

## ANNUAL REPORT 2018-19

GENERAL INFORMATION ABOUT THE KVK**Name and address of KVK with phone, fax and e-mail**

<b>KVK Address</b>	<b>Telephone</b>		<b>E mail</b>	<b>Website</b>
	<b>Office</b>	<b>Fax</b>		
Krishi Vigyan Kendra, Kulgam (Pombay), P.O. Gopalpora Kulgam-192 233	<b>01931213492</b> <b>09797138441</b>	<b>01931213492</b>  -	<b><u><a href="mailto:kvkkulgam@gmail.com">kvkkulgam@gmail.com</a></u></b>	<b>Kvkkulgam.net</b>

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

<b>Address</b>	<b>Telephone</b>		<b>E mail</b>	<b>Web Address</b>
	<b>Office</b>	<b>Fax</b>		
<b>Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir, Shalimar Srinagar (J&amp;K)</b>	<b>0194-2462159</b>	<b>0194- 2462159</b>	<b><u><a href="mailto:vcskuastk@gmail.com">vcskuastk@gmail.com</a></u></b>	<b><u><a href="http://www.skuastkashmir.ac.in">www.skuastkashmir.ac.in</a></u></b>

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

<b>Name</b>	<b>Telephone / Contact</b>		
	<b>Residence</b>	<b>Mobile</b>	<b>Email</b>
<b>Dr. Tasneem Mubarak</b>	<b>09797138441</b>	<b>09797138441</b>	<b><u><a href="mailto:kvkkulgam@gmail.com">kvkkulgam@gmail.com</a></u> <u><a href="mailto:drtasneem.mubarak@gmail.com">drtasneem.mubarak@gmail.com</a></u></b>

**Year of sanction: 2005 vide no. : 2-42-2003-AE11; Dated: 09-05-2005**

**Details of KVK staff as on 3-4-2019**

<b>S.No</b>	<b>Sanctioned post</b>	<b>Name of the incumbent</b>	<b>Discipline</b>	<b>Date of joining</b>
1	Sr. Scientist & Head	Dr. Tasneem Mubarak	Agronomy	15-3-2018
2	Subject Matter Specialist	Mrs. Saima Paul	Home Science	Deployed to KVK Srinagar.
3	Subject Matter Specialist	Dr. Ab Shakoor Khanday	Soil Science	21-06-2017
4	Subject Matter Specialist	Dr Shahid Ahmad Shergogri	Animal Sci.	25-8-2017
5	Subject Matter Specialist	Dr Parvez Ahmad Sheikh	Plant Pathology	11-4-2018
6	Subject Matter Specialist	Vacant	Horticulture	--
7	Subject Matter Specialist	Vacant	Floriculture/fishery/vegetable Science	--
8	Programme Assistant	Syed Shakir Nazir	Aqua-life medicine	Pursuing Ph. D and Shifted to KVK on 10/7/2017
9	Computer Programmer	Mr. Shabir Ahmad Mir	Computer Science	17-07-2009
10	Farm Manager	Vacant	-	Vacant
11	Accountant/ Superintendent	Mrs. Zahida Parveen	-	22-05-2017
2.12	Stenographer	Vacant	-	
2.13	Driver 1	Mr Amir Yousuf	-	17-01-2019
2.14	Driver 2	Vacant	-	
2.15	Supporting staff 1	Gh. Hassan Mir	-	12-12-2005
2.16	Supporting staff 2	Basharat Ahmad Lone	-	02-02-2015

**Total land with KVK (in ha) :**

<i>S. No.</i>	<i>Item</i>	<i>Area (ha)</i>
1	Under Buildings	0.5
2.	Under Demonstration Units	0.1
3.	Under Crops	4.0
4.	Horticulture	1.06
5.	Under Barren/natural bunds	4.51
	<b>Total</b>	<b>10.17</b>

**Infrastructural Development:**

**A) Buildings**

<i>Name of building</i>	<i>Source of Funding</i>	<i>Stage</i>					
		<i>Complete</i>			<i>Incomplete</i>		
		<i>Completion Date</i>	<i>Plinth area (Sq.m)</i>	<i>Expenditure (Rs.)</i>	<i>Starting Date</i>	<i>Plinth area (Sq.m)</i>	<i>Status of construction</i>
Administrative Building	ICAR	July -07	500	41.63 lakh	-	-	Needs repairs
Farmers Hostel	ICAR	Jun -07	305	27.30 lakh	-	-	Needs face-lifting
Staff Quarters	ICAR	-	--	--	Oct., 2011	-	Incomplete due to lack of funds
Demonstration Units 2 (Dairy, Poultry)	ICAR	May-07	60.0	3.28 lakh	-	-	Completed and functional
Soil Lab	ICAR	Functional					
Plant Pathology Lab	ICAR	Functional					
Threshing floor		Not sanctioned yet					
Farm go down		Not sanctioned yet					

**B) Vehicles and machinery**

<b>Type of vehicle</b>	<b>Year of purchase</b>	<b>Present status</b>
Bolero GLX 4wd7 STR.G	2005	Not functional and Needs condemnation subjected and replacement by new vehicle
Tractor & Implements	2005	Good
Hydraulic Tractor Trolley	2016	Good
Motor Cycle	2012	Good
Power Tiller	2016	Good

**Major farming systems/enterprises of the district Kulgam**

<b>S. No</b>	<b>Farming system/enterprise</b>	
1	Irrigated (canal)	Rice-Brown sarson; Rice-wheat; Rice-fodder (Oat, Berseem); Apple+vegetables, Apple+fodder. Apple+pulses
2	Rainfed	Maize+Rajmash, Maize-Field pea; Moong- Fodder (Oat, Berseem), Cowpea- Fodder (Oat, Berseem), Rajmash – Fodder (Oat),Apple+ Pulses, Apple + Fodder.
5	Enterprises	Horticulture, Agriculture, Livestock, Handicraft, Fishery, Mushroom, Apicultur, Poultry

## Soil type/s

<b>S. No</b>	<b>Soil type</b>	<b>Characteristics</b>	<b>Area in ha</b>
1	Clay Loam	Ideal for cultivation of paddy, oilseeds and pulses	15845
2	Sandy Loam	Ideal for cultivation of apple, maize, walnut	21446

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

S. No	Crop	Area (ha)		Production (q)		Productivity (q/ha)	
		2010-11	2017-18*	2010-11	2017-18*	2010-11	2017-18*
1.	Rice	<b>16411</b>	<b>16000</b>	<b>798723</b>	<b>1077760</b>	<b>48.67</b>	<b>67.36</b>
2.	Maize	<b>8440</b>	<b>5430</b>	<b>90392</b>	<b>194394</b>	<b>10.71</b>	<b>35.80</b>
3.	Wheat	50	20	1500	600	30.0	30.0
4.	Oilseed	<b>5787</b>	<b>7698</b>	<b>30960</b>	<b>69282</b>	<b>5.35</b>	<b>9.0</b>
5.	Pulses	2068	2668	19211	27764	9.29	10.4
6.	Vegetables	2650	2850	192628	879000	72.69	308.4
7.	Fodder crops	2350	2790	214320	1043460	91.20	374

Data received from department of Agriculture Kulgam

### Area, Production and Productivity of Horticulture crops cultivated in the district

S.No	Crop	Area (ha)		Production (q)		Productivity (q/ha)	
		2010-11	2017-18*	2010-11	2017-18	2010-11	2017-18
1.	Apple	<b>13614</b>	<b>19148</b>	<b>1439950</b>	<b>2238930</b>	<b>105.8</b>	<b>116.9</b>
2.	Pear	<b>669</b>	<b>850</b>	<b>55200</b>	<b>77950</b>	<b>82.5</b>	<b>91.7</b>
3.	Apricot	125	198	8640	8010	69.1	40.4
4.	Peach	122	197	8400	7490	68.9	38.0
5.	Plum	207	210	13680	8260	66.1	39.0

### Population of livestock, Poultry, Fisheries etc. in the district

Category	Population	Category	Population
<b>Cattle</b>	<b>126000</b>	Goats	21000
Crossbred	113400	Poultry	264000
Indigenous	12600	Ducks	14000
<b>Sheep</b>	<b>151000</b>	Horses	810
Crossbred	130000	Ponies	1905
Indigenous	21000	Buffalo	2035

**Thrust area and Prioritized problems in different sectors.**

<b>Sector</b>	<b>Major Crop/ Enterprise/n atural Resource</b>	<b>Thrust area</b>	<b>Identified Problem</b>
Horticulture	Apple/walnut	Improvement in yield and quality of apple and walnut.	<ul style="list-style-type: none"> <li>a) Poor fruit set, yield and quality of apple</li> <li>b) Lack of quality planting material</li> <li>c) Nutrient deficiency, poor canopy management and heavy disease incidence</li> <li>d) <b>Nutrient management in chards were fields remains covered with snow till late.</b></li> </ul>
Agriculture	Paddy, maize, Brown sarson, fodder oat and Pulses	Enhance seed replacement rate in major cereals, Pulses, oilseeds and fodder crops.	<ul style="list-style-type: none"> <li>a)Low seed replacement rate</li> <li>b)Faulty nutrient application</li> <li>c) Disease incidence in rice.</li> <li>d) Lack of suitable rice variety for mid altitudes</li> <li>e) Shortage of fodder</li> <li>f)Low yield of brown sarson</li> </ul>
Vegetables	Chilli, Knolkhol, Kale, cucurbits etc.	Increasing vegetable production and revival of niche crops	<ul style="list-style-type: none"> <li>a) Chilli Wilt</li> <li>b) Downy mildew of cucurbits</li> <li>c)Lack of vegetables in winter</li> </ul>
Live stock	dairy , Sheep husbandry and poultry	Up gradation of existing breeds Commercial dairy and poultry farming	<ul style="list-style-type: none"> <li>a) Low yield due to local breeds,</li> <li>b) skin infestation (with ticks, lice and fungi) in cattle</li> <li>c) unawareness about disease and nutrient management</li> </ul>
Apiculture	Bee-Keeping	Popularization of Apiculture for income generation and role in fruit industry	Lack of awareness and management
Pisciculture	Fish farming	Rearing and breeding management with respect to carp culture	Unawareness about improved methods of fish farming

Entrepreneurs hip Development	Agribusiness	Introduction of income generation programmes for Self-employment of youths in mushroom, cultivation and processing, fish farming, value addition of fruits and vegetables and rearing of honey bees and vermicomposting, nursery raising and training and pruning	Unawareness about self employment and income generation programmes in agriculture and allied areas
	Rural craft	Women empowerment through income generating skill oriented programmes in Cutting and tailoring, knitting, value addition of fruits and vegetables.	Social backwardness in women
Natural Resource Conservation	Soil and Water	Soil and water conservation.	Soil erosion and moisture deficit.

## Action Taken Report on Salient recommendations of Scientific Advisory Committee Meeting of KVK held on 25 May 2018.

### Agenda item 1: Focus on skill development trainings to create livelihood opportunity for youth.

KVK Kulgam conducted 2 skill development programmes of 40 and 30 days duration on 'Small poultry farming' and 'Vermicomposting', respectively for livelihood through entrepreneurship development in Vermicomposting and poultry farming. In this training programme 40 youth were trained on various aspects of vermicomposting and poultry farming. Trainees were equipped with all skill to start their units for livelihood and for meeting the

demand in the market. The trainees learned by doing and are being guided by the Kendra for establishment of viable vermicomposting and small poultry units at their farms. Exposure visits to the successful entrepreneurs and SKASUT-Kashmir units were also conducted to expose the youth to

different agriculture and allied sectors. Kendra is also putting its efforts for market linkage for the group. Experts from other relevant departments especially district industries were also involved to make programme more meaningful. Funding was done by *Agriculture Skill Council of India*.



### Agenda item 2: Further strengthening Coordination with line department.

- Despite unrest in the district KVK could collaborate and coordinate in 17 training/interaction/ awareness camps /clinical camps etc with

line departments including Agriculture, Horticulture, Animal husbandry and sericulture. In these programmes hundreds of farmers participated. Major activities include following:





• *One week Joint campaign during heavy snow damage in November 2018:*

In view of untimely snowfall in valley during November 2018, a good coordination was observed between Krishi Vigyan Kendra Kulgam and department of horticulture and revenue during one week campaign. The villages visited by team included high altitude and far-flung area of district Kulgam. Worthy District Development commissioner Kulgam Dr. Shamim Ahmad, monitored the activities and also participated in field visits along with SDM, ADC Kulgam, Chief Horticulture Officer Kulgam, Concerned Tehsildars and other officials of horticulture and revenue department . Hundreds of farmers and number of orchards in villages including Nihama, Khokharhama, D.H.Pora, Badijhalan, D.K. Mergw, Nagnar, Nagam, Salam Kani, Chimmar, Yaroo, Boh, Asnoor, Manzgam, Lalpora (Sanyari), Dodwani, wattoo, Tangmargh, Damhal, Chogalpora, Bathipora,



Konsarbal Hard hanger, Sursana, Monadguffan, Modergam, Kakran , Areh, and Manchoo were jointly visited by the team. During these field visits team could observe un- harvested fruit in some orchards at higher elevations, which suffered heavy loss. Fruit piled in some orchards was not covered but with snow. Damage was quite variable as the farmers who managed to clear snow from trees on the date of snowfall suffered minimum plant damage. Farmers who have trained trees properly (very less in number) suffered minimum damage. Farmers who neither trained the trees properly nor removed snow from trees suffered huge loss. On-spot advisory was given by KVK Kulgam scientists to the farmers during the field visits as per the prevailing situation. Programme was covered by print and electronic

media. As per the instruction received from Honourable Vice Chancellor and worthy Director Extension on telephone forecast for snowfall and related advisory was sent by KVK Kulgam one day prior to around 2000 farmers in the district through Farmers Portal Service, which helped many farmers to take precautionary measures in advance.

- **Kisan Divas** : The event was conducted on 24 December 2018 at KVK Kulgam in which 45 farmers and extension functionaries identified by department of Agriculture participated. Focus was on doubling the farmers' income and soil health management. Farmer scientist interaction was held during the day long programme.



- **PM Kisan Saman Nidhi** : KVK Kulgam participated in a mega event on PM Kisan Saman Nidhi organized by department of agriculture. An event was scheduled to be held at KVK Kulgam on 24 February 2019 which in view of the prevailing situation and security concerns in the district was merged with a mega event at a secure place at rest house Kulgam. Deliberations on the scheme PM Kisan Saman Nidhi were made and an interaction programme was also held at the end. In the presence of all dignitaries, officers, field functionaries Asstt Commissioner Revenue Kulgam launched the scheme. Around 350 farmers and field functionaries attended the programme.



- **Mega Kisan Mela**: KVK Kulgam also actively participated in a mega Kisan Mela organized by Department of Agriculture at Mini-stadium Kulgam in which Dr. Tasneem Mubarak Sr. Scientist & Head KVK delivered a lecture on current agriculture scenario especially in the background of climate change and market led extension for doubling farmers' income.





- **Programme on Training and pruning of high density apple orchards :**

One day programme on Training and pruning of HDP for HDOs, Field functionaries and farmers was conducted by KVK Kulgam on 29 November 2018 at KVK, in which 60 participants were benefited. Farmers were identified by Horticulture department. Experts from SKUAST-Kashmir were invited to impart training. Method demonstration and a question answer session was held during day long programme.



- **Animal clinical camp:**

Animal clinical camp was held by KVK at KVK campus on 24 December 2018 in collaboration with departed of

Animal Husbandry Kulgam. 65 farmers and farm women participated in the programme. 78 animals were inspected for various disease ailments and vaccinated by a team of field functionaries and animal Scientist of the Kendra.

- **Identifying beneficiaries for skill development programme:**

Department of Agriculture, Floriculture and Animal Husbandry were approached by Kendra for identifying suitable youth for 2 skill development programmes of one month duration each on 'Small poultry farming' and 'Vermicomposting' for livelihood through entrepreneurship development in Vermicomposting and poultry farming. All the three departments cooperated and interested youth were trained by Kendra.

**Agenda item 3: Impact of technologies and horizontal spread:**

It was desired by worthy director extension that impact of technologies demonstrated by Kendra must be worked out to understand the pace of progress in this regard and also identify the problems if any in the adoption of technologies. In this regard a format was also provided by the directorate for compilation of the information. Department of Agriculture has cooperated and provided data with regard to the horizontal spread of SKUAST-Kashmir released varieties. The information is annexed at ANNEXURE 1.

**Agenda item 4: SMS Floriculture at KVK and creation of Demonstration unit on floriculture.**

Officer from Floriculture department requested worthy Director Extension to post a Floriculture



Scientist at KVK Kulgam. 2 scientist posts are vacant at Kendra and the same has been communicated to the concerned quarters and hopefully both the posts will be filled soon. So far as floriculture demonstration is concerned a unit has been established by Division of floriculture under a project on floriculture for exposure and training of farmers.

**Agenda item 6: Awareness regarding proper use agrochemicals and spray schedule among farmers;**

- 9 awareness camps were conducted in which the 853 farmers were given information regarding all aspects of disease and pest management viz a viz nutrient management in addition to other aspects of farming.



- 7 Awareness programmes under project **Pesticide Risk Reduction** were conducted at Villages Kakran, Pombay, Mirhama, Sehpora, Areh, Ladgoo and Guddar in which farmers were made aware about the safe use of pesticides and other issues related to handling and application of pesticides. Integrated approach of pest management and do's and don'ts were also highlighted during these programmes. Besides stress was given on use of organic and bio products for sustainability and environmental safety. Around **730** farmers and extension functionaries participate in these camps.



- A day long programme was conducted on Risk Assessment of Pesticide and Fungicide Exposure on Orchard Farmers Population of Kashmir Valley and Designing Preventive Measures for Minimizing Pesticide Exposure in collaboration with Division of Biotechnology, SKUAST-Kashmir under the project **“Screening and awareness camp through Biotechnological Tools”**.



80 orchardists including women farmers of District Kulgam participated in the programme and during the Programme the participants were given awareness about deleterious effects of pesticides on human health, Safe handling and use of pesticides, Diseases and disorders associated with indiscriminate use of pesticide. On spot diagnosis of different ailments of



orchardists and collection of their blood samples for pesticide residue analysis was done by team of Doctors from SKIMS, Srinagar.

• One week orchard sanitation programme was conducted during swatchta pakhwara benefiting 325 farmers. Eemphasis was laid on orchard sanitation and organic input agriculture. Scientists highlighted the

importance of orchard sanitation in the reduction of disease and pest incidence in the fruit orchards Sanitation plays a significant role in reducing pest incidence as a very strong component of Integrated Pest Management and is

of great interest to the farmers as evident from the interactions on spot. Scientists also demonstrated the soil sampling techniques and made awareness about the process of disposing and decomposing organic

residues for making a very good on-farm source of nutrient as a part of integrated nutrient management. Besides animal scientist explained how residues can be converted into nutritious feed blocks which can be used in lag phase during winter when there is acute shortage of fodder and forage. Scientists encouraged farmers to attend trainings organised by the Kendra for the purpose. Farmers were made to understand that proper

handling of crop residues and other organic wastes not only cleans the premises and environment but also increases the aesthetic value of villages besides acting as a good source of nutrients especially micronutrients, which is essential for sustaining soil fertility and soil health. Relevant literature was also distributed among the farmers.





### *Agenda item 7: Focus on soil health management*

- Organized Soil health day on December 5<sup>th</sup> 2018 in a unique way by visiting 7 villages and conducting activities like group discussions, literature distribution and method demonstrations December 2018 benefiting 123 farmers were benefited from the programme



Farmers were sensitized about the importance of soil health and how to maintain it.

- Focus on soil health in 17 awareness camps cum farmer scientist interactions held at various occasion.
- 32 method demonstrations on soil sample collection were conducted during the period.



- Skill development of 398 famers regarding collection of soil samples
- One week campaign for awareness and literature distribution regarding soil health and fertilizer management (327 beneficiaries.)
- 219 soil samples analysed under unrest in the district.



- 30 days skill development programme for 20 youth on vermicomposting was conducted and trainees were made aware about current issues related to soil health its importance and management of soil health.
- 3 days Skill development training on soil health assessment through STFR Meter for RAWE students.

**Agenda item 8: Increase contact with the maximum number through personal interaction and ICT:**

➤ In exhibitions/ Kisan melas Kendra highlighted the technologies developed by the University in which hundreds of farmers participated.

➤ 17 Farmers Scientist interaction programmes for creating Awareness on various aspects of farming in agriculture and allied sectors for around **1605 farmers** and extension functionaries.

➤ 3 field days conducted by Kendra at KVK campus in which 173farmers/farm women/rural youth participated.

➤ Using Social media like Face book, whats' App and mobile phone for communicating KVK programmes and 178 advisories were given to more than **8000** famers during the year.

➤ Campaigns were also organized for increasing personal contacts with farmers by visiting farmers filed especially on soil health and orchard sanitation.

➤ Kendra prepared a list of 3000 farmers covering around 120 villages and submitted to Directorate of Extension for mobile advisory service Programme as per the instructions received from the Directorate. Kendra shall be adding more farmers to complete the target of 5000 farmers covering at least 70% villages.



**Agenda item 9: Establishment of Vermicomposting unit at KVK**

Vermicomposting unit has been established by the Kendra and same was utilized for imparting training to 20 youth in vermicomposting. Kendra has submitted a project entitled ***'Training rural youth for livelihood and self -employment in the field of agriculture and allied sectors through learning by doing.'*** to ICAR under ARYA and has recently got approval for the same.



Provision for extending infrastructure and activities under vermicomposting is kept in the project which shall help Kendra in further strengthening the Vermicomposting unit.

**Agenda item 10: Testing Tea Cultivation in district**

As informed by Chief Agriculture Officer during the sac meeting that honourable MP Rajai Sabha Mr. Nazeer Ahmad Laway Sahib has desired that Tea cultivation must be tested in the district. The feedback was immediately communicated to the authorities and Honourable vice Chancellor and worthy Director Extension took Personal interest in the matter and thus received some plating material for testing at SKUAST-Kashmir and at KVK Kulgam. As per the instructions received from authorities 20 number of plants were also provided for planting at Honourable MPs Farm.



**Agenda item 11: Multiplication of HDP rootstock at KVK**

1000 dwarf rootstock of M-9 has been procured from FOA Wadurah and demonstration cum training nursery plot has been established at KVK instructional Farm. Further multiplication of the same is under process and within 2-3 years more than 10000 rootstock shall be available at the Kendra.

**Agenda item 12 Maintaining demonstration plots of all major crops at kvk instructional farm for training and showcasing university technologies to the farmers**

➤ **Demonstration on Modern apple farming**

Being the major crop of the district strong focus of Kendra is on apple crop. Kendra has established a Model High Density apple orchard on an area of 4.5 Kanal. Hundreds of farmers are visiting the plot and developed great interest in the advanced technology of apple farming. Farmers are getting first-hand information about the technology. A great demand of the material from different parts of the district is received from the farmers. Taking this into consideration the KVK is





multiplying rootstock for which a land of one hectare has been developed during 2018-19. HDP orchard was established in 2017 and came into fruiting in 2018 with very good quality apple thus attracting the attention of masses.

➤ **Bud wood Bank at Kendra**

KVK has also established HDP virus free *MOTHER BLOCK* in collaboration with Division of Plant pathology over 5 Kanal for distribution of Bud/graft wood to farmers of the district. This will not only fulfil the demand but also help Kendra generate revenue.

➤ **Demonstrations on field crops and Livestock**

KVK also maintained demonstration plots on major field crops during *kharief* (Paddy,

Maize, Pulses, Soybean) as well as during *rabi* season (Pea and fodder oat), Poultry and dairy farming. It is in place to mention that hundreds of farmer visited these demonstration

plots at the Kendra and a very good number of farmers approached Kendra for seed and knowhow about the production technology of these crops. Chief agriculture officer, Chief Horticulture officer Kulgam and other officer / extension functionaries of line

department also visited Kendra and these plots and appreciated the efforts of the Kendra for showcasing the potential of technologies available with the University.



## **OTHER SALIENT ACHIEVEMENTS OF KVK DURING 2018-19**

### **Awareness programme on Protection of Plant varieties and Farmers' rights ( PPV & FRA) Act 2001 held at KVK Kulgam , SKUAST-Kashmir**

Training cum awareness programme on PPV & FRA Act 2001 was held at KVK Kulgam SKUAST-Kashmir on 19 March 2019 at KVK Campus to create awareness about the provisions of plant varieties and farmers' Rights Act 2001. Programme was sponsored by Protection of Plant Varieties and Farmers' Right Authority, Ministry of Agriculture, Government of India. Programme was attended by more than 200 famers especially the tribal farmers from far-flung villages of district Kulgam. After welcome address by Dr. Ab. Shakoor, Subject Matter Specialist Soil Science, the overview of the programme was presented by Dr. Tasneem Mubarak, Sr. Scientist and Head KVK Kulgam. He highlighted the importance of Act and said that the way things are evolving and scenarios changing, conservation and cultivation of indigenous crop varieties is turning out to be very essential. In view of this Protection of plant varieties and Farmers' Rights Act 2001 is a timely intervention. He further said that in the background of changing climatic conditions and global trade, authorities must encourage and adequately appreciate the farming community in their quest to conserve the local land races and indigenous strains of different crops. He further stress the importance of local land races of paddy like Mushkebudji, Kamad, Zag etc and Ambri apple, Herpora Potato, Narwaw Rajmash and other indigenous heritage crop strains. He said that in paddy only more than 1.5 lakh strains are available and farmers have contributed immensely in preserving these strains and these genetic resources provide ample opportunities for developing new varieties as per the need of the time. He also highlighted the success story of Mushkebudji in Sagam area of district Anantnag and its demonstration in district Kulgam under Mushkebudji Popularization programme jointly conducted by KVK Kulgam and MRCFC, SKUAST-Kashmir. Dr. Ab. Shakoor Subject Matter Specialist Soil Science , Dr. Parvez Ahmad Subject Matter Plant Pathology and Dr. Shahid Ahmad Subject Matter Specialist Animal Science also deliberated on various aspects of the Act and sensitised farmers about their rights and the programmes for rewarding and encouraging contributing farmers and breeders. A question answer session was also held at the end of the programme,



Dr. Ab. Shakoor Subject Matter Specialist Soil Science , Dr. Parvez Ahmad Subject Matter Plant Pathology and Dr. Shahid Ahmad Subject Matter Specialist Animal Science also deliberated on various aspects of the Act and sensitised farmers about their rights and the programmes for rewarding and encouraging contributing farmers and breeders. A question answer session was also held at the end of the programme,



## **Kisan Divas held in collaboration with Department of Agriculture at KVK**

On the Occasion of Farmers' Day (Kisan Devas) a Farmer Scientist interactions programme was conducted in collaboration with Department of agriculture Kulgam at KVK on 24 December 2019, in which farmers were sensitized about the latest developments in the field of agriculture and allied sectors. An interaction session was also held at the end of programme to satisfy the queries of farmers about different farming practices. A field visit was also conducted during the programme.

## **Activities carried out under swatchta Pakwara and Pre-rabi campaign**

### **Sanitation campaign**

During the Swatchta Pakwara KVK Kulgam conducted special drive on orchard sanitation and organic input agriculture. The programme was conducted at 7 villages of district in which 126 farmers participated. KVK



Kulgam conducted programmes on sanitation with emphasis on orchard sanitation and organic input agriculture as a continuation of campaign under Swachta Pakhwara. Scientists highlighted the importance of orchard sanitation in the reduction of disease and pest incidence in the fruit orchards the farmers. This plays a significant role in reducing pest incidence as a very strong component of Integrated Pest Management and is of great interest to the farmers as evident from the interactions on spot. Scientists also demonstrated the soil sampling techniques and made awareness



about the process of disposing and decomposing organic residues for making a very good on-farm source of nutrient as a part of integrated nutrient management. Besides animal scientist explained how residues can be converted into nutritious feed blocks which can be used in lag phase during winter when there is acute shortage of fodder and forage. He encouraged farmers to attend trainings organised by the Kendra for the purpose. Farmers were made to understand that proper handling of crop residues and other organic wastes not only cleans the premises and environment but also increases the aesthetic value of villages besides acting as a good source of nutrients especially micronutrients, which is essential for sustaining soil fertility and soil health. Relevant literature was also distributed among the farmers.

### **Farmer Interaction Programmes**

3 training cum interaction programme were also conducted on 24, 25 and 29 /12/2018 to Create Awareness about the safe use of pesticides and reducing pesticide risk. Programmes were aimed at reducing the risk in



view of indiscriminate and improper use of agro-chemicals in the agriculture and horticulture crops. Orchard sanitation and strong focus was on use of organic and bio products for sustainability and environmental safety. 205 farmers and extension functionaries participate in these programme.

### **Skill Development Programme on management of organic wastes**

KVK Kulgam also started one month Skill development programme on vermicomposting during the Pakhwara on 26th December with and objective to encourage proper disposal of organic residues and side by side provide opportunity to earn a respectable livelihood through entrepreneurship development in Vermicomposting.



In this training programme 20 youth were trained on various aspects of vermicomposting so that the trainees were equipped with all skill to start their units for livelihood and for meeting the demand in the market. The trainees learned by doing and are being guided by the Kendra for establishment of the vermicomposting units at their farms. Exposure visits to the successful entrepreneurs were the part of the programme and Kendra is also putting its efforts for market linkage well in advance for the group. Experts from other relevant departments were also involved to make programme more meaningful. Under prerabi campaign an exhibition and exposure to farmers during Kisan mela at SKUAST-Kashmir was also conducted on 9 &10 March, 2019

## **CELEBRATION OF NUTRITION WEEK AT KVK KULGAM**

### **Programme for ICDs Project staff and farm women**

Under the celebration of Nutrition Week, two interactive awareness cum demonstration programmes on healthy human nutrition were organized on 04-09-2018 and 06-09-2018 at KVK Kulgam. 08 Rural Women and 28 women associated with ICDS scheme participated in the programmes. During the programmes, awareness about the following topics was given

- Preparation of healthy and nutritious food in the kitchen.
- Methods for Enhancement of nutritive value of food
- Taste enhancement in healthy foods for improving their acceptability by babies
- Better plant protection options for maintaining the hygienic quality of food
- Soil health improvement for nutritious and healthy food production.



Diverse types of Sandwich preparation and confectionary making was demonstrated to the participants. A visit of participants to different components of the working Integrated Farming System of the KVK was also facilitated. The participants were highly satisfied with the programmes and requested for more such programmes in the future.



### *Awareness programme at Degree College Kulgam*

Awareness programme was organized on 11-09-2018 at Govt. Degree College Kulgam in which 80 college girls and 06 faculty members of the college participated. During the programme awareness on following issues was given by the scientists of the KVK.

- Need for balanced diet.
- Physical and physiological Symptoms of Nutrient deficiencies.
- Adverse effects of junk food on human health.
- Ways for enhancement of nutritive value of food.
- Healthy livestock products for healthy life.
- Soil health as foundation stone of Human Health.
- Scientific handling and use of pesticides.

In addition to the awareness on various issues, the meeting Hall of the college reverberated when all the participants raised the slogan ***Go Further with the Food.*** At the end of the programme a Nutrition slogan composing competition was held in which all the participant girls took place. Three girls were felicitated with prizes for composing encouraging nutrition related slogans.



### *Awareness cum assessment programme on Risk Assessment of Pesticide and Fungicide Exposure on Orchard Farmer Population of Kashmir Valley*

Awareness cum assessment programme was conducted on Risk Assessment of Pesticide and Fungicide Exposure on Orchard Farmer Population of Kashmir Valley and Designing Preventive Measures for Minimizing Pesticide Exposure in collaboration with Division of Biotechnology, SKUAST-Kashmir under the project, “ Screening and awareness camp through Biotechnological Tools” . 80 orchardists of District Kulgam participated in the programme and during the Programme the participants were given awareness about

- Deleterious effects of pesticides on human health.
- Safe handling and use of pesticides
- Diseases and disorders associated with Indiscriminate use of pesticide

On spot diagnosis of different ailments of orchardists and collection of their blood samples for pesticide residue analysis was done by team of Doctors from SKIMS, Srinagar.



## Exposure visits

Exposing farmers to the latest development in the field of Agriculture and allied sectors and getting their feedback is very important in the background of climate change and opportunities of employment generation in agriculture and allied sectors. In view of this Kendra conducted 6 exposure visits.



## Crop Field Days

Apple, Rice, Maize and Wheat field days were organized by the Kendra/SAU units to expose the farmers and farmwomen to the latest technologies developed by SKUAST-Kashmir and demonstrated at farmers field, KVK instructional farm and at different units of SKUAST-Kashmir. Farmers expressed great interest in the technologies demonstrated and posed many questions to the KVK scientist regarding the availability of planting material seed, altitudinal tolerance, disease and pest management and other cultivation practices.





**Visits of Dignitaries/**



**Visit of Honourable Vice Chancellor SKUAST-Kashmir on 13/9/18**



**Visits of worthy Director Extension SKUAST-Kashmir on 25/5/2018 and 20/12/2018**

**ROUTINE ACTIVITIES OF THE  
KENDRA DURING 2018-19**



### On-Farm trials conducted by the Kendra during 2018-19

<b>OFT -1: Varietal Assessment of rice in lower belts of district</b>								
Crop/ enterprise	Prioritized Problem	Details of technology	Source of Technology	No. of Trials	Grain yield (t/ha)	*Net profit (₹/ha)	Additional income over farmers' practice (₹/ha)	% increase in Income
RICE	Poor income	Farmers Practice(Jhelum/ K- 39/ Mixtures)	MRCFC, SKUAST- Kashmir	3	4.5	72980	98740	135
		Mushkebudgi			4.3	171720	-	
<i>*Includes returns from paddy straw. The price of Mushkebudji gain ranges between ₹4000 to ₹5000/q</i>								

### **OFT 2: Varietal Assessment of oats varieties released by SKUAST-K**

Crop/ enterprise	Prioritized Problem	Details of technology	Source of Technology	No. of Trials	Fodder Yield (t/ha)	*Net profit (₹/ha)	Additional income over farmers' practice (₹/ha)
Oats	Poor availability of fodder	T1: Farmer Practice(Sabzar) T2: SKO-20 T3: SKO-90	DARS Budgam	3	Crop in filed at tillering stage	--	--

<b>OFT -3: Integrated Management of Chilli wilt</b>						
<b>Crop/ enterprise</b>	<b>Prioritized Problem</b>	<b>Details of technology</b>	<b>Source</b>	<b>No. of Trials</b>	<b>Disease incidence (%)</b>	<b>Yield(q/ha)</b>
CHILLI	Drooping of plants/ Death of plants	<b>T1:</b> Drenching with any available fungicide (FP)	SKUAST-K	03	68	4.8
		<b>T2:</b> Seed and seedling treatment with carbendazim 50 wp @ 0.1% + Transplanting on ridges + need based irrigation + drenching with carbendazim 50 wp @ 0.1%			53	5.6
		<b>T3:</b> Transplanting on ridges + need based irrigation + Seed and seedling treatment with carbendazim 50 wp @ 0.1% + soil application of bio-agent (Pre-inoculated on FYM)			23	8.5

<b>OFT -4: Integrated Management of Collar rot of Apple</b>						
<b>Crop/ enterprise</b>	<b>Prioritized problem</b>	<b>Title of OFT</b>	<b>Technology options</b>	<b>Source of Technology/Col laboration</b>	<b>No. of trials</b>	<b>Percent Recovery</b>
APPLE	Collar rot	Management of Collar rot through Bio-control agents	<b>T1:</b> Removal of Soil (FP)	SKUAST-Kashmir	03	12
			<b>T2:</b> Scraping of affected area and pasting of bio-agents + Soil Application of bio-agent (Pre-inoculated on FYM) near the affected areas.			49

### OFT 5: Control of pre-harvest fruit drop in apple Cv- Red delicious

Crop/enterprise	Farming situation	Problem Diagnosed	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter (Fruit fall%)	Feedback from the farmer
Apple	Irrigated	Fruit Drop	05	1: Spray of calcium chloride (3g/lit) (FP)	Yield	10.3	Farmers were involved at all the levels of trial execution, and are satisfied with the technology Economics needs to be worked out in future trials
				2: Spray of NAA (10 ppm) 21 days before harvesting.		6.0	
				3: Spray AVG (Aminoethoxy vinyl glycine) 125 mg/lit 4 weeks before harvesting.		4.5	

### OFT 6: Bio mediated composting

Crop/enterprise	Farming situation	Problem Diagnosed	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter (Fruit fall%)	Feedback from the farmer
FYM	Irrigated	Poor soil health	03	1: Farmers Practice ( Leaving in Open as such)	Rate of Decomposition	6.25 months	Farmers were involved at all the levels of trial execution, and are satisfied with the technology
				2: Mixture of agricultural waste, Kitchen waste and litter waste + Preparation of Pit ( 4' x 6' x 8') + Use of effective microbes @ 200 ml m-2		4.5 Months	

<b>OFT 7-Assessment of nutritional management for productive and reproductive performance in dairy cow</b>			
<b>Parameters of technology assessed Treatment details</b>	<b>Results</b>		<b>% Change in the parameters</b>
<b>Treatment details</b>	T1= feeding of onion, Methi, and Guar (FP) (FP)	T1= Deworming +mineral mixture 50g/cow /day, Deworming with recommended dose of fenbendazole before one month of calving. Mineral mixture will be fed after 15 days of calving for 2 months (RP)	
Number of cows comes in heat	2	18	89%
Service period (days)	470	405	14%
Post-partum estrus interval (Days)	185	100	46%
Calving interval (days)	160	95	41%
Average milk yield liters /Cow/day	8.00	9.5	18.75%

### OFT 8-Assessing the performance of Potassium Permanganate as preventive measures for subclinical Mastitis in milking cows

Parameters of technology assessed Treatment details	Results	
<b>Treatment details</b>	T1= washing of udder with water (FP)	T2=washing of udder and teats with 3% Potassium Permanganate (premilking and postmilking teat dipping with 3% Potassium Permanganate solution)(RP)
Detection of incidence of subclinical mastitis based on MASTRIP/CMT	40	5
Estimation of economic benefit	Rs10875	Rs.15875
% Change in the parameters 45 and 87% respectively		

### OFT 8-Assessment of Production Performance in dairy cow During Winter season through supplementation Feeding of Winter chocolate to lactating cows

Parameters of technology assessed Treatment details	Results	
<b>Treatment details</b>	T1= feeding of traditional ration and Guar (FP)	T2= supplementation Feeding of Winter chocolate to lactating cows 400g/cow /day .Start with half chocolate/cow /day for first six days (RP)
Average milk yield litres /Cow/day	7.5	8.00
Body condition score	3.00	4.00
% Change in the parameters 6.6% and 33.33% respectively		

**FRONLINE DEMONSTRATION PROGRAMME ON FIELD CROPS**

Crop	Technology demonstrated	Variety/ critical input	Farming situation	No. of Demo.	Yield (q/ha)				% Increase	Economics (Rs./ha)		
					Demo			Check		*Net Return		Additional Income Over farmers' Practice
					H	L	A			Demo	Check	
Paddy	Farmers own seed	Seed and technique	Irrigated	10	65.2	52.8	60.1	55.4	8.5	123417	113301	10116
	Package of practice ( Quality seed, Time of sowing/ transplanting and seed rate) in mid belts of Kulgam	K-448	Irrigated mid belts	54	69.7	62.8	65.3	58.6	14.8	*129749	*119011	10738
Maize	Maize Variety	SMC-3	Irrigated/ Rainfed	62	48.7	38.2	43.9	35.8	22	*86128	*70435	15693
Oats	Variety	SKO-96	Irrigated	54	Crop is at tillering stage							
Brown sarson	Old varieties	Shalimar Brown sarson-1	Irrigated/ Rainfed	21	Crop is at seedling stage							

*\* Includes the income from paddy straw and maize Stover*

<b>Frontline Demonstrations on Fruit crops</b>									
Crop	Technology demonstrated	Critical input	Farming situation	No. of Demo	No. of plants/demo	Per recovery/Pest incidence/ (yield in MT/ha)		Additional cost of cultivation /ha	Additional income /ha after ducting the additional cost of cultivation
						Demo	Check	-	-
Apple	Management of cankers	Fungicide paint	Irrigated	5	10	83%	12%	-	-
	Spray Schedule	Technical	Irrigated/Rainfed	10	-	1-2% (17.1)	13-25% (12.3)	1610/=	153980/=
	Calcium and Boron Management	Calcium Chloride and Boric acid	Irrigated	5	10	16.2	12.7	9200/=	141232=
<i>Cabendazim : Copperoxychloride: Linsed oil 1:2:9 ratio produced excellent results. Calcium boron spray is also adopted by majority of farmers in the district now.</i>									

### Frontline Demonstrations on Animal Science

**Prevention and control of parasitic diseases of small ruminants through de-worming (50 animals) Oral administration of recommend dose of Albendazole @750mg+ ivermectin@ 25mg/ 30ml**

Parameters of technology assessed Treatment details	Technology to be demonstrated: Oral administration of recommend dose of Albendazole750mg+ivermectin25mg/30ml)		% Change in the parameters
	Results		
Treatmants	Farmers practices	Demo	
Body weight in g/month	210	360	71%
birth wt of lamb/ kids ( kg)	2.5	3.5	40%

<i>Performance of Vanaraja poultry birds under backyard system</i>			
<b>Parameters of technology assessed Treatment details</b>	<b>Technology to be demonstrated: Performance of Vanaraja poultry birds under backyard system</b>		<b>% Change in the parameters</b>
	<b>Results</b>		
<b>Treatments</b>	<b>Local</b>	<b>Demo</b>	<b>--</b>
Average body weight in g/month	1200	2100	75%
Age of first egg (days)	190.45	183.5	3.6%
Total eggs up to 40 weeks of age	15.33	22.20	44.8%
First egg weight at 40 week of age (g)	48.47	52.27	7.83%

***TRAINING/AWARENESS PROGRAMMES CONDUCTED DURING THE YEAR 2018-19***

***A. FARMER/FARM WOMEN***

<b>Thematic area</b>	<b>Crop / Enterprise</b>	<b>Training Course Title</b>	<b>No. of Courses</b>	<b>No. of participants</b>
<b>Crop Production</b>	Paddy	1. Improved Practices for quality seed production/Farmers own seed production 2. Modified Protected nursery in rice 3.Nutrient and water Management in rice	03	57
	Maize	1. Practices for increasing maize yield under irrigated conditions 2. Moisture conservation practices and agronomic practices for maize under rain fed conditions. 3.Symptoms and correction of plant nutrient deficiency	02	43



Thematic area	Crop Enterprise /	Training Course Title	No. of Courses	No. of participants
Crop Production	Oilseeds	1.Non monitory inputs for improving yield of oilseed 2.Importance of S nutrition in oilseeds	01	19
	Oilseeds, pulses, fodder crops	1.Productivity and profitability of different cropping systems under Kulgam conditions 2.Importance of legumes in sustainable Agriculture	02	66

Thematic area	Crop Enterprise /	Training Course Title	No. of Courses	No. of participants
Horticulture	Apple	Planning and layout for establishment of apple orchards for both traditional and HDP	01	24
		Pollination management in temperate fruit crops	01	62
		Scientific training and pruning of apple in both young and old orchards	02	137
		Nutrient deficiencies and fertilizer management in fruit crops.	02	54

Thematic area	Crop Enterprise /	Training Course Title	No. of Courses	No. of participants
Soil Health and Fertility	Apple	Soil and leaf sampling techniques for fertilizer scheduling.	3	107
		Importance, preparation and use of organic inputs	2	83
	Agri & allied	Soil health management	3	127

Thematic area	Crop / Enterprise	Training Course Title	No. of Courses	No. of participants
Animal Science	Live stock	Integrated livestock farming	2	47
		Dairy cattle management	1	22
		Low cost balanced feed formulation for dairy cattle	3	47
		Dipping, deworming, dosing and vaccination of livestock	2	62
		Backyard Poultry farming	1	56
		Disease Management in livestock	2	43

***B. SKILL DEVELOPMENT TRAINING FOR RURAL YOUTH DURING***

Thematic area	Crop / Enterprise	Training Course Title	No. of Courses	Duration	Participants
Soil Science	Vermicomposting	Skill development training on vermicomposting for livelihood and soil health	01	30 days	20
Livestock Production	Poultry farming	Small poultry farming for creating job opportunities for rural youth.	01	40 days	20

***Other Extension programme***

S.No.	Extension programme	No. of programmes or activities	No of Participants
1	Field Day	3	173
2	Farmer Scientist interactions	23	1605
3	Kisan Mela	4	683
4	Exhibition	3	5500

5	Plant/Soil health/Animal health camps	3	384
6	Method Demonstrations	32	398
7	Exposure visits	7	375
8	TV/Radio Programmes	5	--
9	Scientists visits to farmers field	59	1180
10	Farmers Visit to KVK for advisory	3472	3472
11	Mobile advisories	-	7928

**STATUS OF SEED AND PLANTING MATERIAL AT KVK-KULGAM DURING 2018-19**

<b>Name of Crop</b>	<b>Variety</b>	<b>Quantity (q)</b>
Rice	Jhelum, Mushkebudgi and Kamad	12
Maize	SMC-3	8
Oats	SKO-96	15
Soybean	Shalimar Soyabean	3
Vegetable	Different varieties of Potato	20
Brown sarsoon	BS-3	4.0
<b>Total Seed</b>	<b>Cereals/fodder crops and oilseeds</b>	<b>62.0</b>
*Planting material	Red velox/Red Chief/ Origon super/ grainy smith/ malies delicious Pollinizers/M-9 root stock(2 <sup>nd</sup> year)	3000/=No