Recommended Practice)** T2:Bispyribac 30g/ha at 30 DAS **(New Intervention)**
4.	Source of technology	:	SKUAST-J
5.	Production system thematic area	:	Irrigated cereal based system (Paddy - Wheat)
6.	Thematic area	:	Weed management
7.	Performance of the Technology with performance indicators	:	Performance of T-2 showed 5.76% increase in grain yield as compared to T1 with very less Weed Count (8.0) at 60 DAS (no./m2)
8.	Final recommendation for micro level situation	:	Bispyribac 30g/ha at 30 DAS should be adopted during direct seeded paddy crop
9.	Constraints identified and feedback for research	:	Water scarcity at the time of sowing
10.	Process of farmers participation and their reaction	:	Farmers response was participatory and actively responded to the technical guidance provided by the KVK

Fig: Direct seeded basmati rice crop monitoring

B 2: Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials	Technology Assessed	Parameters	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Paddy	Irrigated	Non availability of labour for transplanting and high incidence of weed infestation for direct seed paddy	**Effect of bispyribac herbicide for broad spectrum weed management in direct seeded basmati rice**	03	T1: Anilophos + Ethoxysulfuron 375g/ha +15g/ha at 15 DAS **(Recommended Practice)**	**Grain yield (q/ha)** **Weed Count at 60 DAS (no./m^2)**	26.0 11.0	T1 recorded 26.0 q/ha grain yield with 11 weeds/m^2	Farmers satisfied with the yield potential Basmati varieties
					T2:Bispyribac 30g/ha at 30 DAS (**New Intervention)**		27.5 8.0	5.76% increase in grain yield as compared to T1 with very less Weed Count (8.0) at 60 DAS (no./m2)	

Technology Assessed	*Production per unit*	**Weed Count at 60 DAS (no./m^2)**	*Net Return (Profit) in Rs. / unit*	*BC Ratio*
11	12	13	14	15
T1: Anilophos + Ethoxysulfuron 375g/ha +15g/ha at 15 DAS **(Recommended Practice)**	26.0	11.0	73156	2.85
T2:Bispyribac 30g/ha at 30 DAS (**New Intervention)**	27.5	8.0	78006	2.94

A-3: Trial-3

1.	Title	:	**Varietal evaluation of wheat in irrigated areas of Jammu district**
2.	Problem diagnose/defined	:	Low yield and incidence of rust disease
3.	Details of technologies selected for assessment/refinement	:	T1= HD-2967 (farmers practice) T2= HD-3086 T3= Unnat PBW-550
4.	Source of technology	:	SKUAST-J, PAU ludhiana
5.	Production system thematic area	:	irrigated Paddy-Wheat systems
6.	Thematic area	:	Varietal evaluation
7.	Performance of the Technology with performance indicators	:	T3 showed 26.7 % increase in production of grains as compared to the HD-2967 with no incidence of rust disease whereas T2 recorded 6.7 % % increase in production of grains as compared to the HD-2967
8.	Final recommendation for micro level situation	:	The productivity of wheat can be increased by adoption of Unnat 550 variety which also has resistance to rust diseases
9.	Constraints identified and feedback for research	:	Non availability of seed
10.	Process of farmers participation and their reaction	:	Farmers response was participatory and actively responded to the technical guidance provided by the KVK

Fig: Improved wheat varieties taken up under OFT

B 3. Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials	Technology Assessed	Parameters	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Wheat	irrigated	Low yield and incidence of rust disease	**Varietal evaluation of wheat in irrigated areas of Jammu district**	01	T1: HD-2967 (farmers practice)	Yield	30.0 q/ha		Farmers were satisfied with the varieties
					T2:HD-3086		32.0q/ha	T1 recorded 6.7 % % increase in production of grains as compared to the HD-2967	
					T3:Unnat PBW-550		38.0 q/ha	26.7 % increase in production of grains as compared to the HD-2967 with no incidence of rust disease	

Technology Assessed	***Production per unit***	***Net Return (Profit) in Rs. / unit***	***BC Ratio***
11	12	13	14
T1= HD-2967 (farmers practice)	30.0 q/ha	30500	2.24
T2:HD-3086	32.0q/ha	34180	2.38
T3:Unnat 550	38.0 q/ha	45220	2.83

A.4 Trial 4

	Title	:	Assessment of berseem varieties for higher productivity.
2.	Problem diagnose/defined	:	Lack of improved variety
3.	Details of technologies selected for assessment/refinement	:	T1- Wardhan (farmers practice) T2- Mascavi T3- BL-10
4.	Source of technology	:	SKAUST-J/ PAU
5.	Production system thematic area	:	Paddy-Wheat irrigated system
6.	Thematic area	:	Varietal evaluation
7.	Performance of the Technology with performance indicators	:	BL-10 variety of berseem recorded 7.30 % increase in fodder yield as compared to T1(Wardhan) whereas, T2 depicted 4.0% increase in fodder yield as compared to T1
8.	Final recommendation for micro level situation	:	BL-10 variety of Berseem should be adopted for getting higher green fodder yield up to 2nd Week of June
9.	Constraints identified and feedback for research	:	Non availability of improved seed
10.	Process of farmers participation and their reaction	:	The trials were laid out at farmer's fields with their active participation.

Fig: Improved Berseem varieties taken up under OFT

B 4: Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials	Technology Assessed	Parameters	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Berseem	Irrigated	Lack of improved variety	Assessment of berseem varieties for higher productivity.	05	T1- Wardhan (farmers practice)	Green fodder Yield (q/ha) Time of availability	654 q/ha Ist week of June		Farmers were satisfied with both the chemicals.
					T2- Mascavi		680 q/ha 2nd week of June	4.0% increase in fodder yield as compared to T1	
					T3- BL-10		702q/ha 2nd week of June	7.30% increase in fodder yield as compared to T1	

Technology Assessed	Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
T1- Wardhan (farmers practice)	654 q/ha	40980	2.09:1
T2- Mascavi	680 q/ha	44100	2.18:1
T3- BL-10	702q/ha	46740	2.25:1

A5: Trial-5

1.	Title	:	**Effect of herbicidal combination for weed management in Mash**
2.	Problem diagnose/defined	:	Weed growth during germination
3.	Details of technologies selected for assessment/refinement	:	T1:Farmers practices T2:Pendimethalin @ 1 kgai /ha at pre emergence T3:Imazythapar + Pendimethalin @ 1 kg (ai /ha) at pre emergence
4.	Source of technology	:	SKUAST-J
5.	Production system thematic area	:	Rainfed Maize-Wheat systems
6.	Thematic area	:	Weed management
7.	Performance of the Technology with performance indicators	:	T 2 recorded 78.3.0% increase in yield as compares to T-1 with 46 % weed control efficiency whereas 11.3 % increase in yield as compares to T-2 with 70 % weed control efficiency was recorded for T3
8.	Final recommendation for micro level situation	:	Imazythapar + Pendimethalin @ 1 kg (ai /ha) at pre emergence stage for effective weed control may should be adopted
9.	Constraints identified and feedback for research	:	Nil
10.	Process of farmers participation and their reaction	:	Farmers participated actively and responded to the technical guidance provided by the KVK


Fig: Farmers field showing effect of herbicidal combination for weed management in Mash

B 5. Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials	Technology Assessed	Parameters	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Mash	Rainfed	Weed growth during germination	**Effect of herbicidal combination for weed management in Mash**	01	T1:Farmers practices	Yield q/ha Weed Control efficacy (%) B: C ratio	3.60 q/ha		Farmers were satisfied with the weed management practices
					T2: Pendimethalin @ 1 kgai /ha at pre emergence		6.42 q/ha 46 %	78.3.0% increase in yield as compares to T-1 with 46 % weed control efficiency	
					T3: Imazythapar + Pendimethalin @ 1 kgai /ha at pre emergence		7.15 q/ha 70%	11.3 % increase in yield as compares to T-2 with 70 % weed control efficiency	

Technology Assessed	***Production per unit***	**Weed Control efficacy (%)**	***Net Return (Profit) in Rs. / unit***	***BC Ratio***
11	12		13	14
T1:Farmers practices	3.60 q/ha		15004	1.73
T2:T2:Pendimethalin @ 1 kgai /ha at pre emergence	6.42 q/ha	46	16878	2.66
T3:Imazythapar + Pendimethalin @ 1 kgai /ha at pre emergence	7.15 q/ha	70	17675	2.83

A.6 Trial 6

	Title	:	**Effect of different herbicides mixture on weed density and weed biomass at 60 DAS in maize**
2.	Problem diagnose/defined	:	Lack of labour and heavy weed infestation in maize
3.	Details of technologies selected for assessment/refinement	:	Atrazine 1000 g/ha at 0-3 DAS Tembotrione 100 g/ha+ Atrazine 500 g/ha at 15-20 DAS Atrazine 1000 g/ha fb tembotrione 100 g/ha
4.	Source of technology	:	SKAUST-J
5.	Production system thematic area	:	Rainfed cereal based system (Maize - Wheat)
6.	Thematic area	:	Weed management
7.	Performance of the Technology with performance indicators	:	T 2 registered mean increase of 15.14 % in grain yield over farmers' practice with 6.09 g/m^2 of total weed biomass.
8.	Final recommendation for micro level situation	:	Tembotrione 100 g/ha+ Atrazine 500 g/ha at 15-20 DAS effectively control weed and improves productivity in maize
9.	Constraints identified and feedback for research	:	
10	Process of farmers participation and their reaction	:	Farmers participated from seed to seed in laying out of the OFT. Moreover they fully cooperated in providing feedback and other data pertaining OFT.

Fig: Maize crop with different herbicides mixture

B 6: Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials	Technology Assessed	Parameters	Data on the Parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Maize	Rainfed	Lack of labour and heavy weed infestation in maize	Effect of different herbicides mixture on weed density and weed biomass at 60 DAS in maize	3	T 1: Atrazine 1000 g/ha at 0-3 DAS Farmers Practice	Grain Yield Total weed biomass (g/m^2)	22.78 48.34		Farmers satisfied with the INM practice and yield potential
					T 2: Tembotrione 100 g/ha+atrazine 500 g/ha at 15-20 DAS		26.23 6.09	T 2 registered mean increase of 15.14 % in grain yield over farmers' practice	
					T 3: Atrazine 1000 g/ha fb tembotrione 100 g/ha		25. 93 16.93	T 3 registered mean increase of 13.82 % in grain yield over farmers' practice	

Technology Assessed	Production per unit	Total weed biomass (dry) g/m^2	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14	15
T 1: Atrazine 1000 g/ha at 0-3 DAS Farmers Practice	22.78	48.34	31537	1.91
T 2: Tembotrione 100 g/ha+atrazine 500 g/ha at 15-20 DAS	26.23	6.09	37705	2.13
T 3: Atrazine 1000 g/ha fb tembotrione 100 g/ha	25. 93	16.93	36307	1.98

A.7 Trial 7

	Title	:	**Assessment of superior clones of Aonla with respect to survival and establishment**
2.	Problem diagnose/defined	:	Lack of quality planting material and inferior growing stock
3.	Details of technologies selected for assessment/refinement	:	T1: Local selection T2: Kancan T3: NA-7
4.	Source of technology	:	SKAUST-J/ Dr YSP UH&F SOlan HP
5.	Production system thematic area	:	Maize – Wheat rainfed system
6.	Thematic area	:	Varietal evaluation
7.	Performance of the Technology with performance indicators	:	Clones are under phase of establishment , However after one year clones recorded 63.0 % 66.5 % and 65.5% survival. With respect to height T3 (NA-7) out performed T 1 and T 2
8.	Final recommendation for micro level situation	:	.
9.	Constraints identified and feedback for research	:	

Fig: Survival and establishment of Aonla

B7: Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials	Technology Assessed	Parameters	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Harad	Rainfed	Lack of quality planting material and inferior growing stock	**Assessment of superior clones of Aonla with respect to survival and establishment**	05	Local selection	Survival percentage (%) Collar Dia (mm) Height (m)	63.0 %		
					Kancan		66.5 %		
					NA-7		65.5%		

Technology Assessed	Production per unit	Collar Dia (mm)	Height (m)
11	12	13	14
Local selection	63.0 %	14.5	1.49
Kancan	66.5 %	17.3	1.85
NA-7	65.5%	17.2	1.91

A.8 Trial 8

	Title	:	**Effect of broad weed management practices in wheat (Carfentrazone 20 g/ha)**
2.	Problem diagnose/defined	:	Heavy weed infestation in Wheat
3.	Details of technologies selected for assessment/refinement	:	T1: Farmer's Practice (2, 4-D 400 g/ha) T2: Metribuzin 210g/ha (PoE at 30-35 DAS) (Recommended Practice) T3: Carfentrazone 20g/ha at 30 DAS (New Intervention)
4.	Source of technology	:	SKAUST-J
5.	Production system thematic area	:	Irrigated cereal based system (Paddy- Wheat)
6.	Thematic area	:	Weed management
7.	Performance of the Technology with performance indicators	:	T 3 registered mean increase of 9 % in grain yield with 46% reduction in broad leaf weeds over farmers' practice where as T 2 registered mean increase of 3.8 % in grain yield over farmers' practice
8.	Final recommendation for micro level situation	:	Carfentrazone 20g/ha at 30 DAS will reduce the weed density by 46%
9.	Constraints identified and feedback for research	:	Lack of spraying skills
10.	Process of farmers participation and their reaction	:	Farmers participated from seed to seed in laying out of the OFT. Moreover they fully cooperated in providing feedback and other data pertaining OFT.

B 8: Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials	Technology Assessed	Parameters	Data on the Parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Wheat	Irrigated	Heavy weed infestation in Wheat	**Effect of broad weed management practices in wheat (Carfentrazone 20 g/ha)**	3	T1: Farmer's Practice (2, 4-D 400 g/ha)	Grain Yield Broad leaved weeds at 60 DAS (no./m^2)	38.5 15		Farmers satisfied with the weed control practice and yield potential
					T2:Metribuzin 210g/ha (PoE at 30-35 DAS) (Recommended Practice)		40.0 12	T 2 registered mean increase of 3.8 % in grain yield over farmers' practice	
					T3:Carfentrazone 20g/ha at 30 DAS (New Intervention)		42.0 8	T 3 registered mean increase of 9 % in grain yield with 46% reduction in broad leaf weeds over farmers' practice	

Technology Assessed	Production per unit	Broad leaved weeds at 60 DAS (no./m^2)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14	15
T1: Farmer's Practice (2, 4-D 400 g/ha)	38.5	15	42863	1.82
T2:Metribuzin 210g/ha (PoE at 30-35 DAS) (Recommended Practice)	40.0	12	45310	1.91
T3:Carfentrazone 20g/ha at 30 DAS (New Intervention)	42.0	8	48675	2.05

A.9 Trial 9

	Title	:	**Effect of broad weed management practices in wheat (Metsulfuron 4 g/ha)**
2.	Problem diagnose/defined	:	**Broad leaved weeds**
3.	Details of technologies selected for assessment/refinement	:	T1: Farmer's Practice (2, 4-D 400 g/ha)
			T2: Metribuzin 210 g/ha (PoE at 30-35 DAS) (Recommended Practice)
			T3; Metsulfuron 4 g/ha at 30 DAS (New Intervention)
4.	Source of technology	:	SKAUST-J
5.	Production system thematic area	:	Irrigated cereal based system (Paddy- Wheat)
6.	Thematic area	:	Weed management
7.	Performance of the Technology with performance indicators	:	T 3 registered mean increase of 8.5 % in grain yield with 53.8% reduction in broad leaf weeds over farmers' practice whereas T 2 registered mean increase of 3.0 % in grain yield over farmers' practice
8.	Final recommendation for micro level situation	:	Metsulfuron 4 g/ha at 30 DAS will reduce the weed density by 53.6%
9.	Constraints identified and feedback for research	:	Lack of spraying skills
10.	Process of farmers participation and their reaction	:	Farmers participated from seed to seed in laying out of the OFT. Moreover they fully cooperated in providing feedback and other data pertaining OFT.

B 9: Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials	Technology Assessed	Parameters	Data on the Parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Wheat	Irrigated	Heavy broad leaved weed infestation in Wheat	Effect of broad weed management practices in wheat (Carfentrazone 20 g/ha)	3	T1: Farmer's Practice (2, 4-D 400 g/ha)	Grain Yield Broad leaved weeds at 60 DAS (no./m^2)	39.8 13		Farmers satisfied with the weed control practice and yield potential
					T2: Metribuzin 210 g/ha (PoE at 30-35 DAS) (Recommended Practice)		41.0 10	T 2 registered mean increase of 3.0 % in grain yield over farmers' practice	
					T3: Metsulfuron 4 g/ha at 30 DAS (New Intervention)		43.2 6	T 3 registered mean increase of 8.5 % in grain yield with 53.8% reduction in broad leaf weeds over farmers' practice	

Technology Assessed	Production per unit	Broad leaved weeds at 60 DAS (no./m^2)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14	15
T1: Farmer's Practice (2, 4-D 400 g/ha)	39.8	13	45025	1.91
T2: Metribuzin 210 g/ha (PoE at 30-35 DAS) (Recommended Practice)	41.0	10	46955	1.98
T3; Metsulfuron 4 g/ha at 30 DAS (New Intervention)	43.2	6	51132	2.19

A.10 Trial 10

	Title	:	**Effect of weed management practices in wheat (Metsulfuron + Carfentrazone 25 g/ha)**
2.	Problem diagnose/defined	:	**Broad leaved weeds**
3.	Details of technologies selected for assessment/refinement	:	T1: Farmer's Practice (2, 4-D 400 g/ha)
			T2: Metribuzin 210g/ha (PoE at 30-35 DAS) (Recommended Practice)
			T3: Metsulfuron + Carfentrazone @ 25g/ha at 30 DAS (New Intervention)
4.	Source of technology	:	SKAUST-J
5.	Production system thematic area	:	Irrigated cereal based system (Paddy- Wheat)
6.	Thematic area	:	Weed management
7.	Performance of the Technology with performance indicators	:	T 3 registered mean increase of 13 % in grain yield with 83.3% reduction in broad leaf weeds over farmers' practice whereas T2 recorded mean increase of 6.0 % in grain yield over farmers' practice
8.	Final recommendation for micro level situation	:	Metsulfuron + Carfentrazone @ 25g/ha at 30 DAS (New Intervention by 83.3%
9.	Constraints identified and feedback for research	:	Lack of spraying skills
10.	Process of farmers participation and their reaction	:	Farmers participated from seed to seed in laying out of the OFT. Moreover they fully cooperated in providing feedback and other data pertaining OFT.

B 9: Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials	Technology Assessed	Parameters	Data on the Parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Wheat	Irrigated	Heavy broad leaved weed infestation in Wheat	**Effect of weed management practices in wheat (Metsulfuron + Carfentrazone 25 g/ha)**	3	T1: Farmer's Practice (2, 4-D 400 g/ha)	Grain Yield Broad leaved weeds at 60 DAS (no./m^2)	39.1 18		Farmers satisfied with the weed control practice and yield potential
					T2; Metribuzin 210g/ha (PoE at 30-35 DAS) (Recommended Practice)		41.7 15	T 2 registered mean increase of 6.0 % in grain yield over farmers' practice	
					T3: Metsulfuron + Carfentrazone @ 25g/ha at 30 DAS (New Intervention)		44.2 3	T 3 registered mean increase of 13 % in grain yield with 83.3% reduction in broad leaf weeds over farmers' practice	

Technology Assessed	Production per unit	Broad leaved weeds at 60 DAS (no./m^2)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14	15
T1: Farmer's Practice (2, 4-D 400 g/ha)	39.1	18	43898	1.86
T2; Metribuzin 210g/ha (PoE at 30-35 DAS) (Recommended Practice)	41.7	15	48223	2.03
T3: Metsulfuron + Carfentrazone @ 25g/ha at 30 DAS (New Intervention)	44.2	3	52232	2.18

PART 4 - FRONTLINE DEMONSTRATIONS

4.A. Summary of FLDs implemented during 2018-19

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*	
A	**Oilseeds**													-
				Gobi Sarson	DGS-1		Varietal Evaluation	Improved variety	5.0	2.0	11	09	20	-
					RSPN-25					1.0	02	03	05	-
				Toria	RSPT-06					2.0	11	01	12	-
				Til	PB-2					2.0	0	10	10	-
B	**Pulses**													
1		Rainfed	Rabi 2018-19	**Chickpea**	PBG-5		Varietal evaluation	Improved variety	20.0	10.0	23	80	103	-
3			Kharif 2018	**Mash**	PU-31					11.2	28	56	84	
				Moong	Pusa vishal					1.1	5	3	8	
C	**Cereals**													
1		Irrigated	Kharif 2018	**Paddy**	B-370		Varietal evaluation	Improved variety	10.0	4.4	0	20	20	-
2					Pusa 1121					2.7	8	7	15	-
3					Pusa 1637					1.5	0	8	8	-
4					Pusa B-1					1.4	0	4	4	-
5		Rainfed	Kharif 2018	**Maize**		Double Dekalb	Varietal evaluation	Improved variety	10.0	10.0	17	46	63	-
					PMC-3					0.15	0	3	3	
6		Irrigated	Rabi 2018-19	**Wheat**	HD- 3086		Varietal evaluation	Improved variety	10.0	6.0	11	14	25	-
					HD-3059					1.1	3	3	6	
		Rainfed			WH-1080					4.0	8	15	23	
D	**Millets**													
E	**Vegetables**													
F	**Flowers**	Irrigated	Rabi 2018-19	**Marigold**	Pusa basanti		Varietal evaluation	Improved variety		03	1	6	7	
G	**Fruit**	Irrigated		Strawberry	Chandler		Varietal evaluation	Improved variety		03	0	3	3	
H	**Spices and condiments**	-	-	-	-	-	-	-	-	-	-	-	-	-
I	**Medicinal and aromatic**	Raifed	Kharif 2018	Harad Aonla	JH Kanchan	-	Clonal demonstration	Superior clones	-	10.0	25	64	89	-

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	
					NA-7									
J	**Fodder**													-
1		Rainfed	Kharif 2018	Bajra	K-19	-	Varietal evaluation	Improved variety		2..0	1	18	19	-
K	**Dairy**	-	-	-										-
L	**Poultry**	-	-	-	-	-	-	-	-	-	-	-	-	-
M	**Piggery**	-	-	-	-	-	-	-	-	-	-	-	-	-
N	**Sheep and goat**	-	-	-	-	-	-	-	-	-	-	-	-	-
O	**Button mushroom**	-	-	-	-	-	-	-	-	-	-	-	-	-
P	**Vermicompost**	-	-	-	-	-	-	-	-	-	-	-	-	-
Q	**IFS**	-	-	-	-	-	-	-	-	-	-	-	-	-
R	**Apiculture**	-	-	-	-	-	-	-	-	-	-	-	-	-
S	**Implements**	-	-	-	-	-	-	-	-	-	-	-	-	-

4.A. 1. Soil fertility status of FLDs plots during 2018-19

Sl. No.	*Category*	*Farming Situation*	*Season and Year*	*Crop*	*Variety/ breed*	*Hybrid*	*Thematic area*	*Technology Demonstrated*	*Status of soil (Kg/Ha)*			*Previous crop grown*
									N	*P*	*K*	
A												
1	**Oilseeds**	Irrigated	Rabi 2018-19	**Gobi Sarson**	DGS-1	Variety	Varietal Evaluation	Improved variety	135.05-257.15	14-39	45-230	Wheat/Vegetables/Maize
2		Irrigated/ Rainfed		**Toria**	RSPN-25				135.05-257.15	14-39	45-230	Wheat/Vegetables/Maize
3					RSPT-06				135.05-257.15	14-39	45-230	Wheat/Vegetables/Maize
B			Kharif 2018	**Til**	PB-2				298.85-604.65	25-40	118-266	Wheat/Vegetables/Maize
1	**Pulses**	Rainfed/Irrigated	Rabi 2018-19	**Chickpea**	PBG-5		Varietal evaluation	Improved variety	135.05-257.15	14-39	45-230	Wheat/Vegetables/Maize
3			Kharif 2018	**Mash**	PU-31				135.05-257.15	14-39	45-230	Maize/Wheaty/Vegetables
				Moong	Pusa vishal				160-563	29.3-46.8	197-287	Wheat/Maize
C	**Cereals**											
1		Irrigated	Kharif 2018	**Paddy**	B-370		Varietal evaluation	Improved variety	160-563	29.3-46.8	197-287	Wheat/Paddy
2					Pusa 1121							
3					Pusa 1637				298.85-604.65	25-40	118-266	Wheat/Vegetables
4					Pusa B-1							
5		Rainfed	Kharif 2018	**Maize**		Double Dekalb						
						PMC-3						
6		Irrigated	Rabi 2018-19	**Wheat**	HD- 3086		Varietal evaluation	Improved variety	160-563	29.3-46.8	197-287	Wheat/Oilseed/Pulses
					HD-3059				298.85-604.65	25-40	118-266	Paddy/Maize
		Rainfed			WH-1080							-
D	**Millets**											-
E	**Vegetables**											-
F	**Flowers**	Irrigated	Rabi 2018-19	**Marigold**	Pusa basanti		Varietal evaluation	Improved variety				-
G	**Fruit**	Irrigated		**Strawberry**	Chandler		Varietal evaluation	Improved variety	160-563	29.3-46.8	197-287	Wheat/Oilseed/Pulses
H	**Spices and condiments**	-	-	-	-	-	-	-				
I	**Medicinal and aromatic**	Raifed	Kharif 2018	**Harad Aonla**	JH Kanchan NA-7	-	Clonal demonstration	Superior clones	145-570	13-38	75-223	Wheat/Maize
J	**Fodder**											
1		Rainfed	Kharif 2018	**Bajra**	K-19	-			298.85-604.65	25-40	118-266	Paddy/Vegetables
K	Apiculture	-	-	-	-	-	-	-				-
L	Implements	-	-	-	-	-	-	-				-
M	Button mushroom	-	-	-	-	-	-	-	-	-	-	-

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										
Oilseed																			
Gobi Sarson	**Assessment and promotion of improved Gobi Sarsoon varieties**	DGS-1		Irrigated	20.0	2.0	16.0	11.0	13.8	11.2	23.2	18800	55200	36400	2.94	17600	44800	27200	2.55
		RSPN-25			05	1.0	17.0	12.0	14.5	11.2	29.5	18800	58000	39200	3.09	17600	44800	27200	2.55
Toria	**Assessment of SKUAST Toria variety**	RSPT-06		Rainfed	12	2.0	11.8	10.8	11.4	7.96	43.3	18800	45600	26800	2.43	17600	31840	14240	1.81
Til	**Assessment and Promotion of Til (PB-2)**	PB-2			10	2.0	2.80	2.35	2.60	2.36	10.20	9000	20800	11800	2.00	9000	16000	7000	1.17
Pulses																			
Chick Pea	**Assessment and promotion of PBG-5 chik peafor higher productivity**	PBG-5			103	10.0	10.8	5.5	7.32	6.0	22.0	22600	51240	28640	2.27	22440	42000	19600	1.87
Urd Bean	**Assessment and promotion of PU-31 urdbean for higher productivity**	PU-31			84	11.0	10.0	3.8	5.98	4.5	32.9	17450	33488	16038	1.92	16800	24750	7950	1.47
Moong	**Assessment and promotion of Pusa Vishal Moong for higher productivity**	Pusa vishal			8	1.1	9.0	5.0	7.6	6.2	22.6	18400	41800	23400	2.27	17600	34100	16500	1.94
Cereals																			
Paddy	**Assessment and promotion of B-370 higher production**	B-370			20	4.4	32.0	18.0	24.48	21.85	11.20	32850	99355	66505	3.03	30500	85215	54715	2.80

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
	Assessment and promotion of Pusa Basmati varieties for higher productivity	Pusa 1121			15	2.7	42.0	35.0	39.9	35.0	14.0	28500	71820	43320	2.52	26900	65700	38800	2.44
		Pusa 1637			8	1.5	42.5	34.0	38.9	35.0	11.4	28500	70020	41520	2.46	26900	65700	38800	2.44
		Pusa B-1		Irrigated	4	1.4	44.0	40.0	41.25	35.0	13.0	28500	74250	45750	2.60	26900	65700	38800	2.44
Maize	**Promotion of maize Composite**		DD	Rainfed /irrigated	63	10.0	29.10	23.2	25.6	22.0	15.8	19800	45240	25440	2.28	19800	39465	19665	1.99
	Promotion of maize Composite	PMC-3			3	0.15	19.1	17.4	18.4	18.0	2.2	19800	33294	14294	1.68	19500	32600	13100	1.67
Wheat	**Assessment and promotion of high yielding wheat varieties for higher productivity**	HD- 3086		Irrigated	25	6.0	39.0	18.0	31.5	28.5	10.5	24400	57776	33376	2.37	23500	52440	28940	2.23
		HD-3059		Irrigated	6	1.1	30.0	24.0	27.7	26.5	4.5	24400	50968	26568	2.09	23500	48760	25260	2.07
		WH-1080		Rainfed	23	4.0	28.0	20.0	22.3	20.0	11.5	20600	48032	20432	1.99	19500	36800	17300	1.89
Flower																			
Marigold	**Promotion of Pusa varieties**	Pusa basanti		Irrigated	7	0.5	112	108	110	85	29.41	45000	154000	109000	3.4	40000	119000	79000	2.97.1
Fruits																			
Strawberry	**Assessment and promotion of improved strawberry**	Chandler		Irrigated	03	0.15	40.2	36.0	38.73	34.20	13.2	3300000	786666	456666	2.38	330000	690840	360840	2.09
Medicinal																			
Harad Aonla	**Promotion of superior clones of Harad, Aonla and other Medicinal tree**				89	10.0	Under phase of establishment												
Fodder																			
Bajra	**Promotion of multi cut Bajra K19 under rainfed conditions**	K-19		Rainfed	19	2..0	7.2	6.6	6.85	6.35	7.8	12000	32600	20600	2.71	12000	30220	18200	2.52


FRONTLINE DEMONSTRATION OF WHEAT


FRONTLINE DEMONSTRATION OF BAZRA AMD MAIZE


FRONTLINE DEMONSTRATION OF HARAD AMD CHICK PEA


FRONTLINE DEMONSTRATION OF STRAWBERRY AND TIL

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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poultry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rabbitry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pigerry	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sheep and goat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Duckery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Others (pl.specify)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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***
-	-	-

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)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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	07	257	-
2	Farmers Training	16	393	-
3	Media coverage	18	-	-
4	Training for extension functionaries	-	-	-
5	Others (Extension activities)	02	202	-

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	1	14	0	14	1	0	1	15	0	15
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	-	-	-	-	-	-	-	-	-	-
II Horticulture	1	14	0	14	4	0	4	18	0	18
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.)	-	-	-	-	-	-	-	-	-	-
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	1	14	0	14	4	0	4	18	0	18
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	-	-	-	-	-	-	-	-	-	-
Poultry Management	-	-	-	-	-	-	-	-	-	-
Piggery Management	-	-	-	-	-	-	-	-	-	-
Rabbit Management	-	-	-	-	-	-	-	-	-	-
Disease Management	-	-	-	-	-	-	-	-	-	-
Feed management	-	-	-	-	-	-	-	-	-	-
Production of quality animal products	-	-	-	-	-	-	-	-	-	-
V Home Science/ Women empowerment	2									47
Household food security by kitchen gardening and nutrition gardening	1	0	0	0	0	18	18	0	18	18
Design and development of low/minimum cost diet	-	-	-	-	-	-	-	-	-	-
Designing and development for high nutrient efficiency diet	1	0	0	0	4	25	29	4	25	29
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	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-
X Capacity Building 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	**4**	**28**	**0**	**28**	**9**	**43**	**52**	**37**	**43**	**80**
(B) RURAL YOUTH										
Mushroom Production	2	16	0	16	15	0	15	31	0	31
Bee-keeping	-	-	-	-	-	-	-	-	-	-
Integrated farming	-	-	-	-	-	-	-	-	-	-
Seed production	-	-	-	-	-	-	-	-	-	-
Production of organic inputs	-	-	-	-	-	-	-	-	-	-
Integrated Farming	-	-	-	-	-	-	-	-	-	-
Planting material production	1	5	0	5	14	0	14	19	0	19
Vermi-culture	-	-	-	-	-	-	-	-	-	-

Sericulture	-	-	-	-	-	-	-	-	-	-
Protected cultivation of vegetable crops	-	-	-	-	-	-	-	-	-	-
Commercial fruit production	1	6	0	6	15	0	15	21	0	21
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	**4**	**27**	**0**	**27**	**44**	**0**	**44**	**71**	**0**	**71**
(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	1	0	0	0	0	0	0	16	0	16
Care and maintenance of farm machinery and implements	-	-	-	-	-	-	-	-	-	-
WTO and IPR issues	1	0	0	0	0	0	0	27	0	27
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	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**43**	**0**	**43**

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	2	21	0	21	34	6	40	55	6	61
Crop Diversification	4	65	5	70	18	5	23	83	10	93
Integrated Farming	-	-	-	-	-	-	-	-	-	-
Water management	-	-	-	-	-	-	-	-	-	-
Seed production	-	-	-	-	-	-	-	-	-	-
Nursery management	-	-	-	-	-	-	-	-	-	-
Integrated Crop Management	-	-	-	-	-	-	-	-	-	-
Fodder production	1	18	0	18	1	0	1	19	0	19

Production of organic inputs	-	-	-	-	-	-	-	-	-	-
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops	3	54	0	54	5	0	5	59	0	59
Off-season vegetables	-	-	-	-	-	-	-	-	-	-
Nursery raising	-	-	-	-	-	-	-	-	-	-
Exotic vegetables like Broccoli	-	-	-	-	-	-	-	-	-	-
Export potential vegetables	-	-	-	-	-	-	-	-	-	-
Grading and standardization	-	-	-	-	-	-	-	-	-	-
Protective cultivation (Green Houses, Shade Net etc.)	-	-	-	-	-	-	-	-	-	-
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	1	27	0	27	0	0	0	27	0	27
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	3	54	0	54	18	0	18	59	13	72
Nursery management	-	-	-	-	-	-	-	-	-	-
Production and management technology	2	41	0	41	26	0	26	67	0	67
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	-	-	-	-	-	-	-	-	-	-
Poultry Management	-	-	-	-	-	-	-	-	-	-
Piggery Management	-	-	-	-	-	-	-	-	-	-
Rabbit Management	-	-	-	-	-	-	-	-	-	-
Disease Management	-	-	-	-	-	-	-	-	-	-
Feed management	-	-	-	-	-	-	-	-	-	-
Production of quality animal products	1	15	0	15	20	0	20	35	0	35
V Home Science/Women empowerment										
Household food security by kitchen gardening and	-	-	-	-	-	-	-	-	-	-

nutrition gardening										
Design and development of low/minimum cost diet	1	0	0	0	0	19	19	0	19	19
Designing and development for high nutrient efficiency diet	2	0	0	0	1	48	49	1	48	49
Minimization of nutrient loss in processing	-	-	-	-	-	-	-	-	-	-
Gender mainstreaming through SHGs	-	-	-	-	-	-	-	-	-	-
Storage loss minimization techniques	-	-	-	-	-	-	-	-	-	-
Value addition	3	0	7	7	0	76	76	0	83	83
Income generation activities for empowerment of rural Women	1	0	13	13	0	14	14	0	27	27
Location specific drudgery reduction technologies	1	0	0	0	3	35	38	3	35	38
Rural Crafts	-	-	-	-	-	-	-	-	-	-
Women and child care	-	-	-	-	-	-	-	-	-	-
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										
VIII Fisheries										
Integrated fish farming	-	-	-	-	-	-	-	-	-	-
Carp breeding and hatchery management	-	-	-	-	-	-	-	-	-	-
Carp fry and fingerling rearing	1	11	3	14	0	0	0	11	3	14
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	-	-	-	-	-	-	-	-	-	-

X Capacity Building and Group Dynamics										
Leadership development	1	14	4	18	6	0	6	20	4	24
Group dynamics	1	27	0	27	0	0	0	27	0	27
Formation and Management of SHGs	-	-	-	-	-	-	-	-	-	-
Mobilization of social capital	3	28	4	32	29	13	42	58	16	74
Entrepreneurial development of farmers/youths	1	0	0	0	20	0	20	20	0	20
WTO and IPR issues	-	-	-	-	-	-	-	-	-	-
XI Agro-forestry										
Production technologies	2	17	0	17	28	7	35	45	7	52
Nursery management	-	-	-	-	-	-	-	-	-	-
Integrated Farming Systems	-	-	-	-	-	-	-	-	-	-
TOTAL	**34**	**392**	**36**	**428**	**209**	**223**	**431**	**589**	**271**	**860**
(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	1	0	0	0	0	19	19	0	19	19
Rural Crafts										
TOTAL	**1**	**0**	**0**	**0**	**0**	**19**	**19**	**0**	**19**	**19**
(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	1	0	0	0	0	0	0	0	44	44
Low cost and nutrient efficient diet designing	-	-	-	-	-	-	-	-	-	-
Production and use of organic inputs	-	-	-	-	-	-	-	-	-	-
Gender mainstreaming through SHGs	-	-	-	-	-	-	-	-	-	-
TOTAL	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**44**	**44**

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	7									173
Weed Management	-	-	-	-	-	-	-	-	-	-
Resource Conservation Technologies	-	-	-	-	-	-	-	-	-	-
Cropping Systems	2	21	0	21	34	6	40	55	6	61
Crop Diversification	4	65	5	70	18	5	23	83	10	93
Integrated Farming	-	-	-	-	-	-	-	-	-	-
Water management	-	-	-	-	-	-	-	-	-	-
Seed production	-	-	-	-	-	-	-	-	-	-
Nursery management	-	-	-	-	-	-	-	-	-	-
Integrated Crop Management	-	-	-	-	-	-	-	-	-	-
Fodder production	1	18	0	18	1	0	1	19	0	19
Production of organic inputs										
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops	3	54	0	54	5	0	5	59	0	59
Off-season vegetables	-	-	-	-	-	-	-	-	-	-
Nursery raising	-	-	-	-	-	-	-	-	-	-
Exotic vegetables like Broccoli	-	-	-	-	-	-	-	-	-	-
Export potential vegetables	-	-	-	-	-	-	-	-	-	-

Grading and standardization	-	-	-	-	-	-	-	-	-	-
Protective cultivation (Green Houses, Shade Net etc.)	-	-	-	-	-	-	-	-	-	-
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	1	27	0	27	0	0	0	27	0	27
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	3	54	0	54	18	0	18	59	13	72

Nursery management										
Production and management technology	3	55	0	55	30	0	30	85	0	85
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	-	-	-	-	-	-	-	-	-	-
Poultry Management	-	-	-	-	-	-	-	-	-	-
Piggery Management	-	-	-	-	-	-	-	-	-	-
Rabbit Management	-	-	-	-	-	-	-	-	-	-
Disease Management	-	-	-	-	-	-	-	-	-	-
Feed management	-	-	-	-	-	-	-	-	-	-
Production of quality animal products	1	15	0	15	20	0	20	35	0	35
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	1	0	0	0	0	18	18	0	18	18
Design and development of low/minimum cost diet	1	0	0	0	0	19	19	0	19	19

Designing and development for high nutrient efficiency diet	3	0	0	0	5	73	78	5	73	78
Minimization of nutrient loss in processing	-	-	-	-	-	-	-	-	-	-
Gender mainstreaming through SHGs	-	-	-	-	-	-	-	-	-	-
Storage loss minimization techniques	-	-	-	-	-	-	-	-	-	-
Value addition	3	0	7	7	0	76	76	0	83	83
Income generation activities for empowerment of rural Women	1	0	13	13	0	14	14	0	27	27
Location specific drudgery reduction technologies	1	0	0	0	3	35	38	3	35	38
Rural Crafts	-	-	-	-	-	-	-	-	-	-
Women and child care	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	-	-	-	-	-	-

VIII Fisheries	-	-	-	-	-	-	-	-	-	-
Integrated fish farming	-	-	-	-	-	-	-	-	-	-
Carp breeding and hatchery management	-	-	-	-	-	-	-	-	-	-
Carp fry and fingerling rearing	1	11	3	14	0	0	0	11	3	14
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	-	-	-	-	-	-	-	-	-	-
X Capacity	-	-	-	-	-	-	-	-	-	-

Building and Group Dynamics										
Leadership development	1	14	4	18	6	0	6	20	4	24
Group dynamics	1	27	0	27	0	0	0	27	0	27
Formation and Management of SHGs	-	-	-	-	-	-	-	-	-	-
Mobilization of social capital	3	28	4	32	29	30	42	58	16	74
Entrepreneurial development of farmers/youths	1	0	0	0	20	0	20	20	0	20
WTO and IPR issues	-	-	-	-	-	-	-	-	-	-
XI Agro-forestry										
Production technologies	2	17	0	17	28	7	35	45	7	52
Nursery management	-	-	-	-	-	-	-	-	-	-
Integrated Farming Systems	-	-	-	-	-	-	-	-	-	-
TOTAL	**38**	**420**	**36**	**456**	**218**	**266**	**483**	**626**	**314**	**940**
(B) RURAL YOUTH										
Mushroom Production	2	16	0	16	15	0	15	31	0	31
Bee-keeping	-	-	-	-	-	-	-	-	-	-
Integrated farming	-	-	-	-	-	-	-	-	-	-
Seed production	-	-	-	-	-	-	-	-	-	-
Production of organic inputs	-	-	-	-	-	-	-	-	-	-
Integrated Farming	-	-	-	-	-	-	-	-	-	-
Planting material production	1	5	0	5	14	0	14	19	0	19
Vermi-culture	-	-	-	-	-	-	-	-	-	-
Sericulture	-	-	-	-	-	-	-	-	-	-
Protected cultivation of vegetable crops	-	-	-	-	-	-	-	-	-	-
Commercial fruit production	1	6	0	6	15	0	15	21	0	21
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	1	0	0	0	0	19	19	0	19	19
Rural Crafts										
TOTAL	**5**	**27**	**0**	**27**	**44**	**19**	**63**	**71**	**19**	**90**
(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	1	0	0	0	0	0	0	16	0	16
Care and maintenance of farm machinery and implements	-	-	-	-	-	-	-	-	-	-
WTO and IPR issues	-	-	-	-	-	-	-	-	-	-
Management in farm animals	-	-	-	-	-	-	-	-	-	-
Livestock feed and fodder production	1	0	0	0	0	0	0	27	0	27
Household food security	-	-	-	-	-	-	-	-	-	-
Women and Child care	1	0	0	0	0	0	0	0	44	44
Low cost and nutrient efficient diet designing	-	-	-	-	-	-	-	-	-	-
Production and use of organic inputs	-	-	-	-	-	-	-	-	-	-
Gender mainstreaming through SHGs	-	-	-	-	-	-	-	-	-	-
TOTAL	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**43**	**44**	**87**

(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**	
Rural Craft	4/6/18-6/7/18	Basic Embroidery Stitches	Income generation activities	One month	**0**	**19**	**19**	-	-	-	-
Mushroom Cultivation	9/9/18-1/10/18	Compost Preparation	Round the year mushroom cultivation	15days	**15**	**0**	**15**	-	-	-	-
Compost Preparation	5/8/18-8/8/18	Mushroom Cultivation		2 days	**16**	**0**	**16**	-	-	-	-
Propagation	24/10/18-25/10/18	Propagation of Sub tropical fruits	Quality Planting material & production	2 days	**21**	**0**	**21**	-	-	-	-
Quality Planting material	26/10/18-27/10/18	Quality Planting material & production	Quality Planting material & production	2 days	**19**	**0**	**19**	**farmers**	**02**	-	-

(E) Sponsored Training Programmes conducted by KVK

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				
								M	F	T	M	F	T	M	F	T		
1	**18th Sept-31st Oct, 2018**	**Various Horticulture operation**	Horticulture	Quality planting material	35	RY	01	-	-	-	-	-	-	30	-	30	**MIDH**	
2	**02-01-2019**	**Refresher cun training workshop**	Medicinal fruits	Medicinal and Aromatic plants	1	PF/RY	01	-	-	-	-	-	-	-	-	-	**NABARD**	25000
3	**17-01-2019**	**Awareness cum training programme on PPV&FRA**	Plant breeding	Cencervation	1	PF/RY	01	69	14	83	10	9	19	79	23	102	**PPV&FRA**	34000
4	28-01-2019	Interaction workshop cum training programme	Medicinal plants	Medicinal plants	01	PF/RY	01	-	-	-	-	-	-	-	-	100	NMPB RCFC Kashmir	20000

(F) Skill Development Training under ASCI Conducted by selected KVKs

Sl. No	Date	Title	Discipline	Thematic area	Duration (days)	Client (PF/RY/EF)	No. of courses	No. of Participants								
								Others			SC/ST			Total		
								Male	Female	Total	Male	Female	Total	Male	Female	Total
1	21 Jan-15th March 2019	Vermicompost Producer	Agroforestry	Organic production	35	RY	1	9	0	9	11	0	11	20	0	20
2	12th oct 2018-20th Feb 2019	Mushroom Grower	Home Science	Mushroom cultivation	35	RY	1	11	0	11	8	1	9	19	1	20
Total							**2**	**20**	**0**	**20**	**19**	**1**	**20**	**39**	**01**	**40**

6. Extension Activities (including activities of FLD programmes)

Sl. No.	Nature of Extension Activity	Topic / crop	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 Days	Chick Pea	1	1	0	1	27	13	40	0	0	0	28	13	41
2		Wheat	2	15	0	15	36	13	49	0	0	0	51	13	64
3		Bajra	1	0	0	0	19	0	19	0	0	0	19	0	19
4		Maize	1	22	6	28	0	0	0	0	0	0	22	6	28
5		Mash	1	38	7	45	12	5	17	0	0	0	50	12	62
6		Paddy	1	15	2	17	15	11	26	0	0	0	30	13	43
7	Kisan Mela Participated		1	170	30	200	40	13	53	0	0	0	210	43	253
8	Awareness Programs	Kisan Kalyan Karyashalla	1	200	0	200	0	0	0	0	0	0	200	0	200
9		Breast Feeding week	1	0	34	34	0	183	183	0	0	0	0	217	217
10		Parthenium Awareness Campaign	2	26	18	44	11	8	19	0	0	0	37	26	63
11		Nutritional week	2	0	47	47	0	25	25	0	0	0	0	72	72
12		Swatchta Hi sewa hai	1	60	40	100	0	0	0	0	0	0	60	40	100
13		PPV&FRA Av Prg	1	90	13	103	0	0	0	0	0	0	90	13	103
14		Plantation Week	1	22	0	22	0	0	0	0	0	0	22	0	22
15		Plantation Drive-Neem	1	6	0	6	24	0	24	0	0	0	30	0	30
16	Kisan Ghosthi		4	113	31	144	178	49	227	0	0	0	291	80	371
17	Exhibition	KVK Stall	2	170	30	200	40	13	53	0	0	0	210	43	253
18	Film Show	PPVFRA	1	200	0	200	0	0	0	0	0	0	200	0	200
19	Method Demonstrations		16	238	10	248	112	37	149	0	0	0	350	47	397
20	Farmers Seminar	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Workshop		2	137	23	160	38	4	42	0	0	0	175	27	202
22	Group meetings		2	30	2	32	0	0	0	0	0	0	30	2	32
23	Lectures delivered as resource persons		12	-	-	-	-	-	-	-	-	-	-	-	-
24	Newspaper coverage		23	-	-	-	-	-	-	-	-	-	-	-	-
25	Radio talks		4	-	-	-	-	-	-	-	-	-	-	-	-
26	TV talks			-	-	-	-	-	-	-	-	-	-	-	-
27	Popular articles		3	-	-	-	-	-	-	-	-	-	-	-	-
28	Extension Literature		10	-	-	-	-	-	-	-	-	-	-	-	2000
29	Advisory Services		50	-	-	-	-	-	-	-	-	-	-	-	1500
30	Scientific visit to farmers field		104	-	-	-	-	-	-	-	-	-	-	-	780
31	Farmers visit to KVK		111	152	0	152	8	0	8	0	0	0	160	0	160
32	Diagnostic visits		5	34	0	34	0	0	0	10	0	10	44	0	44
33	Exposure visits		3	35	4	39	10	0	10	0	0	0	45	4	49
34	Ex-trainees Sammelan	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	Soil health Camp		1	8	2	10	33	20	53	0	0	0	41	22	63
36	Animal Health Camp	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	Agri mobile clinic	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	Soil test campaigns	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	Farm Science Club Conveners meet	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	Self Help Group Conveners	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	meetings														
41	Mahila Mandals Conveners meetings	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Celebration of important days (specify)	World Rabies Day	1	71	6	77	0	0	0	0	0	0	71	6	77
43	Celebration of important days (specify)	Mahila Kisan Divas	1	10	27	37	6	57	63	0	0	0	16	84	100
44	Celebration of important days (specify)	Kisan Divas	1	39	0	39	16	0	16	0	0	0	55	0	55
45	Swatchata Pakhwara		7	206	7	213	0	0	0	0	0	0	206	7	213
46	Unnat Bharat Abhiyan		4	66	0	66	7	0	7	0	0	0	73	0	73
47	248		3	87	19	106	83	101	184	0	0	0	170	102	272
Grand Total			**274**	**1914**	**348**	**2262**	**576**	**502**	**1078**	**10**	**0**	**10**	**2516**	**832**	**8158**

6. B. Kisan Mobile Advisory Services

Kisan Mobile Advisory									
Name of the KVK	**No. of farmers Covered**	**No. of Advisories Sent**	**Type of messages**						
			Crop	**Livestock**	**Weather**	**Marketing**	**Awareness**	**Other enterprise**	**Any other**
Jammu	**1500**	**50**	-	-	**yes**	-	-	-	-

6. C. DETAILS OF TECHNOLOGY WEEK CELEBRATIONS during 2018-19

No. of Technology week celebrated	Types of Activities	No. of Activities	Number of Participants	Related crop/livestock technology
01	Gosthies	02	32	-
	Lectures organized	05	104	-
	Exhibition			-
	Film show	01	72	-
	Fair			-
	Farm Visit	04	24	-
	Diagnostic Practicals			-
	Distribution of Literature (No.)	200	100	-
	Distribution of Seed (q)	-	-	-
	Distribution of Planting materials (No.)	-	-	-
	Bio Product distribution (Kg)	-	-	-
	Bio Fertilizers (q)	-	-	-
	Distribution of fingerlings	-	-	-
	Distribution of Livestock specimen (No.)	-	-	-
	Total number of farmers visited the technology week		104	

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					
	Paddy	Basmati 370	82.5	346500	550
	Wheat	WH1080	160	294440	360
OILSEEDS	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
PULSES	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
VEGETABLES	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
FLOWER CROPS	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
OTHERS (Specify)	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-

B) PLANTING MATERIALS

Major group/class	Crop	Variety	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
FRUITS	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
SPICES	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
VEGETABLES	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
FOREST SPECIES	-	-	-	-	-
	Napier		2000	2500	50
	Seteria		200	1500	50
	Harad, Anola, Behra, Jamun		1193	47235	89
	-	-	-	-	-
ORNAMENTAL CROPS	-	-	-	-	-
	Kachnar, Gulmohar, Cassia, Bamboo Neem		150	1500	37
	-	-	-	-	-
	-	-	-	-	-
PLANTATION CROPS	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Others (specify)	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-

C) BIO PRODUCTS

Major group/class	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			No	(kg)		
BIOAGENTS	-	-	-	-	-	-
1	Mushroom			0.80	8000	19
	-	-	-	-	-	-
	-	-	-	-	-	-
BIOFERTILIZERS	-	-	-	-	-	-
1	Vermicompost	Eisenia foetida		6700	53600	45
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
BIO PESTICIDES	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-

D) LIVESTOCK

Sl. No.	Type	Breed	Quantity		Value (Rs.)	Provided to No. of Farmers
			(Nos	Kgs		
Cattle	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
SHEEP AND GOAT	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
POULTRY	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
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) KVK e-News Letter – (Name, Date of start, periodicity, Name of the Website uploaded)

(C) Literature developed/published

Item	*Title*	*Authors name*	*Number of copies*
Research papers	• Augmenting Production and Income of Wheat Growers in Irrigated Plains of Jammu District through Introduction and Spread of HD Wheat Variety	Sharma, R., Tandon, V., Khar, S., Choudhary, P. and Arora, R.K.	Journal of Safe Agriculture. 2018. 2 (1): 46-49
	• Marketing analysis of meat retailing in Jammu	Handoo, A., Kachroo, J., Sharma, S., Dwivedi, S., Sharma, R., and Hamid, N.	J. of Community Mobilization and Sustainable Development 2018. 13(1): 91-97
	• *Terminalia chebula* Retz. (Harad) for Livelihood Security of Farmers of Kandi Villages of Jammu Region of Jammu and Kashmir	Choudhary, P. Sharma, R. Gularia, V., Gupta, S.K., Tandon, V. and Arora, R.K.	Indian Forester 2019. 145 (3): 275-278
	• Evaluation of Carp Gut Isolated Probiotic Bacteria *Lactobacillus plantarum* FLB1: Hematological and Biochemical Alterations in Rohu *Labeo rohita* (Ham.)	Prem Kumar, Vaneet Inder Kaur , Anuj Tyagi and Shanthanagouda A. Holeyappa	Indian Journal of Ecology (2019) 46(2): 408-412
Abstracts	• Rakesh Sharma, Vikas Tandon, Arora, R.K. and Choudhary, P. (2018). Initiatives of KVK in Doubling of Farmers Income: A Case Study of Village Sagoon, Jammu pp 156 In: Souvenir & compendium of International Conference Doubling the income of farmers of SAARC Countries: Extension Strategies and approaches. 2018 Kathmandu, Nepal 20th -23rd September, 2018.		
	• Poonam Abrol, Rakesh Sharma, Vikas Tandon, Sheetal Badyal, Puneet Choudhary and Raju Gupta (2018). Pesticide Residues in Food – A Challenge in Nutritional Security. In: compendium of 3rd National seminar RASSA on "Smart Technologies to Boost Farm Productivity and Socio-Economic Status of Rural India" organized by Royal association for Science-Led Socio-Cultural Advancement (RASSA), New Delhi in collaboration with SKUAST-Jammu, November 19-20, 2018. Pp192		
	• Vikas Tandon, Rakesh Sharma, Punit Choudhary, Sheetal Badyal, and R.K.Arora (2018). " Round the Year Farming Cycle for Enhancing Farmers Income in Jammu In: compendium of 3rd National seminar RASSA on "Smart Technologies to Boost Farm Productivity and Socio-Economic Status of Rural India" organized by Royal association for Science-Led Socio-Cultural Advancement (RASSA), New Delhi in collaboration with SKUAST-Jammu, November 19-20, 2018. Pp184		
	• Sheetal Badyal, Vikas Tandon, Rakesh Sharma, Punit Choudhary, Poonam Parihar, and Poonam Abrol (2018). Capacity Building of Rural Women for Self Employment through Training in Tie and Dye Technique. In: compendium of 3rd National seminar RASSA on "Smart Technologies to Boost Farm Productivity and Socio-Economic Status of Rural India" organized by Royal association for Science-Led Socio-Cultural Advancement (RASSA), New Delhi in collaboration with SKUAST-Jammu, November 19-20, 2018. Pp163-164		

Item	Title	Authors name	Number of copies
	• Puneet Choudhary, Rakesh Sharma, Vikas Tandon, Sheetal Badyal, Raju Gupta, Poonam Abrol and R.K.Arora (2018) Harad: A boon for higher Income and Entrepreneurship Development for Kandi Villages of Jammu Region. In: compendium of 3rd National seminar RASSA on "Smart Technologies to Boost Farm Productivity and Socio-Economic Status of Rural India" organized by Royal association for Science-Led Socio-Cultural Advancement (RASSA), New Delhi in collaboration with SKUAST-Jammu, November 19-20, 2018. Pp16		
	• Sheetal Badyal, Vikas Tandon, RK Arora, Anamika Jamwal, Neerja Sharma, Vinod Gupta and Pawan Sharma. 'Mushroom cultivation: A viable micro-enterprise for farmers and farm-women. In: compendium of 3rd National seminar RASSA on "Smart Technologies to Boost Farm Productivity and Socio-Economic Status of Rural India" organized by Royal association for Science-Led Socio-Cultural Advancement (RASSA), New Delhi in collaboration with SKUAST-Jammu, November 19-20, 2018.		
	• Sheetal Badyal, Vikas Tandon, Poonam Parihar, Sonika Jamwal, Neerja Sharma, Pooja Nayyar and Shalini Khajuria."Mushroom: An Excellent nutraceutical for alleviating poverty and malnutrition. In: compendium of 3rd National seminar RASSA on "Smart Technologies to Boost Farm Productivity and Socio-Economic Status of Rural India" organized by Royal association for Science-Led Socio-Cultural Advancement (RASSA), New Delhi in collaboration with SKUAST-Jammu, November 19-20, 2018.		
	• Rakesh Sharma, Puneet Choudhary, Vikas Tandon, Sheetal Badyal, Raju Gupta, Poonam Abrol and R.K.Arora (2018). Scope and Limiting Factors in Pulses Production in Rainfed Areas of Jammu District. In: compendium of 3rd National seminar RASSA on "Smart Technologies to Boost Farm Productivity and Socio-Economic Status of Rural India" organized by Royal association for Science-Led Socio-Cultural Advancement (RASSA), New Delhi in collaboration with SKUAST-Jammu, November 19-20, 2018. Pp114		
	• Prem Kumar, Anuj Tyagi, Harsh Panwar, Vaneet Inder Kaur 2018. Isolation and Probiotic Characterization of *Lactobacillus plantarum* and *Lactococcus lactis* from Gut Microbiome of Rohu (Labeo rohita). ICFAT 2018 : 20th International Conference on Fisheries and Aquaculture Technology at Tokyo, Japan w.e.f November 12-13. World Academy of Science, Engineering and Technology International Journal of Animal and Veterinary Sciences. Vol:12, No:11, 2018		
	• Prem Kumar, Vaneet I. Kaur, Anuj Tyagi, and Shashi Nayyar 2019. Probiotic potential of putative lactic acid bacteria isolated from fish gut: Immune modulation in *Labeo rohita* (Ham.). In compendium of BRAQCON2019. Jan 23-25,2019 at CIBA, Chennai.		
	• Prem Kumar, Vaneet Inder Kaur, Anuj Tyagi, and Shashi Nayyar 2019. Putative Lactobacillus plantarum FLB1 as probiotic for improved growth performance and intestinal enzymatic status of rohu (*Labeo rohita*). In : 31st All India Congress of Zoology (31st AICZ) and National Seminar on Climate-Smart Aquaculture and Fisheries (CSAF) held at College of Fisheries, Lembucherra during 15-16th January 2019.		
	• Prem Kumar, Vikas Tandon, Punit Choudhary, Sheetal Badyal and Sushma Sharma 2019. Sustainable Income generation and Employment opportunities through aquaculture. In: compendium of two days National Conference on "Women Empowerment through Agro-entrepreneurship for Livelihood security" (WE-2019) held at Main Campus, SKUAST-Jammu, Chatha, J&K, on February 07-08, 2019.		
	• Sheetal Badyal, Vikas Tandon, Rakesh Sharma, Punit Choudhary, Prem Kumar, Poonam Abrol & R.K Arora 2019. Mushroom Production-A Case Study of a Women Entrepreneur. In: compendium of two days National Conference on "Women Empowerment through Agro-entrepreneurship for Livelihood security" (WE-2019) held at Main Campus, SKUAST-Jammu, Chatha, J&K, on February 07-08, 2019.		
	• Punit Choudhary, Rakesh Sharma, L M Gupta, Vikas Tandon Sheetal Badyal, Prem Kumar, Raju Gupta, Poonam Abrol & R K Arora *2019.* Bir Singh: HARAD FOR SUSTAINABILITY UNDER RAINFED AGRICULTURE. In: compendium of two days *National Conference on "Women Empowerment through Agro-entrepreneurship for Livelihood security" (WE-2019) held at Main Campus, SKUAST-Jammu, Chatha, J&K, on February 07-08, 2019.*		

Item	*Title*	*Authors name*	*Number of copies*
Technical reports	• Annual Progress report • MPR's • Quarterly progress reports • Annual reports for University • Report on Cluster FLD's • NEP Reports • NABARD Sponsored Project Reports		
Technical bulletins	• Pradhan Mantra Fasal BimaYojna (English)	VikasTandon, Puneet Choudhary, Rakesh Sharma, Sheetal Badyal, Raju Gupta, Poonam Abrol	200
	• Pradhan Mantra Fasal BimaYojna (Hindi)	VikasTandon, Puneet Choudhary, Rakesh Sharma, Sheetal Badyal, Raju Gupta, Poonam Abrol	200
	• Sarson Ki Unnat Kheti	Rakesh Sharma, Vikas Tandon, Puneet Choudhary, Raju Gupta	200
	• Gehu Ki Unnat Kheti	Rakesh Sharma, Puneet Choudhary, Vikas Tandon, Raju Gupta	200
	• Chane Ki UnnatKheti	VikasTandon, Rakesh Sharma, Puneet Choudhary, Raju Gupta	200
	• Harad medicinal tree propagation and value addition	Puneet Choudhary, Poonam Abrol, Sheetal Badyal, Vikas Tandon, Rakesh Sharma, Raju Gupta	300
	• Podh kismo aur krishik adhikar sarankshan Adiniyam	Vikas Tandon, Rakesh Sharma, Puneet Choudhary, Raju Gupta	200
	• Machali ki Mratyu: Unke karan avan nivaran	Prem Kumar, Puneet Choudhary, Rakesh Sharma	100
	• Kya aap kar sakte hain machli ki kheti	Prem Kumar, Puneet Choudhary, Rakesh Sharma	100
Popular articles	Twelve articles	Dr. Banarsi lal Dr. Vikas Tandon	Daily news papers
Folders /leaflets	• Machali se prapt mulya sanverdhit utpad	Prem Kumar, Rakesh Sharma, Puneet Choudhary, Vikas Tandon, Sheetal Badyal, Poonam Abrol, Raju Gupta	100
	• Matasya Palan ki Jankari	Prem Kumar, Rakesh Sharma, Puneet Choudhary, Vikas Tandon, Sheetal Badyal, Poonam Abrol, Raju Gupta	100
	• Poshtik grahvatika ke labh	Poonam Abrol, Vikas Tandon, Sheetal Badyal, Prem Kumar, Puneet Choudhary,	100

Item	*Title*	*Authors name*	*Number of copies*
		Rakesh Sharma, Raju Gupta	
	• Nutritional benefits from Organic food	Poonam Abrol, VikasTandon, Sheetal Badyal,	
Training manual	• VERMICOMPOSTING: Process & Value Addition Skill Development Entrepreneurial Activity In Agriculture Training manual II	Punit Choudhary Rakesh Sharma Vikas Tandon	25
	• KHUMB ADHARIT UDHAMITA VIKAS	Sheetal Badyal, Prem Kumar, Rakesh Sharma, Punit Choudhary and Vikas Tandon	25

I Details of Electronic Media Produced

S. No.	Type of media (CD / Software)	Title of the programme	Number
1	DD Kisan – Krishi Darshan (youtube)	Fish Farming Special	
2	DD Kisan – Krishi Darshan (youtube)	Women self-help group	

(D) Mobile App developed by KVK

S.No.	Name of KVK	Name of Mobile App Developed	Year in which App is Developed	No. of Users downloaded the App	Type of information offered by the App(seeds, fertilizers, market prices, weather etc.)
	-	-	-	-	-

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

9.1.1 HARAD FOR SUSTAINABILITY UNDER RAINFED AGRICULTURE

Introduction:

Farmers of kandi villages have adapted themselves to traditional Harad and Aonla based agro-forestry practices according to their needs and circumstances that are growing naturally in the forest area, village common lands popularly known as Ghasni under traditional agro-forestry systems and on the bunds of farmer's fields are the source of livelihood for the resource poor farm families of the villages. Harad trees fruits green and dry fruit alone contributes to trade of more than 350 Tonnes and 15-20 Tonnes respectively, that is being exported to Pakistan and gulf countries through Amritsar border fetching a total income of more than 70 lakhs per annum. One such farmer Sh Bir Singh S/o Nand lal of village Kathar Kishanpur Manwal of Jammu district has adapted to such practices with the coordination and technical guidance of KVK Jammu. Before intervention farmers was realizing Net Income- Rs 32,000 only from traditional rain-fed farming of Wheat- Maize+ Pulses form 2.6 ha area. This eager income is not suffice to run a family of average 6 members per family. The farmers are forced to do the job of labourer or private job to earn bread and butter for his family.

KVK Intervention:

With the guidance of KVK Jammu the farmer adopted modified agroforestry system with planting of superior Raj Harad clones at 5x5 mt spacing so that the land between the spacing may be utilized for scientific agriculture. KVK also provided critical inputs in the shape of improved seed of oilseed, pulses and cereal crops in addition to Raj Harad sapling. In his 2.6 ha of total farm Medicinal Trees (Harad, Aonla) contributed on 0.4 ha with 150 no's of grafted plants, with of agriculture in in 1.2 ha (Wheat + Maize + Pulses) and fruit trees in 1.0 ha.

Output:

Major Achievements/returns from diversified farm per year:

- Adopted cultivation of medicinal trees
- Established orchard of citus under Horti-agriculture system
- Maintaining six dairy animals with fodder production through perennial grasses and seasonal forage crops.
- Developed facilities of rainwater harvesting structure for life saving irrigation facilities during rainy months.
- Developed nursery of production of quality plating material of harad and other species

Economic Returns:

- Mango, Citrus: Rs 75,000.00 Medicinal Trees (Raj Harad, Aonla.)– Rs 42,000

Scientific Rain-fed Agriculture:

- Cereals & pulses (Maize, Wheat, Mash) – Rs 58,000
- Dairy- 4 cows: Rs 16000 /month
- Saplings (fruit, MAP's etc) – Rs 40,000

The average yield of green fruit of Harad ranged between 100-120 kg per tree, generating an average income of Rs. 1600-2000 per tree per year. During August- September, the fruit harvested in green stage is sent to Delhi, Hoshiarpur or Amritsar markets by the farmer that is either exported to Pakistan and other foreign countries or used for making preserve by the local units. The remaining fruit retained by the farmer is harvested during December- January. The fruit is dried by the farmers, graded according to weight and shape and sent to markets for sale. With coming up of superior grafting clones of Harad, the expected economic returns from these grafted clones at an early bearing age of 7-8 years will Rs 593750 per ha that will be almost double than the existing seedling plantations fetching an amount of Rs 300000 that too after 12-15 years of bearing.


View of farm of Sh Bir Singh

Harad trees grown along with agricultural crops in the form of agro-forestry system provided a biomass reserve upon which farmer can fall back for subsistence and income in times of crop failure, unemployment and other kinds of hardships, contingencies or to meet exceptional needs. The planting of Harad trees will help farmers to meet contingencies by directly providing recurrent, seasonal or occasional flow of food, fodder, timber, medicinal fruits and other products or earn cash to meet the contingencies thus helping in reducing household vulnerability to risk and thereby ensuring the livelihood.

9.1.2 MUSHROOM CULTIVATION- A PANACEA TO FARMER'S TRIBULATIONS

INTRODUCTION

Among different agro enterprises, mushroom cultivation is one which has the potential for bioconversion of agricultural, industrial, forestry and household wastes into nutritious food. Mushroom cultivation can effectively utilize agro residues for production of protein rich foods and play crucial role in management of different agro residues. It consists of different activities such as spawn production, compost making, processing and mushroom cultivation etc. and each of these is an enterprise in itself.

At present, the areas with rice-wheat cropping systems of India are facing tough challenges to handle mounting crop residues. Mushroom cultivation can effectively utilize these agro residues for production of protein rich foods and play crucial role in their management.

Krishi Vigyan Kendra, Jammu recognizing the fact that complete absence of on-farm employment for a considerable time period during the year, lack of resources and knowledge about use of agro-waste in mushroom production keep the farmers dependent on traditional crops for their livelihoods. With all its historical background and nutritive importance, it is of paramount importance that large number of farmers/ rural youth be made aware of successful cultivation and economic benefits of mushroom production. Thus, KVK Jammu, since its inception in 1992 has been training farmers in various agri-based economic activities.

Sh. Vinod Kumar, S/o Sh. Seva Ram is a resident of the small village Kaloe situated at a distance of 2kms from the international border between India and Pakistan. He's a progressive, hardworking farmer holding a middle pass educational status. He owns a land holding of not more than 3.5 acres and is practicing cereal based agriculture (rice-wheat) on mere subsistence basis. He tried hard to get a job in the private as well as public sector but failed miserably. Downtrodden by the pressure of feeding a family of 4 members, and providing them a life worth living, he worked his fingers to the bone. In a catastrophic struggle that ordained him to work as a loader at the airport for seven long years, Vinod pushed through what he claims as the "most struggling period of his life." Even the basic necessities of life, like providing elementary education to his children and ensuring them a secure future, seemed a rather Sisyphean task for Vinod. Amidst this frenzy, he made up his mind to put up a hard fought battle. In the efforts to increase his income, he decided to rather diversify instead of practicing routine agriculture.

As 47 years old Vinod recalls, in the year 2010, he happened to visit a neighboring village to attend a family function, where in, he came across the first mushroom unit, he had ever seen. Convinced that the unit could provide a solution to his growing problems, he gathered first hand information about the unit and decided to experiment on the same with 3 quintals of dry wheat straw back at home. To his amazement, the crop yielded very good results. Following the profit, he decided to increase the unit by 2 more quintals and raise it to five quintals in the next season.

It was in the year 2014-15, that Sh. Vinod Kumar and his wife Smt. Sunita Devi came in contact with KVK Jammu, through a local NGO, working for upliftment of farming community in the border areas of RS Pura. This turned out to be the turning point for Vinod and his family. Both Sunita and Vinod started visiting KVK for attending farmer trainings, programmes and melas/fairs.

ECONOMIC BENEFITS				
SNO.	YEAR	CROPS GROWN	UNIT SIZE(qtls.)	INCOME(rupees)
1.	2013-14	Button Mushroom	3	8160
2.	2014-15	Button Mushroom	5	13,610
3.	2015-16	Button Mushroom	10	28,100
4.	2016-17	Button Mushroom	15	44,680
5.	2017-18	Button Mushroom Dhingri	35 5	95,600 11,425
6.	2018-19	Button Mushroom Dhingri	45 5	1,30,000 8430

With the realization of the importance of cultivating mushroom as an additional source of income, Vinod started attending various short duration trainings at KVK Jammu and decided to undergo skill training in Mushroom production. In the year 2016-17, he enrolled himself for 200 hours skill trainings on “Mushroom growers- Small entrepreneurs” sponsored by ASCI and successfully completed the certificate course. After the invention of KVK Jammu, farmers started cultivating 3 different species of mushrooms, viz. white button, oyster and milky mushrooms. However, he has commercialized only 2 of them. , i.e. button mushroom and oyster mushroom.

In spite of a lot of hindrances in its cultivation and high labor requirement, he manages to take maximum possible yield from his unit. Due to extensive training, he has improved his production

potential, marketing, negotiating skills and above all his confidence level. Under the direct guidance of KVK, he has chalked out production and marketing strategies to get maximum benefits.

KVK INTERVENTION

KVK Jammu, recognizing the value of mushroom production in uplifting the economy of marginal, small and landless farmers, lays special emphasis on providing/conducting extension activities, skill trainings, and exhibitions for rural youth, farmers and farm women. Exposure visits are also planned for farmers to promote mushroom production units on lrge scale. Since the past 3 years, KVK is providing 200 hour skill trainings sponsored by ASCI. Moreover, it facilitates the mushroom growers not only in providing technical inputs but also assist in procuring good quality spawn and other critical inputs in addition to conducting diagnostic visits to mushroom units at farmer's field. Exhaustive skill training comprising of theoretical as well as practical knowledge, exposure visits regular interactions with like KVK scientists and experts from allied departments like EDI, mushroom development department, NABARD etc. has provided Vinod Kumar enough technical input to shape him into an innovative farmer who has developed improved methods of mushroom cultivation by using different strains of spawn after intervention of KVK Jammu.

IMPACT

In the pursuit to become a role model, accruing more benefit Vinod kumar is transforming from a seasonal producer to a round the year producer and also has entered into Micro-processing.He is marketing his fresh produce and Mushroom pickles by the brand name "Nisha Farm Products" and people in the market have started recognizing him not only by his brand name but also in terms of quality in Mushroom production and preservation. Whereas Sh. Vinod kumar along his wife has started horizontal spread of the technology in different ways by traning fellow farmers, youth and involving other women in micro-processing, he has become a role-model for rural youth for taking mushroom cultivation a potential practice for agri-preneurship development leading to sustainable livelihood security.

Hon'ble MOS presenting award for Best stall at state level Kisan mela.

DDG- ICAR interacting with Sh. Vinod Kumar

KVK has recognized achievement of Sh. Vinod kumar and his success story has also been covered by DD Kissan channel in 2018. Due to his recognition Mushroom Development has come forward in helping him by providing him loan facility and other govt. scheme benefits such as construction of Mushroom shed for increased production capacity. His work has been appreciated by many dignitaries like Dr. Jatinder Singh (MP/PMO), Dr. Nirmal Singh (former Deputy CM, Sh. NN Vohra (former Governor of J&K), DDGs-ICAR. He has been felicitated at various district and state level Kisan Melas and National Level exhibitions.

9.1.3 Impact of KVK Activities on Farmers Attitude towards Agriculture Enterprise

Introduction

Jandial Panchayat of Block Bhalwal is located 32^0 53'28" NL and 74^0 46' 53" EL of Jammu district of Jammu and Kashmir (J&K) state. The major farming system of the area is Maize-Wheat, Mash-Wheat, Maize-Oilseed. Chickpea crop was cultivated in the past by the farmers of Jandial Panchayat. But due to the non-availability of good quality seed, shortage of labour to do intercultural operations, lack of knowledge about chemical weed management and attack of gram pod borer and its subsequent effect on crop yield forced the farmers to discontinue sowing of this precious crop during *rabi* season.

KVK Intervention

The team of scientists listened to the grievances' of the farmers and suggested that there is need to alter their cropping system. The KVK experts suggested that instead of cereals, pulse crops should be incorporated in the existing system that will enrich their soil and moreover more profitable than wheat and maize crops. KVK Jammu organized three training programmes for farmers and farm women of the panchayat to update their knowledge about scientific agriculture. The training programmes were attended by 85 farmers/farm women. Two exposure visits for the farmers of the village was also organized. Frontline demonstrations of hybrid maize, wheat and chickpea were laid. In *rabi* 2018-19, KVK laid demonstrations of chickpea on 52 farmers field and the results were encouraging. As compared to the local check, 40 percent higher yield was recorded from the demonstrations and this enhancement in yield is contributed to adoption of high yielding variety and complete package of practice by the farmer.

Outcome

The average productivity of the chickpea crop was 5.9 q/ha. The impact of this intervention was very encouraging and majority of the farmers who have kept the seed of GNG 1581 cultivated chickpea in the *rabi* season 2017-18. On an average, each farmer obtained 40 kg chickpea from one kanal of area. The farmers revealed that compared to wheat, the cultivation of chickpea is more profitable and will help farmers to double their income from same piece of land. Now, the farmers of the panchayat are regular visitor of KVK Jammu and attended different programmes being organized by KVK from time to time. They are completely satisfied with KVK interventions and act as role model for the farmers of the area.

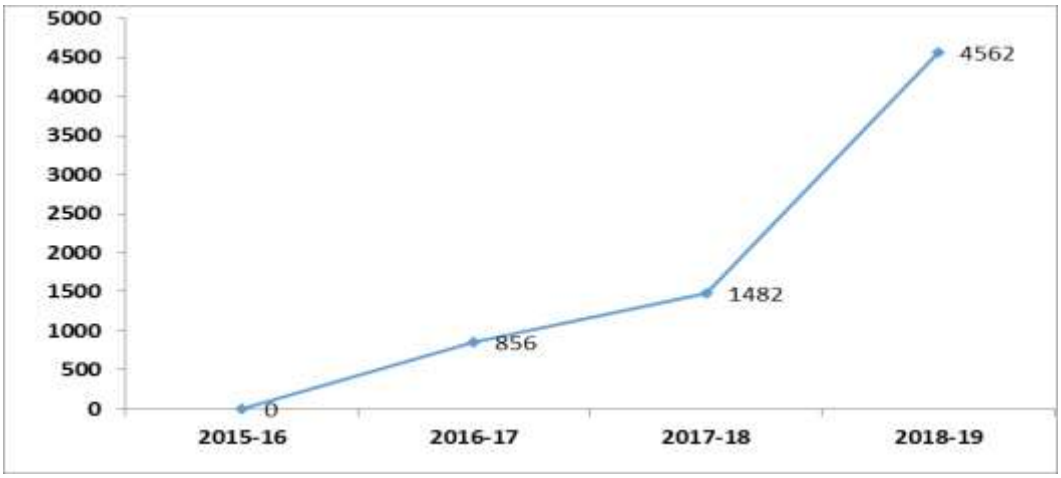
Impact

It was evident that KVK playing vital role in raising the socio-economic status of the farmers. Farming community welcomed new technologies of agriculture and allied sciences which improved their production. Farmers trusted the KVK activities and maintained the regular relationship for upgrading their knowledge. The activities of KVK namely FLDs on chickpea helped farmers to regain confidence in sowing of chickpea that they have lost due to non-availability of quality seed and pest management practices to save crop from the attack of gram pod borer.

Thus, the Government of India's initiative to double the farmers' income by 2022 can be easily achieved if the farmers plan cropping scheme for whole year and include crops like chickpea that will fetch higher returns than the traditional crops. The results further suggests that if the farmers out of his average farm size 0.4 ha, replace chickpea with wheat on 0.15 ha area, he will be able to earn income same to 0.25 ha of area on which he will cultivate wheat. Moreover, farmers are also suggested to sow toria after the harvesting of maize crop to get an addition income @ Rs 6000-7000/ha. Thus, addition of oilseed and pulse crops in the existing cropping sequence out only helps the farmers to increase their farm income but it will be helpful to the farmers for sustainability as pulse crops will enrich the soil. Also the incorporation of oilseed and pulses will be helpful for livelihood security of the farmers as he can produce necessary household items on his own farm and will generate more employment as the farmers remained without work after sowing of maize and wheat crops.

a) Performance of the end results of any one technology assessed, its refinement if any and its impact in district agriculture with respect to that crop or enterprise

As a result of KVK activities, the rate of adoption of the HD 3086 seed of wheat increased. Between 2015-16 and 2018-19, the area under HD-3086 wheat variety expanded from zero to 4562 ha. The results indicated that the KVK activities have given a good impact over the farming community of Jammu district as they were motivated by the OFTs and FLDs. Thus, there was 433 percent increase in area under HD 3086 wheat variety between 2015-16 and 2018-19**.**



Area (ha) under wheat variety HD 3086 over time

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

- KVK Jammu is following cluster approach in carrying out all activities.
- KVK is also using Post office linkage system to spread newly released varieties.
- KVK has also good rapport with the ex-servicemen of the area and is utilizing their services for dissemination of KVK technologies / information in their respective villages for better adoption.
- KVK Jammu has also used social media for spreading their message among the contact farmers for easy and timely spread of message for the benefit of farming community.
- KVK Jammu has a crop cafeteria where visiting farmers can themselves see the performance of new technologies and can pick the technologies suited to their requirements.

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
1	Cucurbits	Dusting with ash for control of beetles	Plant Protection to save vegetable crops
2	Maize	Beating of drum and firing of crackers	To divert wild animals from crop damage
3	Cereal crops	Use of drek leaves as bedding	Safe storage of food grains

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

- **Identification of courses for farmers/farm women**: An interview schedule of training need assessment is developed and group interviews of farmers are conducted at the village level. In this, assessment of village existing situation, assessment of their agricultural needs, trainings they have already participated, trainings they wish to participate, requirement of farmers, etc. These are recorded in the village and later analyzed in the office. Later on action programmes are formulated for successive years.
- **Rural Youth**: Similar interview schedule is designed for identification of training needs of rural youth. In the group interview village situation is assessed. Then priorities of the village youth are identified, looking into their resources, their trainings are finalized
- **In-service personnel**; During in-service training KVK provides them Performa to identify the training needs of extension personnel. Similarly we write a letter to concerned development departments to provide us the feed back and topics they wish to part trainings to their extension workers

9.E. Field activities

14 Number of villages adopted -20
ii. No. of farm families selected -400
iii. No. of survey/PRA conducted- 5

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

Status of establishment of Lab : functional

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

Sl. No	Name of the Equipment	Qty.	Cost
1	Water distillation unit	1	31667
2	Willy Grinding Mill	1	19406
3	P.H. meter	1	16706
4	Precisa analytical balance	1	52594
5	Kahn Shaking Machine	2	29358
6	Oven	1	12900
7	Spectrophotometer	1	151340

8	Flamephotometer	1	31149
9	EC meter	1	15729
10	Hot plate	1	1153
11	Kjeldhal Distillation and digestion unit	2	37695
	Total	**13**	**399397**

3. **Details of samples analyzed / Soil Health Cards issued during 2018-19 :**

Details	No.	No. of Farmers	No. of Villages	Amount realized
Soil Samples	25	25	02	-
Water Samples				
Plant Samples				
Soil Health Cards Issued				

4. Status of mini soil testing labs/kit : 2
5. Year of procurement of lab/kit : 2016-17
6. No. of mini labs with the KVK :-
7. Type of mini labs (Name of lab/Kkt) : mridaparikshak
8. **Details of samples analyzed through mini soil kit / Soil Health Cards issued during 2018-19 :**

Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized
Soil Samples	25	25	02	-
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./Unit)	**After (Rs./Unit)**
1. Spread of HD-3086 wheat Variety.	25	80%	28940	33376

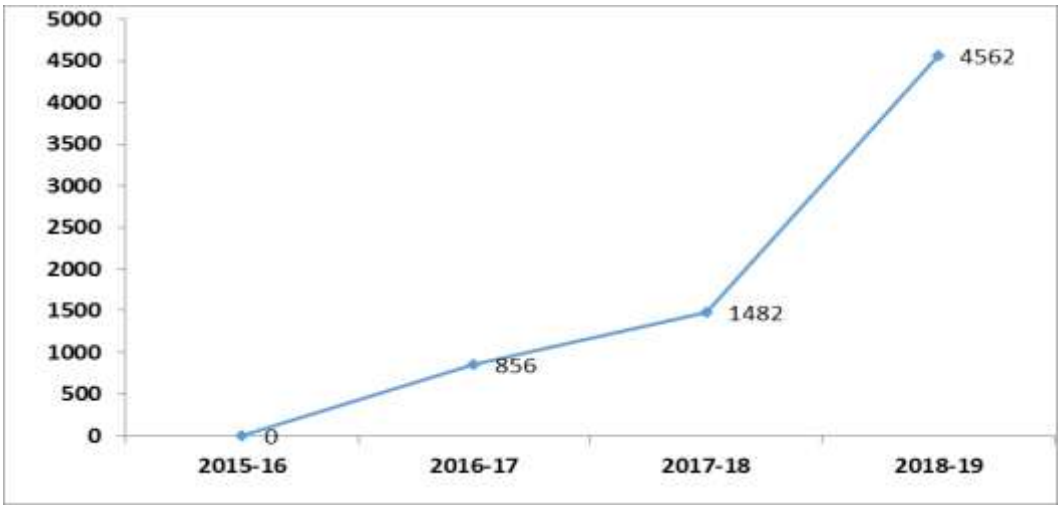
Impact of vocational training programs

KVK emphasized on conducting tailor made programs for rural youth ranging from one to five days and also one month duration, so that trainees could be confident in management of the enterprise besides technical learning technical skills. It has led to the creation of additional income generation avenues for them. About 69 percent of the trainees adopted mushroom cultivation at domestic and commercial level in addition to practicing traditional rice-wheat cultivation. As far as women empowerment through secondary agriculture is concerned, 44% of farm women have adopted cushion and soft toy making, decorative file folder etc. as vocation earning an additional income of Rs. 15,000 to Rs. 18,000 per annum. About 10% of the trainees, have adopted stitching and tailoring at commercial level and earning about Rs. 3500 to Rs. 4000/ per annum. About 15 to SHGs in the district are actively involved in preparing value added products from cereals, pulses, fruits and vegetables. The basic objective of vocational trainings is entrepreneurship development of the beneficiaries. Theses trainings not only empower participants by way of gain in knowledge but also motivate some of the trainees to translate their knowledge into actions as reflected in the adoption of vocations by them.

10.2 Cases of large scale adoption (Please furnish detailed information for each case)

a) Introduction and spread of HD 3086 variety of wheat in the district.

As a result of KVK activities, the rate of adoption of the HD 3086 seed of wheat increased. Between 2015-16 and 2018-19, the area under HD-3086 wheat variety expanded from zero to 4562 ha. The results indicated that the KVK activities have given a good impact over the farming community of Jammu district as they were motivated by the OFTs and FLDs. Thus, there was 433 percent increase in area under HD 3086 wheat variety between 2015-16 and 2018-19**.**



Area (ha) under wheat variety HD 3086 over time

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

- KVK focused on agricultural enterprises other that crops such as floriculture and mushroom cultivation. Farmers have been guided to cultivate marigold round the year. The farmers could get an extra income of Rs 1.00 Lakh per hectare by adopting marigold cultivation within a period of three months.
- The mushroom growers have been trained and have adopted this enterprise during the reporting period and reaped good remunerations out of it.
- Large scale adoption of wheat varieties namely HD 2967, HD 3086 and WH 1105 by the farmers of Jammu district under timely sown irrigated areas.
- Pusa varieties namely Pusa 1612 and PB 1509 have been introduced and have been appreciated by the farmers in non basmati areas due to their early maturity and higher yields.
- The area under pulses have increased during the reporting time. KVK has given special impetus for promotion of Chickpea in Rabi and summer pulses in the district.
- KVK Jammu is accredited center for two skill development programme for unemployed youth on vermin composting and mushroom cultivation and more number of rural youth are visiting KVK for enrolment for such programmes.
- Adoption of line sowing in Maize and Wheat in adopted villages.
- Reduction in application of Urea by 10-15% in paddy by following the use of LCC

10.4 Impact of ASCI Training programmes:

Krishi Vigyan Kendra, Jammu has been assigned two training programmes under Agriculture Skill Council of India with the objective to train and develop rural youths as small entrepreneurs in the field of Vermicompost Production and Mushroom Cultivation.

The detail of the training programme is as under:

S No	Title of Training Programme	No of participants	Duration	Adoption percentage	No of units established
1	Vermicompost Producer	20	200 hrs	35%	07
2	Mushroom Grower	20	200 hrs	80%	16

Trainees were made familiar with working in agricultural environment, possessed techniques of handling organic wastes, farm or dairy wastes and maintaining aseptic conditions. The incumbent assigned with the role of a vermicompost producer and mushroom grower are made competent in producing good quality vermicompost/mushroom using correct species/strains, materials and techniques in appropriate site/location.

About 80% of trainees started mushroom cultivation as vocation in addition to rice wheat cultivation and are actively involved in cultivation of particularly white button mushroom.Some entrepreneurs have also taken up oyster mushroom at a small scale(1-3qtls). However on an Average farmers are earning a profit of Rs.90/- to Rs.120/- per bag. This has helped the mushroom growers in augmenting their income. The apparent impact of intervention was evident in their adoption of the technology on an encouraging level and improving their livelihood.

Year 2018-19	**Types of unit**	**Number of units**	**Number of persons employed**
Course title-			
Mushroom Grower-Small entrepreneur	Commercial (10-50qtls)	5	2-3 each seasonally
	Commercial(3-10qtls)	6	Family resource
	Domestic	5	
	Any other	4	
TOTAL		**20**	

11.0 LINKAGES

11.1 Functional linkage with different organizations

Name of organization	Nature of linkage
Agriculture Department	Conducting training programme in collaboration with Deptt.
Animal Husbandry Department	Conducting training programme in collaboration with Deptt.
Horticulture Department	Demonstrations especially of fruits and vegetables
Forest Deptt.	Participation in meetings, Resource persons
Fisheries Department	Participation in meetings, demonstration
Directorate of fodder development	Participating in meeting and sponsored laying of FLDs on fodder
Nehru Yuva Kendra Jammu	Training for rural youth jointly
Directorate of Maize	FLDs/OFT of maize
IFFCO	These institutes are being contacted for getting financial assistance for establishing unit for different beneficiaries and their participation in meetings
KRIBHCO	These institutes are being contacted for getting financial assistance for establishing unit for different beneficiaries and their participation in meetings
Central Co-op. Bank Jammu NABARD	Banks and other financial agencies are contacted for further financial assistance for starting new units, under KVK.
National Horticulture Board	For establishment of orchids
State Bank of India	For financing and formation of SHGs
National Fertilizer Ltd.	Conducted training Programme in collaboration with NFL.
Indian Institute of Integrative medicine, Jammu	Association with Jammu arogya project and for training of farmers in Medicinal plants.
HFRI Shimla	Training programme for spread of commercially important medicinal plants suited to Jammu Plains.
NMPB RCFC Kashmir	

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

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Cluster FLD's on pulses	**July and Oct,2018**	**DAC**	**90000**
Cultivation of MAP's	**March 2018**	**RCFC NMPB**	**20000**

11.3 Details of linkage with ATMA

a) Is ATMA implemented in your district Yes

S. No.	Programme	Nature of linkage	Remarks

Coordination activities between KVK and ATMA during 2018-19

S. No.	*Programme*	*Particulars*	*No. of programmes attended by KVK staff*	*No. of programmes Organized by KVK*	*Other remarks (if any)*
01	Meetings	Annual plan meeting. Farmer scientist interactions	01	**01**	
02	Research projects	-	-	-	-
03	Training programmes	-	-	-	-
04	Demonstrations	-	-	-	-
05	Extension Programmes	-	-	-	-
	KisanMela	-	-	-	-
	Technology Week	-		-	-
	Exposure visit	Farmers of Rajouri District	01	-	-
	Exhibition	-	-	-	-
	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 NA

S. No.	Programme	Nature of linkage	Constraints if any
-	-	-	-

11.5 Nature of linkage with National Fisheries Development Board NA

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
	-	-	-	-	-
	-	-	-	-	-

12.0 PERFORMANCE OF INFRASTRUCTURE IN KVK

12.1 Performance of demonstration units (other than instructional farm)

Sl. No.	Demo Unit (Mention the name of Demo Unit)	Year of est.	Area	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1	Vermicompost unit	2008	0.02	-	-	67q	10000	53600	Functional unit
2	Fish pond	2012	0.02	Common carp	-	-	-	-	Demonstration purpose.

12.2 Performance of instructional farm (Crops) including seed production

Name Of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.	Cost of inputs	Gross income	
Cereals									
Paddy	**31/07/18**	**20/11/18**	**15.0**	**B-370**	**F-1**	**82.5**	**114367.00**	**180135**	**For sale of 46.80 q Grain**
Wheat	**20/12/18**	**6/5/19**	**20.0**	**HD-3086**	**F-1 &**	**160**	**138480.00**	**34670**	**For auction of wheat grain (19.80q)** **Rest 140.20q amount to be realized from Mega seed (SKUAST-J)**
Pulses	-	-	-	-	-	-	-	-	-
Grams	-	-	-	-	-	-	-	-	-
Oilseeds	-	-	-	-	-	-	-	-	-
Fibers	-	-	-	-	-	-	-	-	-
Floriculture	-	-	-	-	-	-	-	-	-
Fruits	-	-	-	-	-	-	-	-	-
Vegetables	-	-	-	-	-	-	-	-	-
Others (Wheat Straw)	-	08-05-18	4.0	-	Wheat straw	30.0	-	15000.0	Auctioned

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	
1	Vermi compost	67q	10000	53600	
2	Mushroom	0.80		8000.00	

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	Fish	IMC &Exotic	-	-	-	-	-
-	-	-	-	-	-	-	-

12.5 Utilization of hostel facilities:

Accommodation available (No. of beds) = 20

Months	*No. of trainees stayed*	*Trainee days (days stayed)*	*Reason for short fall (if any)*
April 2018	-	-	-
May 2018	-	-	-
June 2018	-	-	-
July 2018	-	-	-
August 2018	-	-	-
September 2018	-	-	-
October 2018	-	-	-
November 2018	-	-	-
December 2018	-	-	-
January 2019	-	-	-
February 2019	-	-	-
March 2019	-	-	-

12.6. Database management

S. No	*Database target*	*Database created by the KVK*
1	1000	1000

12.7 Rainwater Harvesting

Training programmes conducted using Rainwater Harvesting Demonstration Unit

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

13.1 Details of KVK Bank accounts

Bank account	Name of the bank	Location	Account Number
With Host Institute	J&K Bank, R.S.pura	R.S.pura	0025040100040224
With KVK	J&K Bank	R.S.pura	0025040500026430

13.2 Utilization of KVK funds during the year 2018-19 (up to March 2019)

SL. No	Budget Head	Sanctioned	Released	Expenditure	Balance
	Grant for creation of Capital Assets				
1	Works				
	A. Land Building	-	-	-	-
	B. Building	-	-	-	-
	(i) Office Building	-	-	-	-
	(ii) Residential building	-	-	-	-
	(iii) Minor Works	-	-	-	-
2	Equipment's	100000.00	100000.00	95326.00	4674.00
3	Information Technology	-	-	-	-
4	Library Books and Journals	-	-	-	-
5	Vehicle & Vessels	-	-	-	-
6	Livestock	-	-	-	-
7	Furniture and fixtures	-	-	-	-
8	Others	150000.00	150000.00	150000.00	0.00
	Total-CAPITAL (Grants for creation of Capital Assets)	250000.00	250000.00	245326.00	46.74.00
1.	Grant in Aid Salary	-	-	-	-
a	Pay and allowances	13385931.00	13385931.00	13385931.00	0.00
b	Total Pay and Allowances	13385931.00	13385931.00	13385931.00	0.00
c	Grant in Aid-General				
2	Travelling allowance (Domestic)	100000.00	100000.00	85562.00	14438.00
a	Travelling allowance (Foreign)	-	-	-	-
	Total TA	100000.00	100000.00	85562.00	14438.00
3	13 Research Expenses	-	-	-	-
	14 Operational Expenses	1700000.00	1700000.00	1588248.00	111752.00
	15 Infrastructure				
	16 Communication				
	17 Other				
	18 Publicity and Exhibitions				
	19 Guest house maintenance				
	20 Other Misc				
	21 Repair and maintenance				
	(i) Equipment, Vehicle & Others				
	(ii) Office building				
	(iii) Residential building				
	REVOLVING FUND	**0.00**	**0.00**	**0.00**	**0.00**
	Total Recurring contingence	**1700000.00**	**1700000.00**	**1588248.00**	**111752.00**
	Grant in Aid-General (RC+TA)	**1800000.00**	**1800000.00**	**1671791.00**	**126190.00**
	Grant Total (capital+Salary+General)	**15426511.00**	**15426511.00**	**15303048.00**	**140884.00**

13.3 Status of revolving fund (Rs. In lakhs) for the last five 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 2013 to March 2014	4133994.26	842027.00	496470.00	4479551.26
April 2014 to March 2015	4479551.26	531402.00	252399.00	4758554.26
April 2015 to March 2016	4751741.26	4,89583.00	311774.00	4929549.44
April 2016 to March 2017	4929549.44	454578.00	99774.00	5284353.44
April 2017 to March 2018	5284353.44	725000.00	588000	5303000.00
April 2018 to March 2019	**53.87**	**2.17**	**2.62**	**57.20**

14. Details of HRD activities attended by KVK staff during 2018-19

Name of the staff	*Designation*	*Title of the training programme*	*Institute where attended*	*Date*
Dr Rakesh Sharma	Sr Scientist	International Conference Doubling the income of farmers of SAARC Countries: Extension Strategies and approaches. 2018 Kathmandu, Nepal.	***NAEA Nepal***	20th -23rd September, 2018
Dr Rakesh Sharma Dr Sheetal Badyal	Sr Scientist SMS	Organic farming for sustainable agriculture	SKUAST-J	5-6th March 2019
		3rd National seminar RASSA on "Smart Technologies to Boost Farm Productivity and Socio-Economic Status of Rural India" organized by Royal association for Science-Led Socio-Cultural Advancement (RASSA), New Delhi		*November 19-20, 2018*
Dr Rakesh Sharma Dr Sheetal Badyal Dr Punit Choudhary	Sr Scientist SMS Sr Scientist	National Conference on "Women Empowerment through Agro-entrepreneurship for Livelihood security" (WE-2019)	SKUAST-Jammu	February 07-08, 2019.
Dr Punit Choudhary	Sr Scientist	Forage production and utilization for livelihood security in NW Himalayan region	SAMETI SKUAST-J	26-27 July 2018

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

Awards and recognitions:

S. No.	Name of Teacher/Scientist	Name of KVK	Name of Award/ distinction/Recognition	Awarding Institution/Organization
1	Dr Sheetal Badyal	Jammu	Best Extension person	SKUAST-J
2				

External funded Projects Completed

Title	Funding Agency	Year of Start	Duration of Project	Total approved budget of the Project (Lacs)	PI of the Project
Production and demonstration of quality planting material of commercially important medicinal trees for livelihood security	NABARD	2016	3 years	6.32 lakhs	Dr Punit Choudhary

SALIENT RECOMMENDATION:

- Seed collected in the months of Dec-Jan from superior clones from Rabta, Mathwar and Akhnoor kandi villages performed better as compared to Reasi collections. Seed sources from Mathwar and Chawa reported to be better in terms of germination and survival.

- Sowing of seeds done during April –June after stratification treatment with water for 48-72 hrs and diluted H_2SO_4 acid (5%) recorded 71.6 % germination as compared to control (Only soaking in water). Mechanical extraction of kernel from the seed is however advised to have better germination (more than 80%). Treatment with Carbendazim @ 2% reduced the incidence of seedborne diseases at nursery stage

- Side veneer grafting performed during the during last week of March and continued upto 1st week of April in Harad, Behra with capping of poly caps for maintaining humidity and hardening of grafts in the green house provided significantly better results as compared to wedge and cleft grafting and should be adopted trees for successful production of superior germplasm.

- Project intervention in replacement of inferior planting material with superior clones

- KVK Jammu of SKUAST-J in collaboration with Regional Horticulture Research and Training Station Jachh of Dr Y S Parmar University of Horticulture and Forestry, Solan have standardized techniques of vegetative propagation of these medicinal plants. Side veneer, Cleft, wedge grafting was successful in getting good graft plants in good time speeding up for formation of a clonal bank for this species. The technique envisages growing of seedling in poly bags, grafting, capping with poly caps and hardening of grafts in the green house. By using modified side veneer grafting, 80-90 % success in grafting of Harad has been achieved at KVK Jammu.

- With the continuous efforts of KVK Jammu with NABARD financed project to provide superior planting material, capacity buildings programme, exposure visits and laying out frontline demonstration and on farm trials at the farmers field resulted in initiation of production of quality and large sized fruits that will help farmers in doubling their income. Now the farmers have become

desirous of having plants which come into bearing early and with better yield attributes. Framers are also motivated to form commodity interest groups namely Mathwar farmer club and Krishak Mahilla club for better marketing of their produce which will be later on taken up for formation of farmers producers organization..

- Linkages between department namely SKUAST-Jammu, Agriculture marketing and planning, Horticulture, State medicinal plant board J&K, Forest and Dabur Pvt ltd have also been developed during refresher workshop for the betterment of the farming community. Trainings programmes on value addition and post harvesting handling by the KVK has also opportunities for development as entrepreneur and improved returns for the farmers engaged in the enterprise.
- With coming up of superior grafting clones of Harad, the expected economic returns from these grafted clones at an early bearing age of 7-8 years will Rs 593750 per ha that will be almost double than the existing seedling plantations fetching an amount of Rs 300000 that too after 12-15 years of bearing resulting in development of entrepreneurship for commercialization of these medicinal crops among the rural masses.

Plantation	Av. no of large fruit /kg	Av. no of medium fruit /kg	Av. no of small fruit /kg	Total fresh fruit wt per tree (q)	Harad fruit wt after 7-8 years per ha (q/ha)	Expected Returns (Rs)
Grafted Harad (7-8year)	11.9	33.2	50.6	0.95	237.5 (8x5 m spacing)	593750 @ Rs 25/kg
Existing	13.8	40.2	61.0	0.80	120.0 (150 Scattered trees/ha)	300000 @ Rs 15/kg

External funded Projects 2018-20

Title	Funding Agency	Year of Start	Total approved budget (Lacs)	PI of the Project
Establishment of nursery cum production unit of quality planting material of commercially important medicinal trees/crops of jammu subtropics	NMPB RCFC Kashmir	2018	6.0	Dr Punit Choudhary

Annexure-A
List of Farmer Training programs (2018-19)

Farmers Training Programs 2018-19

S. No.	Date	Topic
1.	12/04/18	Scientific cultivation of Marigold
2.	16/05/18	Group approach to address Marketing Problems
3.	18/05/18	Agri based Entreprenerial activities for farm women and school dropouts
4.	23/05/18	Scientific cultivation of Basati for higher productivity
5.	24/05/18	Multipurpose Trees and fodder grasses: Role & Importance
6.	29/05/18	Agroforestry for sustainable land use
7.	01/06/18	Ensuring nutritional security of farmers through kitchen gardening
8.	05/06/18	Scientific cultivation of Paddy (under FLD)
9.	14/06/18	Scientific Cultivation of Maize
10.	02/07/18	Scientific cultivation of Kharif Fodder (Bajra K-19)
11.	09/07/18	Scientific cultivation of Urad Bean
12.	11/07/18	Processing of seasonal fruits (Jamun, Mango)
13.	12/07/18	Value addition of Mango
14.	12/07/18	Cultivation of Medicinal & Aromatic Plants for higher income
15.	19/07/18	Sensitizing farmers to avail crop insurance against natural calamities
16.	24/07/18	Cultivation of Medicinal & Aromatic plants
17.	31/07/18	Cultivation of medicinal trees for higher income
18.	13/08/18	Mitigating malnutrition in women & adolescent girls through dietry modification
19.	16/08/18	cultivation of medicinal & aromatic plants (Aloe vera, lemon grass, etc) for higher income
20.	06/09/18	Enhancing Nutritive value of cereals, pulses & milets through processing (Method Demonstration)
21.	13/09/18	Designing & Preparation of low cost high nutrient diet
22.	05/10/18	Cultivation of Medicinal trees for higher Income
23.	05/10/18	Mobilization of Social Capital
24.	07/10/18	Scientific cultivation of Oil seed crop
25.	23/10/18	Scientific cultivation of Chickpea
26.	24/10/18	Leadership development among rural youth
27.	25/10/18	Importance of Iron rich seasonal vegetables
28.	29/10/18	Scientific cultivation of Chickpea in Kandi belt of Jammu
29.	08/11/18	Value addition of seasonal vegetables
30.	10/12/18	Seasonal Vegetable cultivation
31.	08/01/19	Mobilization of Social capital
32.	14/01/19	Improvement of Nutritive value of low quality roughages
33.	29/01/19	Drudgery reducing technologies for household and agricultural operations
34.	04/02/19	Tree management under AGF System
35.	11/02/19	Cultivation of summer vegetables and melon
36.	27/02/19	Entreprenuerial opportunities in vegetable growing
37.	13/03/19	Fish health management and care
38.	16/03/19	Cultivation of summer vegetable

Annexure-B

MINUTES OF 17th SCIENTIFIC ADVISORY COMMITTEE MEETING OF KRISHI VIGYAN KENDRA, JAMMU

The seventeenth Scientific Advisory Committee (SAC) meeting of Krishi Vigyan Kendra (KVK) Jammu, R.S. Pura was held under the Chairmanship of **Dr. K. S. Risam**, Hon'ble Vice Chancellor, SKUAST-J in the Conference hall of F.V.Sc & A.H., R. S. Pura on 18th March, 2019.

Dr. M. M. S. Zama, Dean, F.V. Sc& A.H., **Dr. R. K. Arora**, Associate Director Extension& I/C KVKs, SKUAST-J, **District Heads** from different line departments, nominated members from Faculty of Veterinary Sciences and Animal Husbandry and Faculty of Agriculture of SKUAST-J, Chief Scientist and Head KVK-Jammu, Senior Scientists, SMS's and Programme Assistants of KVK Jammu, progressive farmers/ farm women member participated in the meeting. (**List enclosed as Annexure-I**).

At the outset, Dr. Vikas Tandon, Chief Scientist and Head KVK Jammu presented a formal welcome address and appraised the house about the active participation of KVK Jammu in various activities related to the welfare of the farming community.

In his presidential address, **Dr. K. S. Risam**, Hon'ble Vice Chancellor, SKUAST-J appreciated the working of KVK Jammu and directed to increase its outreach further to the farming community. During the meeting, the chairman made the following directions:

- KVK Jammu to expand its area of work in entire agriculture sectors involving livestock, apiculture, sericulture, fisheries etc.
- Well planned action plan covering all sector of agriculture for mitigating and addressing farmer's issues.
- Proper feedback of the training programmes imparted by KVKs and further documentation of constraints and success stories.
- Maximum enrollment of the new farmers on the portal
- Involvement of scientific staff of KVK Jammu in teaching and guiding M.Sc. and Ph.D. students for utilization of their respective expertise

(**Action: Dean, FOA; Dean, F. V. Sc & A. H; Dean, F.B. Sc. ; Registrar; KVK Jammu)**

The technical session commenced with the presentation of **Dr. Vikas Tandon**, Chief Scientist and Head, KVK Jammu as per the agenda items.

Agenda No. 1: Confirmation of the Proceedings of 16th SAC meeting

The proceedings of the 16th SAC meeting were circulated among all the members of SAC vide letter **No. AUJ/KVK/F-33/2018-19/1103-15 dated 07/03/2019**. Since no queries were received from any of the members on the proceedings, it was resolved unanimously by the house to confirm the proceedings of 16th SAC meeting.

Agenda No. 2: Action Taken Report of 16th SAC meeting

Chief Scientist and Head, KVK-Jammu presented the action taken report on the issues raised in 16th SAC meeting. The suggestions received from the members are given below:

Regarding action taken on including more number of training programmes under Veterinary Sciences and Animal Husbandry and incorporating UMMB technology and area specific mineral mixture as OFT or FLD's, Dr Vikas Tandon informed that three trainings on animal husbandry were conducted for farmers and world rabies day was also celebrated in the KVK.

In this regard, **Chairman** directed to conduct some more training programme on different aspects of livestock framing and may utilize the resource person from F.V.Sc. and A.H.

(Action: KVK Jammu & Dean, F. V. Sc & A. H)

Regarding sensitizing the farmers about Farmer Producer organization (FPO's), Dr Vikas Tandon informed the house that Training programmes and campaigns have been conducted to sensitize farmers to form self-help

groups and farmer interest groups. He informed the house that one refresher workshop on 02-01-2019 was organized to educate farmers onFarmer Producer Organization (FPO) under NABARD project.

In this regard, **Chairman** directed to document the information of different FPOs running in Jammu district and bring them forward. KVK is also required to document the impact of programmes organised for formulation of FPOs during 2018-19.

(Action: KVK Jammu)

Regarding "**Rejuvenation of senile and old orchards**" and a training programme on "Grafting and budding of Horticulture fruit trees", Dr Vikas Tandon replied that one month training was conducted for rural youth and field workers on Plant propagation and rejuvenation of old orchards in collaboration with Horticulture Department. Vice Chancellor asked for follow-up of the one month training conducted by the KVK.

Regarding backyard poultry development, Chief Scientist informed that backyard poultry has been promoted under the various training programmes.

In this regard, **Chairman** directed to identify the village for poultry development and organize training/frontline demonstrations. **Dean, F.V.Sc. & AH** assured KVK Jammu to provide guidance and technical expertise from the faculty. **Chief Animal Husbandry Officer** offered to provide the chicks to KVK Jammu on bill basis.

(Action: KVK Jammu, Dean, F. V. Sc & A. H and CAHO, Jammu)

Regarding celebration of World's Women Day, Chief Scientist informed that KVK Jammu has celebrated women farmer day and also felicitated the women farmers on the occasion. Apart from this KVK also invited women farmers to live webcasting programme of Hon'ble Prime minister of India on SHG's. KVK has also sent progressive women for exhibiting their products and were felicitated by the D.G. ICAR, New Delhi. Recently on the occasion of International Women's Day, KVK Jammu's women farmers to visit ATARI, Ludhiana and were recognized for their entrepreneurial activities.

Chairman directed to celebrate all the important days related to farming community with full enthusiasm and spirit.

(Action: KVK Jammu)

Agenda No. 3: Presentation of progress report (2018 -2019)

The progress report of KVK Jammu for2018-19was presented before the house. **Chairman** directed to make charts depicting land holdings and crop-wise area details.

(**Action: KVK Jammu)**

Agenda No.4: Fund utilization for the year 2018-19

The budget allocation and utilization of funds for the year 2018-19 was presented before the house and resolved as approved.

Agenda No. 5: Proposed Action Plan for the year 2019-20

Chief Scientist and Head, KVK-Jammu presented the Annual Action plan of KVK-Jammu for the year 2019-20 and following suggestions were proposed by the house:

The **Chairman** directed to study the impact assessment of different training programmes. He directed to incorporate one vocational training programme under Veterinary sciences and Animal Husbandry and resource persons for the said trainings will be made available from FVSc & AH, R. S. Pura.

(Action: KVK Jammu; FVSc. & AH R S Pura)

Chairman instructed to promote University released varieties under various FLD programme undertaken by KVKs.

(Action: KVK Jammu)

Dr. Rajinder Peshin, Professor, SKUAST-J suggested that other than Basmati 370, newly released varieties of SKUAST-J of paddy should also be promoted under FLD. He further suggested that with Basmati 370 variety some critical inputs may be used for laying out FLDs.

(Action: KVK Jammu)

With respect to RAWE student, **Chairmen** directed to involve students more in KVK field activities rather than classroom lecture.

(Action: KVK Jammu)

Chief Animal Husbandry Officer suggested to include a training programme on quail farming in Akhnoor area in collaboration with department who will provide beneficiaries.

(Action: KVK Jammu; FVSc & AH, R. S.Pura; Dept. of Animal Husbandry, Jammu)

Chairman directed Chief Scientist & Head to plan an exposure visit of farmers of Jammu district.

(Action: KVK Jammu)

Rapporteurs- Dr. Punit Choudhary

Dr. Prem Kumar

List of participants of 17th Scientific Advisory Committee meeting KVK-Jammu held on 18th March, 2019

S. No.	Name	Designation
1	Dr. KS Risam	Hon'ble Vice-Chancellor ,SKUAST-J
2	Dr. R.K. Arora	Associate Director Extension(KVK)
3	Dr. MMS Zama	Dean, FVSc & AH
4	Dr. Vikas Tandon	Chief. Scientist & Head, KVK-Jammu
5	Sh. SK Langer	Chief Agriculture Officer, Jammu
6	Dr. Mohd. Ismail	CAHO Jammu
7	Dr. Ajitpal Singh	VAS, RS Pura
8	Sh. Sandeep Kumar	DLSMS (Path.) Jammu
9	Sh. Rakesh Kumar	Horticulture Development Officer, Jammu
10	Sh. Roshan Lal Bhagat	SDAO, RS Pura
11	Sh. BB Sidha	Dy. Project Director ATMA
12	Sh. Ravinder Kachroo	Dy. Project Director ATMA
13	Dr. Shalini Suri	Prof. & Head, Div. of Vety. Anatomy, FVSc. & AH
14	Dr. B.C. Sharma	Professor & Head, Agronomy
15	Dr. L.M. Gupta	Associate Professor(Agro-forestry)
16	Dr. RK Sharma	Professor & Head, ANN
17	Dr. Rajinder Peshin	Professor (Agriculture Extension)
18	Dr. SK Gupta	Prof. & Head, Division of PBG
19	Sh. Davinder Singh	HDO
20	Dr. A.K. Pathak	Asstt. Professor(Animal Nutrition)
21	Dr. Rakesh Sharma	Sr. Scientist(Extension) KVK-Jammu
22	Dr. Punit Choudhary ,	Sr. Scientist (Agro forestry) KVK-Jammu
23	Dr. Sheetal Badyal	SMS(Home Science)KVK-Jammu.
24	Dr. Prem	SMS, Fisheries, KVK Jammu
25	Sh. Swarn Lal, Sarpanch	Farmer, Suchetgarh
26	Sh. Raghubir Singh	Farmer, Fatehpur shekhan
27	Sh. Prem Chand	Farmer, Kattal Batal
28	Sh. Balwant Singh	Farmer, Katal Batal
29	Vinod Kumar	Farmer, Kaloen
30	Sunita Devi	Farmer, Kaloen

ANNEXURE "C"

District Profile – I

Jammu District is called as the city of temples and is also the winter capital of state. The city was Founded by Raja JambuLochan who lived in 14th Century B.C. Jammu is situated around river Tawi and is bound by Udhampur district in the north and north east, Samba district in the east and south east, Pakistan (Sialkote) in the west and Rajouri district in the northwest. It is located 74^0 24' and 75^0 18' east longitude and 32^0 50' and 33^0 30' north latitude. The district falls under sub-mountainous region. The Shivalik ranges rise gradually from behind the Jammu town and merge the Indo Gangetic Plains in the South spreading over an area of 2336 sq.kms (2011 census). Jammu also serves as base camp for the holy shrine of Mata Vaishno Devi. The temperature varies from cold in winter with minimum temperature touching even 0.9'C to heat wave in summers when the temperature shoots upto 46^0C. Jammu district has population of 15.29 lakhs, out of which rural population is 7.65 lakhs and urban population is 7.64 lakhs. The male and female population in rural area is 4.02 lakhs and 3.63 lakhs and in urban area 4.12 and 3.52 lakhs, respectively (2011 census). The literary rate of the district is 77%. The district comprises four tehsils i.e. Jammu, R.S.Pura, Akhnoor and Bishnah. The entire district can be divided into two distinct portions. The area forming north of Jammu-Chhamb road and Jammu-Pathankot road which is known as Kandi area is comparatively under-developed and is mostly minted. The area south of these roads is largely fed by canal and tube wells for irrigation purposes and is relatively more prosperous. As per the census of 2011 Jammu District consists of 780 inhabited villages.

Population Density

As per the census of 2011, the district has a population of 15.29 lakh. The average density of population in the district as per census of 2011 is 653 persons per sq km. Schedule caste population in the district is 3.78 lakh which works out to be 24.71%of total population. (census 2011)

Occupation Pattern

According to census of 2001 the occupation pattern of the District is such that the number or Cultivators is 112480.

District at a Glance

I.	Geographical Area (Sq.km)	:	2336
a.	No of sub divisions	:	04
b.	No. of community development blocks	:	08
c.	No. of villages	:	780
II.	Agro climatic Zone	:	Subtropical
III.	Agro climatic characteristics		
a.	Temperature °C		
Minimum		:	4°C
Maximum		:	47°C

b. Rainfall (average in mm) : 1135 mm
c. Humidity (highest in monsoon month) : 90%

1. Agricultural and allied census

The total area of Jammu district is 2342 square kilometers (census 2011). In 2011-12, the net area sown was 0.91 lakh hectare. Adding to it, the area sown more than once which was of the order of 0.951 lakh hectare. The gross cultivated area works out to be 1.857 lakh hectare.

Land use statistics

1. Population : 15.29 lakh (as per census 2011)
2. Area according to village paper : 2.37 lakh ha
3. Area under forests : 0.30 lakh ha
4. Land put to non agricultural use : 0.35 lakh ha
5. Barrel and un cultivable land : 0.34 lakh ha
6. Permanente pastures and grossing : 0.04 lakh ha
7. Cultivable waste land : 0.12 lakh ha
8. Current follow : 0.17 lakh ha

Size of holdings

	Size/class (ha)	Nos (%)	Area (%)
a)	Below 0.5	61532	48.68
b)	0.5-1.0	34903	27.62
c)	1.0-2.0	19925	15.76
d)	2.0-3.0	6621	5.24
e)	3.0-4.0	2403	1.90
f)	4.0-5.0	597	0.47
g)	5.0-7.5	308	0.24
h)	7.5-10.0	58	0.05
i)	10.0-20.0	22	0.02
j)	20.0 and above	20	0.02
All size classes		**126389**	**100.0**

Irrigation facilities from different sources (ha)

S.No	Source	Area (ha)
1.	By Canal	49886
2.	By Well/Tubewell/others	2405
3.	Springs/Tanks	1627
4.	Others	2161
Total irrigated area		**56079**

2. Agro-climatic zones

Jammu District has a sub tropical climate with hot and dry climate in summer and cold climate in winter. Being in the foothills of the mountains, nights are generally cooler that what they are in the neighbouring areas of Punjab. Minimum and Maximum temperature is around 4°C respectively. Rainy season usually starts from the end of June or the beginning of July. Average rainfall in the district is about 1246 mm.

Irrigated Sub-Tropical Zone

It includes irrigated areas of Satwari, Bishnah, R.S.Pura, Marh and Bhalwal. The unirrigated area falls Akhnoor, Dansal and Khour blocks.

3. Agro-ecosystems

Existing Farming systems in different blocks

S. No.	Agro Ecological Situation	Blocks	Farming System
1	(AES-I)	R.S. Pura and Bishnah	Agri + Animal Husbandry
2	(AES-II)	Marh and Satwari	Agri + Vegetable +AH Horti
3	(AES-III)	Khour and Akhnoor	Agri + Animal Husbandry
4	(AES-IV)	Bhalwal and Dansal	Agri+AH+Horti+ Poultry

4. Major and micro-farming systems

Season	Crop	AES-I	AES-II	AES-III	AES-IV
		Cropping System	**Cropping System**	**Cropping System**	**Cropping System**
Kharif& Rabi	Paddy-Maize	Paddy-Oilseed-wheat	Paddy-Oilseed-wheat	Maize-Oilseed-wheat Maize-Patato-wheat	Maize-Oilseed-wheat Maize-Mustard

5. Major production systems like rice based (rice-rice, rice-green gram, etc.), cotton based, etc.

- Paddy-Maize
- Paddy-Oilseed-wheat
- Paddy-Oilseed-wheat
- Maize-Oilseed-wheat
- Maize-Patato-wheat
- Maize-Mustard

6. **Major agriculture and allied enterprises:** Crop wise area sown under different crops in Jammu district

S.No	Crop	Season	Unit	Marh	R.S.Pura	Akhnoor	Dansal	Total
1	Wheat	Rabi	Ha	18450	21500	20350	10700	71000
2	Maize	Kharif	Ha	4550	-	3300	4150	12000
3	Paddy	Kharif	Ha	12000	25000	7800	200	45000
4	Bajra	Kharif	Ha	500	-	2000	1000	3500
5	Pulses	Kharif	Ha	1000	2350	1400	2000	6750
		Rabi	Ha	1000	100	2200	1200	4500
6	Oilseed	Kharif	Ha	800	-	600	600	2000
		Rabi	Ha	1100	1400	1500	700	4700
7	Fodder	Kharif	Ha	800	600	600	500	2500
		Rabi	Ha	2550	2500	2200	800	8050
8	Vegetables	Kharif	Ha	1700	380	990	240	3310
		Rabi	Ha	3320	1650	1480	240	6690
	Sub Total:	**Kharif**	**Ha**	**21300**	**28330**	**16690**	**8690**	**75,010**
		Rabi	**Ha**	**26470**	**27150**	**27730**	**13640**	**94,990**
	Total		**Ha**	**47770**	**55480**	**44420**	**22330**	**170000**

Agro-ecosystem Analysis of the focus/target area - II

Details of PRA

S.No	*Name of the cluster*	*Major crops and enterprises*	*Major problems identified*	*Intervention needed*
1	R.S.Pura	Paddy, wheat, fodder, dairy, Fish Production	Problem of yellow rust in wheat, lack of knowledge of vaccination in cattle, low milk yield, traditional fish farming system, low fish production, unavailability of fish seeds, poor management, lack of knowledge of use of fish feed, unavailability of fish feed, poor post harvest Management. Low productivity and poor quality of fodder	• Promotion of yellow resistant varieties • Dairy development • Scientific Fish farming • Feed management • Pond management • Value addition • Ornamental fish culture • Promotion of high yielding Oats varieties
2	Akhnoor	Gobhisarson, Mustard, Gram, Mash, Wheat, Maize, Mango, Ber, Anola&Grasses	Low productivity of oilseeds, pulses and cereals, Poor germination and problem of cutworm damage in maize, Unscientific practices in ber, post harvest management in Mango and Anola, low productivity and poor quality of fodder	• Increasing productivity of rain-fed crops • INM and IDM • Promotion of PHT on Mango and Anola • Promotion of perennial grasses
3	Bishnah	Paddy, wheat, mash, moong, potato, grasses, dairy, Fish Production	Low productivity of cereals and pulses, proper package of practices not followed, problem of yellow rust in wheat, lack of knowledge of Vaccination in cattle, low Milk Yield	• Increasing production of cereals and pulses by replacing variety and INM. • Dairy development • Potato seed promotion • Ornamental fish culture • Promotion of perennial grasses
4	Dansal	Paddy , wheat, vegetables, Mushroom, Marigold, Oats	Lack of quality seed in vegetables and marigold, Low productivity of cereals, Insect Pest and Disease, Post Harvest Management in vegetables and Diseases in mushroom and its management. low productivity and poor quality of fodder	• Replacement of seed. • INM and IDM • Promotion of PHT • Increasing productivity of cereals • Promotion of vegetables • Promotion of high yielding Oats varieties

Agro-ecosystem Analysis of the focus/target area - II

Include

1. Names of villages, focus area, target area etc.
2. Survey methods used (survey by questionnaire, PRA, RRA, etc.)
3. Various techniques used and brief documentation of process involved in applying the techniques used like release transect, resource map, etc.
4. Analysis and conclusions
5. List of location specific problems and brief description of frequency and extent/ intensity/severity of each problem
6. Matrix ranking of problems
7. List of location specific thrust areas
8. List of location specific technology needs for OFT and FLD
9. Matrix ranking of technologies
10. List of location specific training needs

SWOT ANALYSIS OF THE DISTRICT

SWOT analysis is a strategic planning method used to evaluate the Strengths, Weaknesses, Opportunities and Threats involved in any venture. SWOT also encompasses a comprehensive analysis of the development parameters linked with economic performance of the State thereby enabling the policy makers and researchers to reorient themselves to the prevailing conditions. Thus while discussing the problems of the district it is important to look also at its strengths first. In this endeavor an in-depth analysis of SWOT was undertaken in a participatory manner to place the extension and technology dissemination efforts in perspective so that success can be achieved in pursuit of serving farming community.

SWOT Analysis of Agriculture and Allied Sector

Strengths

1. The factors required for successful cultivation of paddy (Basmati) are available in the district.
2. Productive and fertile soils with 62% irrigated area.
3. The soils are fit for intensive cultivation.
4. Good scope for diversification in agriculture, which will generate employment especially rural employment.
5. Farmers are respective and willing to adopt improved farm technologies.
6. Agriculture has forward and backward linkages with other activities particularly the agro based activities. As per the latest census, out of 100 main workers 27.5% exclusively dependent upon agriculture.
7. Large number of skilled and semi skilled agricultural labour.

Weaknesses

1. As against the national average of 382 persons per sq.km, density of population of the district Jammu is 653 persons per sq. km (as per 2011 census).
2. Area under commercial crops is very less.
3. Average farm size vey less and more than 90% farmers are marginal and small category.

4. The small and fragmented holdings make the adoption of farm mechanization very difficult that influences adversely the farmer's income.
5. Inadequate soils health management practices.
6. Inefficient and improper water management especially in paddy crop.
7. Critical technological gaps in specific areas of crop production viz, seed treatment, balance fertilization, weeds control and disease management.
8. Basic infrastructure like roads and communication are miserably poor.
9. Marketing facilities are inadequate.
10. Poor adoption level of FYM, green-manuring, vermi-composting and crop/farm residues
11. Inadequate availability of quality seeds for various crops.
12. Non exploitation of potential man power, especially youths.
13. Lack of proper knowledge and indifferent attitude towards crucial farm/crop management practices/operations.
14. The dependency of farmers on monsoons due to inadequate irrigation facilities.
15. Access of small and marginal farmers to agricultural credit is limited.
16. Wastage of agricultural produce due to lack of processing units.

Opportunities

1. Concentrating issues confronting agriculture like seed replacement ratio, irrigation facilities, marketing etc.
2. Quality seed can increase yield by 25-30 %.
3. Immense scope for increasing the cropping intensity.
4. Wide scope of co-operative farming system.
5. There is an opportunity in the diversification of land.
6. High demand for basmati rice in the international market because of taste and flavour.
7. HYV seeds of different crops are suitable for the situation.

8. There is scope for opening more outlets, establishing new units of vermi-compost.

Threats

1. Agriculture is already over-laboured, warrants check and controls.
2. Alarming depletion of ground water in the middle reaches and rising alkalinity and salinity problem in the lower belts of district.
3. Degradation of soil fertility with declining status of potash and micro nutrients (imbalance use of fertilizers)
4. Excessive soil erosion which results into loss in soil fertility.
5. Imbalance fertilizer application deteriorates soil health and effects productivity.
6. Declining factor productivity and rising cost of cultivation.
7. Increasing farmers inability to invest in agriculture production system as majority of the farmers are marginal or small and moreover resource poor.

Horticulture Sector

Strengths

1. Abundant potential and infrastructure for horticulture development in the district.
2. District is abounding in fruit crops like Mango, Ber, Jamun and Citrus which have high commercial value

Weaknesses

1. Insufficient availability of quality planting material
2. Lack of assured irrigation in more than 60 % area of district.
3. Inadequate popularization of advance mechanization
4. Poor soil status in the district
5. Poor economic status of farming community
6. Lack of integrated pest management (IPM) technology for horticulture crops
7. Inadequate post-harvest infrastructure results in wastage of the produce.

8. Inadequacy of agro-processing facility

Opportunities

1. Soil and agro-climatically there exists immense scope for increasing the area under horticulture.
2. Establishment of Cold Storage facilities to improve price stabilization, manipulation of supply to the advantage of the seller and for better sorting, grading and packaging facilities.

Threats

1. Changing climatic scenario may adversely affect horticulture crops and disinterest farming community
2. Poor market infrastructure for marketing the fruit crops
3. Inadequate post harvest/ value addition units

Animal Husbandry Sector

Strength

1. Traditional expertise in cattle rearing with almost every farm household possessing milch animals in variable numbers
2. Ample marketing avenues of animal based products and by products in and around the district
3. Poultry expansion has potential as main feed ingredient "Yellow maize" is available in abundance.
4. Livestock sector engages a sizeable number of workforce in processing, transportation and sale of animal products

Weakness

1. Absence of organized viable milk marketing network.
2. High mortality and poor growth in calves
3. Infertility and delayed calving
4. Repeated breeding and long calving interval
5. Poor disease management and breed up-gradation services

6. Low milk yield of buffalos and cows
7. Lack of proper management and feeding practices
8. Low availability of good quality feed & green fodder.
9. High cost of feed, medicines/vaccines and chicks
10. Small and scattered herds
11. Unscientific practices

Opportunity

1. High demand for milk and other animal based products offers higher returns.
2. Tremendous scope for self employment and income generation.
3. Increased availability of organic manure fir vermin-compost units
4. Bridging yield gaps

Threats

1. Non descript poor graded bulls used for Breeding of cattle
2. Economic loss due to threat of out breaks of Poultry Diseases
3. Poultry feed expensive on account of import of other feed stuffs from other parts of country.

Fisheries Sector

Strengths

1. Fish production, productivity and acreage increasing steadily over years
2. Vast unfulfilled demand for fish with easy market accessibility
3. Greater people participation and generation of employment opportunities especially for landless and marginal farmers

Weakness

1. Weak infrastructure for fish seed production and genetic up-gradation

2. Lack of farmer oriented activities e.g. trainings, demonstrations, exposure visits, awareness camps etc. to update farmer's practices of fish production and management
3. Inadequate quality seed availability of high yielding fresh water fish

Opportunity

1. Immense scope for fish seed (fingerling) production to cater the needs of fish farmers
2. Ample scope for mobilizing untapped water resources such as water logged area and soil for aquaculture
3. Integrated fish farming

Threats

1. High mortality in juvenile and adult fish
2. Absence of any reputed centre/ source of fish feed, fisheries management institute
3. Lack of post harvest management practices by farmers
4. Poor facilities for soil and water sample testing, disease diagnosis and post harvest infrastructures

Technology Inventory and Activity Chart - III

Include

Technology Inventory and Activity Chart – III

1. Names of research institutes, research stations, regional centres of NARS (SAU and ICAR) and other public and private bodies having relevance to location specific Technology needs

2. Inventory of latest technology available

S. No	Technology	Crop/enterprise	Year of release or recommendation of technology	Source of technology	Reference/citation
1.	WH-1080	Wheat	2011	IARI, New Delhi	
2.	HD 3086		2013	IARI, New Delhi	
3	UNNAT-550		2017		
4.	RSPN-25	Gobi sarson	2005	IARI, New Delhi	
5	RSPT-06	Toria	2017		
6.	B-370	Paddy	2013	SKUAST-J	
7	Napier Hybrid	Perennial Grasses	2000	IGFRI	
8.	PMSY-3	Composite Maize	2017	SKUAST-J	
9	PBG-5	Chick Pea	2012	PAU	
10	PU-31	Urd Bean	2008	GB Pant Univ	
11	Double Deklab	Maize	-	-	

3. Activity Chart

Crop/Animal/ Enterprise	Problem	Cause	Solution	Activity	Reference of Technology
Maize	Low productivity of Maize under rainfedareas of distt. Jammu	1) Non adoption/ Poo adoption of hybrids/ Composite 2) Imbalanced fertilizer application 3) Improper Weed management 4) Insect pest infestation	1) Popularization of Hybrids /Composite of Maize Convincing farmer to use balanced fertilizer doses Adoption of proper weed management Practices. Disease and pest management through IPM.	Single component FLD to demonstrate HYV's Training and FLD programme	S no 1 and 11 of the Inventory of latest technology available
	Low productivity of and incidence of yellow rust in Wheat	1. Mismatching of varieties for sowing time. 2. Rain fed farming	-Recommendation of varieties according to sowing time. -Introduction and use of drought resistant varieties	-On farm trails - Demonstrations - Trainings - Diagnostic visits Field days	S. no 2& 3 of the Inventory of latest technology available

Wheat		3. Poor soil moisture conservation. 4. Imbalanced nutrient management. 5. Poor weed management . 6. Seed borne diseases	- Integrated nutrient management strategy -use of basal NPK and N through broadcasting at proper time and in proper proportion. -Proper and timely weed management - Seed treatment with chemicals.		
Paddy	Low yield of traditional Basmati rice	Low seed replacement rate Imbalance fertilizer application Poor Weed management Poor pest management	- Enhancement in seed replacement rate -Introduction high yielding Basmati varieties - Proper and timely weed management - Seed treatment with chemicals.	On farm trails - Demonstrations - Trainings - Diagnostic visits Field days	S. no 6 of the Inventory of latest technology available
Pulses	Low productivity of Pulses under rainfed conditions	Low productivity due to cultivation of local varieties. Improper fertilizer application Growing pulses on Unsuitable land. 4. Occurrence of insects/ diseases.	- Use of recommended Verities. -Growing pulses on suitable land. - Timely and proper use of plant protection material for control of pod borer in gram. -Balanced fertilizer Application	-Demonstration - Trainings - Field days	S. no 09 & 10 of the Inventory of latest technology available
Oilseeds	Low productivity of Oilseeds	1. Use of local germplasam for sowing 2. Unscientific Sowing. 3. Improper fertilizer use 4. Crop infestation with insects.	-Use of HYV Varieties. - Balanced fertilizer Application. - Timely and proper use Insecticides	-Demonstration - Trainings - Field days	S. no 4 and 5 of the Inventory of latest technology available
Fodder crops	Low Productivity	Lack of Knowledge No availability of high yielding fodder grasses/ crops	Introduction high yielding perennial fodder grasses Introduction of HYV of forage crops	-Trainings -Demonstrations	S. no 7 of the Inventory of latest technology available

4. Details of each of the technology under Assessment, Refinement and demonstration

a. Detailed account on varietal/breed characters for each of the variety/breed selected for FLD and OFT:

1) HD-3086: Released in 2012 for timely sown under irrigated conditions. Av seed yield is 50.4 q/ha and matures in 143days. Possesses resistance against leaf rust and yellow rust diseases.
2) HD-1080: Released in 2011 for timely sown under raifed conditions. Av seed yield is 23-25 q/ha and matures in 135-140 days.
3) Unnat 550: Released in 2017 is a yellow rust resistant version of PBW 550. Its average plant height is 86 cm and matures in about 145 days. Its average grain yield is 23.0 quintals per acre. It is resistant to yellow and brown rusts and susceptible to loose smut.
4) RSPN 25: Released in 2005 for timely sown irrigated conditions. Av seed yield is 15-20 q/ha. Seed contains 39 % oil. AV maturity of this variety is 145-155 days.
5) RSPT-6: Released in 2017 for early sown irrigated/rainfed conditions Av seed yield is 10-12 q/ha. Seed contains 42 % oil. AV maturity of this variety is 85-90 days.
6) Basmati-370: Traditional timely sown under irrigated conditions. Av seed yield is 35 q/ha and matures in 150 days. Long cylinder grain highly aromatic, non sticky and soft texture.
7) Palampur-1: High yielding Oats variety with production potential of 450-550 q/ha.
8) PBG-5: Released in 2012 with production potential of 17-19 q/ha. It is semi erect with dark green foliage and thick stemmed. It takes 112 days to flower and matures in 164 days.
9) PMSY-3: Composite variety released in 2017 for mid hill of Jammu province with av grain yield of 50-60q.ha and matures in 130-135 days. Moderately resistant to leaf blight, stem borer and blister beetle.
10) Pu-31: Released in 2008 is a YMV resistant/tolerant variety. Av yield is 12, 5 q/ha and AV maturity of this variety is 85-95 days.

ब्राण्ड नाम से ऐसे उत्पाद उपलब्ध हैं।

बनाने की सामग्री :

मछली (ड्रेस किया हुआ और छोटे टुकडों में कटा हुआ) : 1 किलो ग्राम, सरसों : 10 ग्राम, हरी मिर्ची (टुकड़ों में कटा हुआ) : 50 ग्राम, लहसुन (छिलका निकाला हुआ) : 200 ग्राम, अदरख (छिलका निकाला हुआ और काटा हुआ) : 150 ग्राम, मिर्ची पाउडर : 50 ग्राम, हल्दी पाउडर : 2 ग्राम, तिल का तेल : 200 ग्राम, सिरका (एसिटिक एसिड 1.5 प्रतिशत) : 400 मि.ली., नमक : 60 ग्राम, मिर्ची (पाउडर) : 2.5 ग्राम, चीनी : 10 ग्राम, इलायची, लौंग, दालचीनी (पाउडर) : 1.5 ग्राम।

बनाने की विधि :

मछली को इसके भार के 3 प्रतिशत नमक के साथ एक समान रूप से मिला दें और 2 घण्टे तक छोड़ दें। हल्का नमक वाले और अधिक रूप से सूखे मछली का प्रयोग भी किया जा सकता है। मछली को कम से तेल में तलें। तली हुई मछली को अलग रखें। बचे हुए तेल में सामग्री (सरसों, हरी मिर्च, लहसुन, अदरख) को तलें और उसमें मिर्ची पाउडर, मरीच पाउडर और हल्दी पाउडर मिलाकर कम लौ पर कुछ मिनटों के लिए ठीक से मिलाएं। उसे आग पर से हटा दें। तली हुई मछली डालकर ठीक से मिलाएं। ठंडा हो जाने पर सिरका, इलायची पाउडर, लौंग, दालचीनी, चीनी और बाकी बचे नमक डालकर सभी को ठीक से मिलाएं। समाग्री को ठीक से मिलाने के लिए उबला और ठंडा किया हुआ पानी का उपयुक्त मात्रा में प्रयोग कर सकते हैं। इसे अब साफ व स्टेराइल ग्लास बोतल में रख दें और एसिड प्रूफ कैप (ढक्कन) से सील कर दें। यह ध्यान रखें कि बोतल में समाग्री के ऊपर तेल की एक परत बनी हुई है।

अचार को पैक करने के लिए 12 माइक्रोन पॉलिस्टर से बने और 118 माइक्रोन एलडी–एचडी को एकटूडेड फिल्म से लेमिनेटेड किये गये मुलायम पाउचों का प्रयोग किया जा सकता है।

मछली से प्राप्त मूल्य संवर्धित उत्पाद

प्रेम कुमार, राकेश शर्मा
पुनीत चौधरी, विकास टंडन
शीतल बडयाल, पूनम अबरोल
राजू गुप्ता

Sher-e-Kashmir University of Agricultural Sciences and Technology

actual crop cut), prevented sowing/planting risks also. It will also provide farm level assessment for localised calamities including hailstorms, unseasonal rains, landslides and inundation.

Use of technology:

The scheme proposes mandatory use of remote sensing, smart phones and drones for quick estimation of crop loss. This will speed up the claim process.

Other features: Within next 2-3 years, the scheme aims to bring 50% farmers under the scheme. The settlement of claims will be fastened for the full sum assured. About 25% of the likely claim will be settled directly on farmers account. There will not be a cap on the premium and reduction of the sum insured.

Comparison with earlier crop insurance schemes

The new scheme is different from earlier schemes on the account of following: It is open to all farmers but NOT mandatory to anyone. It is optional for loanee as well as non-loanee farmers. It has so far lowest premium. The existing premium rates vary between 2.5% and 3.5% for kharif crops and 1.5% for rabi crops—but the coverage was capped, meaning farmers could, at best, recover a fraction of their losses. The farmers' premium has been kept at a maximum of 2 per cent for food grains and up to 5 per cent for annual commercial horticulture crops. For rabi crops, it is 1.5%. The balance premium will be paid by the government to provide full insured amount to the farmers. Since there is no upper cap on government subsidy, even if the balance premium is 90 percent, the government will bear it This scheme provides full coverage of insurance. While NAIS had full coverage, it was capped in the modified-NAIS scheme. It also covers the localized risks such as hailstorm, landslide, inundation etc. It provides post harvest coverage.

Critical Appraisal:

Thus, new crop insurance scheme has the potential to deal with the vagaries of nature on Indian farming. The premium to be paid by the farmers is kept low when compared with earlier crop insurance schemes. However, the scheme will increase the financial burden on the government and necessary budget allocations should be made. The scheme does not cover risks and losses inflicted by wild animals like elephants and wild boars. The wild animals pose risks to farmers in peripheral areas of national parks and wild life sanctuaries. Besides, losses from nuclear risks, riots, malicious damage, theft, and act of enmity, are all categorised under 'exclusions' in the new scheme.

Challenges in implementation:

The key problems such as poor land records, flawed land titles, corruption etc. are common challenges any crop insurance scheme in India faces. Further, the success of the scheme depends on how sincerely it is implemented by the insurance companies.

Overview of the Crop Insurance Schemes

Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu

KVK JAMMU IN PRESS

Scientific Advisory Committee meeting of KVK Samba held

Excelsior Correspondent

SAMBA, Mar 26: The 2nd Scientific Advisory Committee meeting of KVK, Samba, was held here today under the chairmanship of Dr K S Rizam, Vice-Chancellor, SKUAST-Jammu.

VC SKUAST chairing Scientific Advisory Committee meeting of KVK Samba on Tuesday.

The meeting deliberated upon the progress report of 2018-19 and finalized the Annual Action Plan for the year 2019-20.

Dr Rizam, in his presidential address, suggested KVK to focus on Integrated approach in farming. He advised to organize collaborative programmes for achieving the doubling of farmers' income. The Vice-Chancellor advised the KVK to expand its area of work in the entire agriculture sector involving livestock, apiculture, sericulture, fisheries etc for the benefit of farming community.

The meeting was attended by Dr J P Sharma, Director Research; Dr R K Arora, Associate Director Extension (KVKs); Dr D P Abrol, Dean, FOA and Dr Sudesh Radhotra, Chief Scientist, IGFRI, Palampur besides district heads of departments like Agriculture, Animal Husbandry, Horticulture, NABARD, farmers and farm women of Samba district.

Dr Vinod Gupta, Senior Scientist & Head, KVK Samba, presented the detailed Annual Progress Report of KVK Samba for the year 2018-19 and action taken towards the suggestions and directions received during the 10th SAC meeting.

Thereafter, the action plan for the fiscal year 2019-20 was also presented before the house for discussion and approval. Dr J P Sharma, Director Research, suggested to undertake exclusive programmes for women in agriculture and allied sectors including poultry farming. Dr D P Abrol, Dean, FOA SKUAST-J, assured that the faculty of Agricultural Sciences will render their help for solving the problems of farmers. Dr R K Arora, Associate Director & Incharge KVKs suggested to organize training programmes in close collaboration with line departments. Dr Sudesh Radhotra, Chief Scientist, IGFRI, Palampur highlighted the importance of millets, medicinal plants and pulses in improving the farmers economy.

Dr S K Gupta, Heads Plant Breeding and Genetics, Dr B C Sharma, HoD, Agronomy; Dr Anil Gupta, HoD, Plant Pathology; Dr R K Sharma, HoD, Animal Nutrition; Dr B S Jamwal, Chief Scientist PRSS, Samba, gave their valuable inputs. Vijay Upadhayaya, DO Ext, Samba, CHO, Samba Aungral, Chief Vety and Animal Husbandry, Dr Sat Pal and S Surender Singh, DDM Nabard discussed about the needs of farmers. Dr Sanjay Khajuria presented the vote of thanks.

KVK Jammu organises awareness programme on nutrition

Participants during the awareness programme.

STATE TIMES NEWS

JAMMU: Krishi Vigyan Kendra (KVK), Jammu, under the aegis of Directorate of Extension, SKUAST-J, organised an awareness programme at village Kattal Batal, Tehsil Nagrota of Jammu District to sensitise the rural women as a part of the celebration of National Nutritional Week, being observed across the country.

The programme was attended by more than fifty women.

While coordinating the programme, Dr Sheetal Badyal, SMS Home Science said that this week is celebrated all over the country since 1983 to aware the people more specifically, the women about their health and well being and to enhance their sensitivity vis-a-vis their food habits and the nutrition they take.

Dr Sheetal focused on availability of safe and nutritious diets through promotion of homestead or organic kitchen gardens ensuring availability of round the year, seasonal, fresh, safe fruits and vegetables, herbs and medicinal plants for the family.

During the programme, vegetable seeds of seasonal vegetables like spinach, carrots, mustard, raddish, etc. were also distributed to the women to encourage them to raise Butri gardens.

The programme was assisted by Poonam Abrol, Programme Assistant, KVK, R S Pura.

The programme was conducted under the guidance of the Sr. Scientist and Head KVK Jammu Dr. Vikas Tandon.

SKUAST celebrates National Nutrition Week

STATE TIMES NEWS

LEH: Krishi Vigyan Kendra, Nyoma (SKUAST-

to their responsibility of nutrition of the whole family.

KVK organises plantation drive

STATE TIMES NEWS

JAMMU: Krishi Vigyan Kendra (KVK) Jammu organised plantation drive at border village Suchetgarh on Wednesday. The drive was launched under the leadership of Dr R.K Arora ADE and Incharge KVKs of SKUAST-J.

On the occasion, Dr Vikas Tandon, Chief Scientist and Head KVK Jammu was the Chief Guest.

Dr Punit Choudhary, Senior Scientist Agroforesty briefed the villagers and officers of Agriculture Department that the plantation drive was organised with an objective of planting more and more Neem plants in the village as the same has been designated as organic village for Basmati 370.

Chief Scientist Dr Vikas Tandon planting a sapling.

More than 100 Neem plants and many ornamental trees were planted during the programme.

Dr Rakesh Sharma, Senior Scientist Agri Extension motivated the farmers for planting of Neem trees for eco-friendly environment.

अधिकार संरक्षण अधिनियम 2001 के प्रति किया जागरूक

KVK organises refresher workshop

STATE TIMES NEWS

R S PURA: Krishi Vigyan Kendra (KVK) Jammu under the aegis of Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu (SKUAST-J) organised a refresher workshop cum interaction programme (Farmers and Industry stakeholders) on Wednesday at KVK R S Pura under the NABARD sponsored project entitled "Production and commercialization of quality planting material of commercially important medicinal trees for livelihood security".

A gathering of more than hundred farmers and farm women from different blocks of Jammu and Samba District engaged in the cultivation of medicinal trees and agricultural produce, Scientists in the field of Agri Extension, Agroforestry, Agricultural Marketing, Plant PROTECTION, Food Processing, Horticulture from SKUAST-Jammu, stakeholders form Industry, Horticulture Department Jammu, Medicinal Plant Board J&K, NABARD, JKEDI, Horticulture Planning and Marketing Jammu participated in the programme.

Dignitaries during the launch of workshop at R S Pura.

On the occasion Dr J.P Sharma Director Research advised the farmers to join hands for the formation of farmers producer organization with production of quality material with proper allotment and chemical composition as per the industrial requirement. Dr R.K Arora, Associate Director Extension and 14 KVKs emphasized on doubling of farmers income through the cultivation and development of value added products from medicinal trees.

Dr Vikas Tandon Chief Scientist and Head KVK Jammu welcomed the participant and shared various innovative techniques being promoted by the university for the Enhancement of farmer's income. Dr Punit Choudhary Principal Investigator of the NABARD Project briefed the farmers and different stakeholders about the objective of the interaction workshop. Dr Rakesh Sharma conducted the proceeding of the programme. Dr Sheetal Badyal, Poonam Abrol, Er Ashish Kathroch, Narinder Sharma helped in smooth conduct of the programme. Experts namely Professor Lalit Mohan Gupta Dir of Agroforestry SKUAST-J, Dr Kamlesh Bali, Dr Anil Bhat, Mr Waheed Nodal Officer J&K State Medicinal Plant Board J&K, Dr Vishal Dabur India Ltd, A.K Mansotra (AMO Jammu), Dr Vinod Kumar (JKEDI), Ashish Gupta (Deputy Director ATMA Samba), Kumar (DDM NABARD), Dr Vishal Mahajan (Scientist Agroforestry KVK Kathua), Dr Sanjay Khajuria (Scientist Agroforestry KVK Kathua) actively participated in the farmer scientist interaction conducted during the programme.