

# CONTENTS

S. No.	Particular	Page No.
1	APR Summary	1 -2
2	General Information about the KVK	3 -7
3	Detail of Scientific Advisory Meeting	7 - 10
4	Details of District & Thrust Area	11 - 17
5	Programmes for Doubling the Income	18-20
6	Technical Achievements	21
7	Details of OFT	22-35
8	Details of FLD	36- 51
9	Training Programmes	52 - 59
10	Extension Activities	60-62
11	Production of Seed and Planting Material	62-64
12	Soil Testing	65
13	Rain Water Harvesting System	66-67
14	Intervention on Disaster Management & HRD	67-69
15	Agriculture Technology Information Centre	70-72
16	Success Story	73-77
17	Important Events	78-84
18	Status Report – CFLD, CRM, NARI	85-116
19	Establishment of IFS Model	117-120

**PROFORMA FOR PREPARATION OF ANNUAL REPORT (January-2019-December-2019)**

**APR SUMMARY**

**1. Training Programmes**

Clientele	No. of Courses	Male	Female	Total participants
Farmers & farm women	92	1468	352	1820
Rural youths	09	70	20	90
Extension functionaries	21	256	60	316
<b>Total</b>	<b>122</b>	<b>1794</b>	<b>432</b>	<b>2226</b>

**2. Frontline demonstrations**

Enterprise	No. of Farmers	Area (ha)	Units/Animals
Oilseeds	35	14.0	02 Buffaloes
Pulses	75	30.0	Mushroom Unit
Cereals	58	19.2	01 NADEP
Vegetables	86	8.62	01 Vermi Compost
Other crops (Mari Gold)	20	2.0	01 Honey bee (10 boxes)
Hybrid crops	0	0	02 Buffaloes
<b>Total</b>	<b>274</b>	<b>73.82</b>	
Livestock & Fisheries			
Other enterprises	30	0.1	
<b>Total</b>			
<b>Grand Total</b>	<b>304</b>	<b>73.92</b>	

**3. Technology Assessment**

Category	No. of Technology Assessed	No. of Trials	No. of Farmers
Crops	10	62	32
Livestock			
Various enterprises	2	15	10
<b>Total</b>	<b>12</b>	<b>77</b>	<b>42</b>

**4. Extension Programmes**

Category	No. of Programmes	Total Participants
Extension activities	861	11596
Other extension activities	15	-
<b>Total</b>	<b>876</b>	<b>11644</b>

## 5. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	
Meerut	Text only	273	15	10	21	35	28	764
	Voice only	1321	8	28	10	385	190	3884
	Voice & Text both							
	<b>Total Messages</b>	<b>1594</b>	<b>23</b>	<b>38</b>	<b>31</b>	<b>420</b>	<b>218</b>	<b>4648</b>
	<b>Total farmers Benefitted</b>							

## 6. Seed & Planting Material Production

	Quintal/Number	Value Rs.	Distributed to No. of farmers
Seed (q)	240	268000	
Planting material (No.)	26500	6510	18
Bio-Products (kg) Honey production	12	2400	13
Livestock Production (No.) Fodder		116000	
Milk Production	1072 lit	48240	
Mushroom production (No.)	25 Kg	2500	45

## 7. Soil, water & plant Analysis

Type of Samples	No. of samples analysis	No. of Beneficiaries	Value Rs.
Soil	1231	3971	184650
Water			
Plant			
<b>Total</b>	<b>1231</b>	<b>3971</b>	<b>184650</b>

## 8. HRD and Publications

Sr. No.	Category	Number
1	Workshops	
2	Conferences	
3	Meetings	
4	Trainings for KVK officials	
5	Visits of KVK officials	
6	Book published	
7	Training Manual	
8	Book chapters	
9	Research papers	
10	Lead papers	
11	Seminar papers	
12	Extension folder	
13	Proceedings	
14	Award & recognition	
15	On going research projects	

## DETAIL REPORT OF APR (Jan.2019 to Dec. 2019)

### 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, Hastinapur, Meerut	01233-280605	01233-280605	meerutkvk@gmail.com

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

Address	Telephone		E mail
	Office	FAX	
SardarVallabhbhai Patel University of Agriculture & Technology, Meerut	0121-2888522, 2888511	0121-2888505, 2888540	deesvpuat2014@gmail.com

#### 1.3. Name of the Programme Coordinator with phone & mobile No

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Omvir Singh	09412109215	09412109215	<a href="mailto:dr_omveer07@yahoo.in">dr_omveer07@yahoo.in</a>

#### 1.4. Year of sanction: 1992



**1.5 Staff Position (as on 30 April, 2019)**

<b>S N</b>	<b>Sanctioned post</b>	<b>Name of the incumbent</b>	<b>Designation</b>	<b>Discipline</b>	<b>Pay Scale (Rs.)</b>	<b>Present basic (Rs.)</b>	<b>Date of joining</b>	<b>Permanent /Temporary</b>	<b>Category (SC/ST/OBC/Others)</b>	<b>Mobile no.</b>	<b>Age (Yr)</b>	<b>Email id</b>
1	Professor and Head	Dr. Omvir Singh	Professor and Head	Horticulture	37400-67000	73730	07.01.2004	Permanent	OBC	9412109215	55	dr_omveer07@yahoo.in
2	Subject Matter Specialist	Dr. P.S. Tiwari	Professor	Agri. Engg.	37400-67000	46760	01.07.1998	Permanent	Gen	9412311560	51	drpsteng@gmail.com
3	Subject Matter Specialist	Dr Shiv Kumar	S.M.S/Asstt. Professor	Agronomy	15600-39000	36660	10.12.2003	Permanent	SC	9411263701	48	shivsvpuat@gmail.com
4	Subject Matter Specialist	Dr.Rakesh Tiwari	S.M.S/Asstt. Professor	Soil Science	15600-39000	32980	21.06.2008	Permanent	Gen	9411820189	49	191rakeshtiwari@gmail.com
5	Subject Matter Specialist	Smt. Veena Yadav	S.M.S/Asstt. Professor	Home Science	15600-39000	29070	23.06.2008	Permanent	OBC	9457263482	49	veenayadav1020@gmail.com
6	Subject Matter Specialist	Dr. Naveen Chandra	S.M.S/Asstt. Professor	Entomology	15600-39000	31070	23.06.2008	Permanent	OBC	9450803857	48	nchandra120@gmail.com
7	Subject Matter Specialist	Dr. Virendra Pal	S.M.S/Asstt. Professor	Horticulture	15600-39000	32980	20.08.2008	Permanent	OBC	9456662212	42	dvpgangwar77@gmail.com

8	Programme Assistant	Smt. Vibha Sahu	Prog. Assistant	Computer	9300-34800	72100	21.10.1999	Permanent	OBC	9410456174	45	vibhasahu.1@gmail.com
9	Programme Assistant	Dr. Ashish Tyagi	Prog. Assistant/ Farm Manager	Plant Protection	9300-34800	49000	22.07.2008	Permanent	Gen	9837474493	41	green.ashsihtyagi@gmail.com
10	Accountant / Superintendent	Sh Amit Chaudhary	O.S. Cum Accountant	-	9300-34800	62200	10.12.2003	Permanent	OBC	9761444004	38	amitsvpuat@gmail.com
11	Stenographer	Sh. M.N.Dimri	Stenographer	-	5200-20200	49000	05.09.2000	Permanent	Gen	9458610511	50	Dimri@yahoo.com
12	Driver	Sh. Amrish Sharma	Tractor Driver	-	5200-20200	42800	01.07.1998	Permanent	Gen	9997889985	47	-
13	Driver	Sh. Upendra Kumar	Jeep Driver	-	5200-20200	30500	02.08.2007	Permanent	OBC	9837194455	47	-
14	Supporting staff	Sh. Hari Das	Sweeper	-	5200-20200	35300	01.07.1998	Permanent	SC	9760855760	45	-
15	Supporting staff	Sh. T B Ale	Cook	-	5200-20200	34300	01.07.1998	Permanent	Gen	9997611921	54	-
16	Other( if any)	Sh. Amar Singh	Field Attended	-	5200-20200	29600	13.12.1999	Permanent	OBC		51	-

1.6. Total land with KVK (in ha) :

S. No.	Item	Area (ha)
1	Under Buildings	2.00
2.	Under Demonstration Units	1.00
3.	Under Crops	5.50
4.	Orchard/Agro-forestry	0.40
5.	Others (specify)	0.30

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	23.05.2009	510	54.88	-	-	-
2.	Farmers Hostel	ICAR	30.06.2007	300	22.92	-	-	-
3.	Staff Quarters (6)	ICAR	30.06.2007	400	26.72	-	-	-
4.	Demonstration Units (2)	ICAR	30.06.2007	160	11.06	-	-	-
5	Fencing	ICAR	30.06.2007	1000	13.77	-	-	-
6	Rain Water harvesting system					-	-	-
7	Threshing floor	ICAR	30.06.2007	300	2.34	-	-	-
8	Farm godown	ICAR	30.06.2007	60	3.63			
	Soil Testing Lab	ICAR	30.05.2006	80	3.20			
		<b>Total</b>	<b>138.52</b>					

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Tractor	2017	5,20,000	200 hours	working
Jeep (Bolero)	2007	5,32,000	194154	Condemn
Motor cycle	1992	28,000	80000	Condemn

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Cultivator	2017	-	working
Disk Harrow	2017	-	working
Rotavator	2017	-	working
Ridge Maker disc type	2017	-	working
Seed drill	1993	-	Non-working
Seed cum fertilizer drill 11 tuyen	1993	-	Non-working
Trolly (Tractor)	1994	-	Working

Paddy Puddler (Cage Wheel)	1994	-	Working
Potato Planter	1998	-	Working
ThresherSonalika	1998	-	Working
Oven	1993	-	Working
LCD Projector	2007	125000	Working
Over Head Projector	1995	12000	Working
TV	1995	18000	Working
Disc Harrow (14 Wheel)	2006	27000	Working
DVD/CD Player	2007	2500	Working
Taka Machine (Chef Cutter)	2008	8700	Working
Computer	2011	20000	Working
Camera Sony	2011	11428	Working
Happy Seeder	2018	129950	Working
Chopper/Shredder/Mulcher	2018	147888	Working
Zero Till Drill	2018	53500	Working
Reversible M B Plough	2018	104950	Working
Cutter cum spreader	2018	51520	Working

**1.8. A). Details of SAC first meeting conducted on 28.01.2019**

**A. Details of Participants:**

**Total No. of Participants: 30**

S. No.	Name of Participants	Designation	Department
1	Dr. Manoj Kumar	Joint Director	CPRS, Modipuram, Meerut
2	Dr. Prem Singh	Acting Director	IIFSR, Meerut
3	Dr. Ashok Kumar Chauhan	CTO	CPRS, Modipuram, Meerut
4	Dr. Satya Prakash	Professor (Horticulture)	SVPU.A.&T., Meerut
5.	Dr. Gopal Singh	Joint Director Extension	SVPU.A.&T., Meerut
6.	Dr. Nazim Ali	Professor & Head A.H.	SVPU.A.&T., Meerut
7.	Smt Anuradha Sharma	Member/ Progressive Farm Women	Village- Ganeshpur
8.	Smt Meera Devi	Member/ Progressive Farm Women	Village- Luccadhari
9.	Smt Kavita Goyal	Member/ Progressive Farm Women	Village- Bheem Nagar
10.	Smt. Usha Tyagi	Member/ Progressive Farm Women	Village- Ganeshpur
11.	Sri K.P. Deshwal	Member/ Progressive Farmer	Village- Madhkalan
12.	Sri Devendra Kumar	Member/ Progressive Farmer	Village- Modh khurd
13.	Sri Jagat Singh	Teacher	Department of Education
14.	Sri Anil Giri	A.H.I	Department of Horticultural
15.	Sri Rakesh Kumar	Veterinary Officer	Animal Department
16	Sri Narendra Singh Sirohi	ADO Ag	Director Extension
17	Sri Jai Kumar	Additional Statitical Officer	Department of Horticultural
18	Dr. Omvir Singh	Professor & Head	KVK, Hastinapur, Meerut
19	Dr. P.S. Tiwari	Professor (Agric. Engg.)	KVK, Hastinapur, Meerut
20	Dr. Virendra Pal	SMS/Assistant Professor(Hort.)	KVK, Hastinapur, Meerut
21	Dr. Shiv Kumar	SMS/Assistant Professor(Agro.)	KVK, Hastinapur, Meerut
22	Dr. Naveen Chandra	SMS/Assistant Professor(Plant Prot.)	KVK, Hastinapur, Meerut
23	Dr. Ashish Tyagi	Prog. Asstt./Farm Manager (Plant. Prot.)	KVK, Hastinapur
24	Smt. Veena Yadav	SMS/Assistant Professor(Home Sci.)	KVK, Hastinapur
25	Smt. Vibha Sahu	Programme Assistant(Comp.)	KVK, Hastinapur
26	Sri Amit Chaudhary	Accountant	KVK, Hastinapur
27	Sri M.N. Dimri	Steno Cum/ Comp Operator	KVK, Hastinapur
28	Sri Harpal Singh	Farmer	Village- Ghejha
29	Sri Ved Pal Singh	Farmer	Village- Gejha
30	Sri Kartar Singh	Manager- Navjivan Kisan Hetu College	Village-Gejha

**(b) Recommendations of SAC held on January 28, 2019**

S.N.	Recommendations
1	Training of nutrient management in Mango orchard should be scheduled in month of September.
2	Arpita variety of Mari gold may be replace by any short duration variety.
3	Wheat variety 3067 may be tested in OFT programmes .
4	Trainings/Titles should be framed according to season/time relevant.
5	PU-31 variety of URD should be taken in programmes.
6	Participation of female should be ensured in training programmes of all discipline
7	Training programme for Insect control in Mango should be conducted in the month of August, specially for shoot gall psylla
8	Mushroom production training programme should be incorporated in the action plan of plant protection discipline.
9	Training for storage should be scheduled in the month of April.
10	Adjustable stools for milching animal may be searched to demonstrate under home science discipline.
11	Activities of KVK should be followed up by taking farmers feed back.
12	Input Dealer training programme should be organized by KVK
13	Farmer exposure visit may be organized to potential field of production/processing
14	Balance use of fertilizer and integrated approach of farming should be promoted through KVK mandatory activities.
15	Possibilities of Kesaria Ginger production in the district may be explored
16	Location specific Mineral mixture formulated in veterinary college SVPUAT, Meerut may be promoted through KVK activities.



**(B) Details of SAC Second meeting conducted on 16.12.2019****A. Details of Participants:****Total No. of Participants: 32**

S. No.	Name of Participants	Designation	Department
1	Dr. Atar Singh	Director	ATARI, Kanpur
2	Dr. S. K. sachan	Director Extension	SVPU.A.&T., Meerut
3	Dr. Manoj Kumar	Joint Director	CPRS, Modipuram, Meerut
4	Sh. Brijesh Chandra	Deputy Director Agril.	Deptt. Of Agril. Meerut
5	Dr. Omvir Singh	Professor and Head	Krishi Vigyan Kendra, Meerut
6	Dr. Satya Prakash	Professor (Horticulture)	SVPU.A.&T., Meerut
7	Dr. S. K. Lodhi	Assisstant Professor	SVPU.A.&T., Meerut
8	Dr. Rajesh Kumar	Veterinary Officer	Deptt. Of Animal Husbanry
9	Dr. Lakhvinder Singh	Deputy CVO, Meerut	Deptt. Of Animal Husbanry
10	Sh. Sanjay Kumar	Lead Development Officer	Syndicate Bank, Meerut
11	Sh. Chaman Singh	Soil Conservation Officer	Deptt. Of Agriculture
12	Sh. Prabodh Kumar	Asssistant Director, Soil Testing	Deptt. Of Agriculture
13	Dr. P.S. Tiwari	Professor (Agric. Engg.)	KVK, Hastinapur, Meerut
14	Dr. Rakesh Tiwari	SMS/Asstt. Professor ( Soil Sc.)	KVK, Hastinapur, Meerut
15	Dr. Virendra Pal	SMS/Assistant Professor(Hort.)	KVK, Hastinapur, Meerut
16	Dr. Shiv Kumar	SMS/Asstt. Professor(Agro.)	KVK, Hastinapur, Meerut
17	Dr. Naveen Chandra	SMS/Asstt. Professor(Plant Prot.)	KVK, Hastinapur, Meerut
18	Smt. Veena Yadav	SMS/Asstt. Professor(Home Sci.)	KVK, Hastinapur
19	Dr. Ashish Tyagi	Prog. Asstt./Farm Manager	KVK, Hastinapur
20	Smt. Vibha Sahu	Programme Assistant (Comp.)	KVK, Hastinapur
21	Sh. Amit Chaudhary	Accountant	KVK, Hastinapur
22	Sh. M.N. Dimri	Steno Cum/ Comp Operator	KVK, Hastinapur
23	Sh. Shodan Singh	Farmer	Village - Amhera
24	Sh. Tejvir Singh	Farmer	Village - Amhera
25	Sh. Mahendra Singh	Farmer	Village - Hastinapur
26	Sh. Jai Kumar Ydav	Farmer	Village - Ikwara
27	Sh. Kanshi Ram	Farmer	Village - Rahmapur
28	Sh. Dinesh Kumar	Farmer	Village - Rahmapur
29	Sh. Premkumar	Farmer	Village – Khoddayalpur
30	Smt. Kamlesh	Farm Women	Village - Hastinapur
31	Smt. Vidyawati	Farm Women	Village - Hastinapur
32	Smt. Meera	Farm Women	Village - Hastinapur

**(b) Recommendations of SAC held on December 16, 2019**

S.N.	Recommendations
1	Pest and disease management in potato should be taken programme.
2	IPM models should be tested in the field.
3	Farmers Producers Organizations to be formed for Mushroom and Bee keeping farmers.
4	Awareness programme should be conducted to manage mango hopper in mango belts.
5	Achievement of FLDs and OFTs must be presented with good quality photographs of the programme and site.
6	Technical feedback should be collected and send to the research programme.
7	Fast decomposer may be taken in demonstration programme.
8	Dal Badi making should be promoted through Self Help Groups for nutritional security.
9	Training schedule/ year planner to be shared with line department of the district.
10	AAS unit should be provided by the ICAR to the KVK for more accuracy in result and to reduce cost of testing.
11	Demonstration of pulses and oilseeds may be conducted with sugarcane crop as intercropping in case of unavailability of area for sole crop.
12	No need to conduct OFT to assess utility of revolving stool.
13	Demonstrations may be conducted for dissemination of technologies of Central Potato Research Station, Modipuram.
14	Training programme should be organized on management of blight in Potato



## 2. DETAILS OF DISTRICT (2019)

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

SN	Farming system/enterprise
1	Cropping (Sugarcane- Ratoon -Wheat) + Live Stock
2	Crop Cultivation (Rice-Wheat) + Live Stock
3	Horticulture (Vegetable) + Live Stock
4	Horticulture (Flower) + Live Stock + Cropping

### 2.2 Description of Agro-climatic Zone & major agro ecological situations

S N	Agro-climatic Zone	Characteristics
1	Western plain zone	<p>1. The zone includes districts of Muzaffarnagar, Meerut, Baghapat, Ghaziabad, Gautam Budh Nagar, Panchsheel Nagar, Bulandshahr and parts of Saharanpur located between the Ganga and Yamuna River and their tributaries.</p> <p>2. The zone is highly productive with light coloured loam soil. The average annual rainfall is 795 mm.</p> <p>3. Relative humidity range from 32 to 85% and the temperature ranges from 2.5<sup>0</sup> C to 43<sup>0</sup>C. Rice wheat sugarcane based cropping system is prevalent in the zone.</p>

Situation	Soil Type	P <sup>H</sup>	Farming system	Major crops	Live stock	Block
AES I	Loam	7.5-8.5	Sugarcane-Ratoon-Wheat, Agro forestry and/or Jower-wheat (2-3 Graded buffalo/1 Cross bread cow)	Sugarcane, wheat, Paddy, potato, vegetable, Jower	Buffalo, cow, Poultry, Sheep & Goat	Mawana, JaniPariksheetgarh, Machhra, Kharkoda, Rajpura, Meerut, Duaralla, Sardhana, Saroorpur, Rohta,
AES II	Loam Sand	7.0-8.0	Sorghum-Potato-Cucurbits and/or Sugarcane-Ratoon-Wheat (2-3 Graded buffalo/ 1 Cross bred cow)	Sugarcane, Potato, Wheat, Mango, Bajra, Jower	Buffalo, cow, Poultry, Sheep & Goat	Hastinapur, Pariksheetgarh, Machhra, Kharkhoda, Jani, Rohta, Saroorpur, Sardhana
AES II	Sandy loam, Silty loam, Clay laom	7.5-7.9	Paddy-wheat and/or Jower-Wheat-Sugarcane –Ratoon-Wheat (2-3 Graded buffalo/ 1 Cross bred cow)	Sugarcane, Paddy, Wheat, Jower, Vegetable	Buffalo, cow, Poultry, Sheep & Goat	Hastinapur, Pariksheetgarh



### 2.3 Soil type/s

SN	Soil type	Characteristics	Area in ha
1	Sandy loam to loam with normal P <sup>H</sup>	The soils have enough clay to store adequate amounts of water and plant nutrients for optimum plant growth. They contain enough silt to hold sufficient available water for plants, to gradually from more clay and to release fresh plant nutrients by weathering. Clay content is not much as to cause poor aeration or to make working with them difficult. A soil containing between 7 to 27% clay and approximately equal amount of silt and sand has a loam texture. Organic content in the soil is 0.3 to 0.4%.	<b>Total –259000</b> a) Cultivated Land- 2,00,000 b) Forest area- 21314 c) Horticulture- 2266 d) Other- 35420

### 2.4. Area, Production and Productivity of major crops cultivated in the district (2018-19)

SN	Crop	Area (ha)	Production (M.Ton)/ha	Productivity (Qtl /ha)
1	Sugarcane	132624	122958363	927.12
2	Wheat	80507	384278	47.73
3	Rice	14.556	43.507	29.57
	Maize	0.214	0.542	25.33
	<b>Barely</b>	145	628	43.31
4	<b>Oil seed: Mustard</b>	6006	8403.00	13.99
5	<b>Pulses</b>			
	Urd	1.315	1.227	9.33
	Masoor	462	542	11.73
	Gram	12.0	16.0	13.33
	Moong	0.072	0.032	4.44
	Pea	751	1216	16.19
	Arhar	1.172		
6	Millet			
7	Potato			
8	Others (Bajra)	0.018	0.038	21.10

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

Category	Population	Production (Lt/day)	Productivity (Lt/day)
<b>Cattle</b>			
Crossbred	133279	1299470.25	9.75
Indigenous	76049	475306.25	6.25
<b>Buffalo</b>	567070	4820095	8.50
<b>Sheep</b>			
Crossbred	482	771.20	1.60
Indigenous	3490	7852.50	2.25
<b>Goats</b>	44353	66529.50	1.50
<b>Pigs</b>			
Crossbred	8947	--	--
Indigenous	12388	--	--
<b>Poultry (Egg)</b>			
Hens	85565	--	273 egg/year
Desi	--	--	79 egg/year
Improved (Dual Purpose)	--	--	167 egg/year
Turkey and others	2483		
<b>Category</b>	<b>Area</b>	<b>Production</b>	<b>Productivity</b>
Inland	--	--	33.00 q/ha

## 2.6 Weather data ( 2019)

Date	Maxi Temp(°C)	Mini Temp(°C)	RH morn (%)	RH evening (%)	Rainfall(mm)	Evaporation (mm)	Sunshine hours (h/day)
2019-Jan	20.9	5.1	94.6	55.1	65.5	1.71	4.86
2019-Feb	21.5	9.6	94.3	61.4	51.4	2.19	5.01
2019-March	27.0	12.2	94.6	47.9	10.6	4.16	8.62
2019-Apr	35.7	19.4	88.1	43.3	2.4	7.86	8.70
2019-May	39.0	21.7	74.5	35.5	9.0	11.2	9.2
2019-Jun	38.7	24.8	77.2	55.8	17.3	8.6	6.87
2019-Jul	33.6	24.5	92.2	71.9	301.8	3.67	3.9
2019-Aug	33.2	24.9	94.5	76.6	265.8	3.0	5.37
2019-Sept	33.4	24.0	94.9	70.9	24.0	3.0	7.17
2019-Oct	31.2	18.3	94.4	57.3	22.9	2.4	6.6
2019-Nov	27.0	12.4	93.4	51.7	10.8	2.1	4.71
2019-Dec	17.7	7.32	92.7	67.4	42.8	1.67	3.00

## 2.7 Details of Operational area villages (2019)

S N	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1	Meerut	Kharkhoda	Piplikhera, Kelli, Gheza, KankerKhera, Ataula, Khandawali, Jhinharpur, Nirpura	Sorghum, Potato, Wheat, Mustard, Livestock production (2-3-Graded buffalo / 1-Crossbred cow)	<ul style="list-style-type: none"> <li>Late sowing of sugarcane</li> <li>Low production of milk in Cow and Buffaloes</li> <li>Deficiency of miner elements and organic matter in soils</li> <li>Attack of white grub in sugarcane</li> </ul>	<ul style="list-style-type: none"> <li>Intercropping with sugarcane</li> <li>Soil health management</li> <li>Management of infertility and repeat heat in Cattle and Buffaloes</li> <li>Weed management in Paddy and Wheat</li> </ul>
		Rajpura	Salarpur, Muzaffarpur Saini, Rajpura, Morna, Kastla, Mameypur, Incholi, Kaserukhera	Sugarcane, Pigeon pea, Potato & Wheat	<ul style="list-style-type: none"> <li>Reducing production area of pulses due to blue horse.</li> </ul>	<ul style="list-style-type: none"> <li>Balance use of fertilizer</li> <li>Crop residues management</li> </ul>
		Daurala	Nihori, Lawad, Mahalka, Macchri, Rasoolpur, Walidpur, Panvari, Meetheypur, Andawali, Eloi, Daurala, Rassolpur	Vegetables, Sugarcane, Wheat, Mustard,	<ul style="list-style-type: none"> <li>Red rot and grassy shoot in sugarcane</li> <li>No use of Potash and micro elements in crops</li> <li>Low production of old orchards</li> </ul>	<ul style="list-style-type: none"> <li>Pest management in Paddy and Sugarcane</li> <li>Disease management in vegetable crops.</li> </ul>
		Meerut	Chandsara, Alipur, Gagol, Phafunda, Fatehullahpur, Noornagar, TarapuriRasidnagar	S/cane, Urd, Rice Wheat	<ul style="list-style-type: none"> <li>Unorganized marketing system of agriculture produce</li> <li>Long dry period and infertility in milch animals</li> <li>Weed infestation in wheat.</li> <li>Depletion of ground water</li> <li>Insect attack in vegetables</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of Oilseed and Pulses crops.</li> <li>Crop productivity enhancement in late sown wheat.</li> <li>Nutritional management among farm women and children</li> <li>Introduction of HYV/Hybrids in vegetables.</li> <li>Promotion of green manuring.</li> <li>Managements of Mango orchards.</li> </ul>
Sardhana	Sardhana	Mahadev, Kushawli, Begumabad, Nahli, Pali	S/cane, Wheat, Vegetables, Flower	<ul style="list-style-type: none"> <li>Late sowing of sugarcane</li> <li>Low production of milk in Cow and Buffaloes</li> </ul>	<ul style="list-style-type: none"> <li>Intercropping with sugarcane</li> <li>Soil health management</li> </ul>	
	Suroorpur	Pawarsa, Ikdri, PanchiBuzurg	-do-	<ul style="list-style-type: none"> <li>Deficiency of miner</li> </ul>	<ul style="list-style-type: none"> <li>Management of infertility and repeat</li> </ul>	
	Rohta	Rohata, Arnavali,	S/cane, wheat			

2			Rasana, Shahapur jain pur,		elements and organic matter in soils	heat in Cattle and Buffaloes
		Jani	Baffar, Meerpur, Mohammadpur Dhumi, Khumbha, Siwal Khas, Nagla Kumbha, Bholi Ki Jhal	S/cane, wheat, mustard, paddy & Urd	<ul style="list-style-type: none"> <li>• Attack of white grub in sugarcane</li> <li>• Reducing production area of pulses due to blue horse.</li> <li>• Red rot and grassy shoot in sugarcane</li> <li>• No use of Potash and micro elements in crops</li> <li>• Low production of old orchards</li> <li>• Unorganized marketing system of agriculture produce</li> <li>• Long dry period and infertility in milch animals</li> <li>• Weed infestation in wheat.</li> <li>• Depletion of ground water</li> <li>• Insect attack in vegetables</li> </ul>	<ul style="list-style-type: none"> <li>• Weed management in Paddy and Wheat</li> <li>• Balance use of fertilizer</li> <li>• Crop residues management</li> <li>• Pest management in Paddy and Sugarcane</li> <li>• Disease management in vegetable crops.</li> <li>• Promotion of Oilseed and Pulses crops.</li> <li>• Crop productivity enhancement in late sown wheat.</li> <li>• Nutritional management among farm women and children</li> <li>• Introduction of HYV/Hybrids in vegetables.</li> <li>• Promotion of green manuring.</li> <li>• Mngt. of Mango orchards.</li> </ul>
3	Mawana	Hastinapur	Jhal Ganeshpur, Saifpur Meewa Mammudpur Latiffpur, Makannagar Pali, Naglagusai, Rani nagla, Matora, Bastura Narang, Nagala Chand, Sikhera, Rathora Khurd, Jora Jalapur, Seena, Tajpura, More Khurd, Rampur Ghoria, Mohammadpur Sikhas, Nagli, Karimpur, Bhadrakali, Behsuma, Tarapur, Pandwan, Makhdoompur, Kunda Chetawala, Bamnoli Badahuakheri, Latifpur, Bheemkhund	Sugarcane, Wheat Rice, potato, Mustard, Chickpea, Urd, Moong	<ul style="list-style-type: none"> <li>• Late sowing of sugarcane</li> <li>• Low production of milk in Cow and Buffaloes</li> <li>• Deficiency of mineral elements and organic matter in soils</li> <li>• Attack of white grub in sugarcane</li> <li>• Reducing production area of pulses due to blue horse.</li> <li>• Red rot and grassy shoot in sugarcane</li> <li>• No use of Potash and micro elements in crops</li> <li>• Low production of</li> </ul>	<ul style="list-style-type: none"> <li>• Intercropping with sugarcane</li> <li>• Soil health management</li> <li>• Management of infertility and repeat heat in Cattle and Buffaloes</li> <li>• Weed management in Paddy and Wheat</li> <li>• Balance use of fertilizer</li> <li>• Crop residues management</li> <li>• Pest management in Paddy and Sugarcane</li> <li>• Disease management in vegetable crops.</li> </ul>

		Parikshitgarh	Geshupur, Bonda, Kalirampur, Neemka, Khajuri, Dhanpura, Jithola, Anwarpur, Kohla	Sugarcane, Wheat, Rice, potato, Mustard, Chickpea, Urd, Moong	<ul style="list-style-type: none"> <li>old orchards</li> <li>• Unorganized marketing system of agriculture produce</li> <li>• Long dry period and infertility in milch animals</li> </ul>	<ul style="list-style-type: none"> <li>• Promotion of Oilseed and Pulses crops.</li> <li>• Crop productivity enhancement in late sown wheat.</li> <li>• Nutritional management among farm women and children</li> </ul>
		Mawana Kala	Meewa, Assa, Matoura, Tatina, Niloha, Piona, Baizadka, Kunda, AkbarpurGhari, Bhaisa, Nidawali, Tigri, Geshupur, Sirjepur, Meerpur, AkbarpurShadat, Mubareekpur, NagalaAjedi, NagalaHareur, Phalawada, ChotaMawana,	Sugarcane, Wheat, Rice, potato, Mustard, Chickpea, Urd, Moong	<ul style="list-style-type: none"> <li>• Weed infestation in wheat.</li> <li>• Depletion of ground water</li> <li>• Insect attack in vegetables</li> <li>• Late sowing of sugarcane</li> <li>• Low production of milk in Cow and Buffaloes</li> <li>• Deficiency of miner elements and organic matter in soils</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction of HYV/Hybrids in vegetables.</li> <li>• Promotion of green manuring.</li> <li>• Managements of Mango orchards.</li> <li>• Intercropping with sugarcane</li> <li>• Soil health management</li> </ul>
		Machara	MaukhasHasanpur, Kaili Rampur, Dabthala, Behlolpur, Shahjahanpur,	Crops, Vegetables, Bee keeping	<ul style="list-style-type: none"> <li>• Attack of white grub in sugarcane</li> <li>• Reducing production area of pulses due to blue horse.</li> <li>• Red rot and grassy shoot in sugarcane</li> <li>• No use of Potash and micro elements in crops</li> <li>• Low production of old orchards</li> <li>• Unorganized marketing system of agriculture produce</li> <li>• Long dry period and infertility in milch animals</li> <li>• Weed infestation in wheat.</li> <li>• Depletion of ground water</li> </ul>	<ul style="list-style-type: none"> <li>• Management of infertility and repeat heat in Cattle and Buffaloes</li> <li>• Weed management in Paddy and Wheat</li> <li>• Balance use of fertilizer</li> <li>• Crop residues management</li> <li>• Pest management in Paddy and Sugarcane</li> <li>• Disease management in vegetable crops.</li> <li>• Promotion of Oilseed and Pulses crops.</li> <li>• Crop productivity enhancement in late sown wheat.</li> <li>• Nutritional management among farm women and children</li> </ul>

## Priority Thrust Areas

S N	Crop/Enterprise	Thrust area
1	Doubling farmers income	Intercropping with winter planting sugarcane.
2	Mango orchards	Pruning, Training and rejuvenation of orchards.
3	Pulses	Promotions of pulses as intercrop with sugarcane and integrated diseases management.
4	Flower production	Promotion of floriculture.
5	Wheat, Paddy, Sugarcane	Improving soil health through balance fertilization and green manuring.
6	Cattle and Buffaloes	Controlling anestrous and repeat breeding in cattle and buffaloes, low milk production due to imbalance feeding in Milch animals.
7	Vegetable Crop	Enhancement of production potential in vegetable and IPM in vegetable.
8	Kitchen Gardening	Malnutrition among rural masses specially belonging to lower strata of the society.
9	Soil Health Management	Soil testing based fertilizer application and crop residue management
10	Resource Conservation	Judicious use and saving of water in agriculture

## 2.9 Intervention/ Programmes for the doubling the farmers income – during 2019

Before Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent Yield(q/ha)	Cost of cultivation(Rs/ha)*	Gross Cost (Rs/ha)	Net income(Rs/ha)	Increase in net income (%)
Sugarcane as Sole crop	815.0	-	-	86500.00	256725.00	170225.00	-

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \* Sale price Rs.315/-

After Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation(Rs/ha)*	Gross Cost (Rs/ha)	Net income(Rs/ha)	Increase in net income (%)
Intercropping (Garden Pea with October sown sugarcane 1:1)	815.0	93.15	1406.42	118100.00	443022.30	324922.30	90.87

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \* Sale price Rs. 2000/-

Before Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation(Rs/ha)*	Gross Cost (Rs/ha)	Net income(Rs/ha)	Increase in net income (%)
Sugarcane as Sole crop	835.0	-	-	86500.00	263025.00	176525.00	-

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \* Sale price Rs. 315/-

After Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation(Rs/ha)*	Gross Cost (Rs/ha)	Net income(Rs/ha)	Increase in net income (%)
Intercropping (Garlic with October sown sugarcane 1:2)	835.0	131.53	1670.11	155000.00	526084.65	371084.65	110.38

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \* Sale price Rs. 2000/-

Before Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation(Rs/ha)*	Gross Cost (Rs/ha)	Net income(Rs/ha)	Increase in net income (%)
Sugarcane as Sole crop	835.0	-	-	86500.00	263025.00	176525.00	-

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \* Sale price Rs. 315/-

After Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation(Rs/ha)*	Gross Cost (Rs/ha)	Net income(Rs/ha)	Increase in net income (%)
Intercropping (Potato with October sown sugarcane1:2)	835.0	251.70	1474.23	172100.00	464382.45	292282.45	65.57

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \* Sale price Rs. 800/-

Before Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation(Rs/ha)*	Gross Cost (Rs/ha)	Net income(Rs/ha)	Increase in net income (%)
Tomato fresh sale	250	-	-	68200.00	150000	81800	-

Tomato sale price Rs.6/-kg

After Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of Preparation (Rs/ha)*	Gross Return (Rs/ha)	Net income (Rs/ha)	Increase in net income (%)
Value addition of Tomato-Tomato Ketchup	250	12500 Kg	-	224450	875000	650550	695.29

Tomato Ketchup Sale price Rs.70/- Making Cost- Rs. 17.95/kg



<b>Before Interventions</b>	<b>Main crop Yield(q/ha)</b>	<b>Inter crop Yield(q/ha)</b>	<b>Equivalent yield(q/ha)</b>	<b>Cost of cultivation(Rs/ha)*</b>	<b>Gross Cost (Rs/ha)</b>	<b>Net income(Rs/ha)</b>	<b>B.C: Ratio</b>
Tomato fresh sale	250	-	-	68200.00	150000	81800	1:2.1

Tomato sale price Rs.6/-kg

<b>After Interventions</b>	<b>Main crop Yield(q/ha)</b>	<b>Inter crop Yield(q/ha)</b>	<b>Equivalent yield(q/ha)</b>	<b>Cost of cultivation(Rs/ha)*</b>	<b>Gross Cost (Rs/ha)</b>	<b>Net income(Rs/ha)</b>	<b>B.C: Ratio</b>
Value addition of Tomato-Tomato Puree	250	12500 Kg	-	318200.00	1250000	931800	1:3.9

Tomato Ketchup Sale price Rs.100/- Making Cost- Rs. 16 /kg

### 3. TECHNICAL ACHIEVEMENTS

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

OFT (Technology Assessment and Refinement)				FLD (Oilseeds, Pulses, Cotton, Other Crops/Enterprises)			
1				2			
Number of OFTs		Total no. of Trials		Area in ha		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
12	12	77	42	-	73.92	100	304

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	100	92	2000	1820	500	861	5000	11596
Rural youth		09		90				
Extn. Functionaries		21		316				
		122		2226				

Seed Production (Qtl.)			Planting material (Nos.)		
5			6		
Target	Achievement	Distributed to no. of farmers	Target	Achievement	Distributed to no. of farmers
200	240	-	20000	26500	-

Soil/plant/water Analysis		
5		
Target	Achievement	No. of farmers covered
1200	1231	3971

## I. TECHNOLOGY ASSESSMENT

### Summary of technologies assessed under various crops by KVKs

Thematic areas	Crop	Name of the technology assessed	No. of trials	No. of farmers
Integrated Crop Management	Urd	Assessment of intercropping Sugarcane in Urd.	06	03
	Mustard	Assessment of intercropping Sugarcane in Mustard.	06	03
Integrated Nutrient Management	Wheat	Assessment of fertilizer dose in Wheat.	06	03
	Paddy	Assessment of fertilizer dose in Paddy.	06	03
Varietal Evaluation	Tomato	Assessment of Hybrid varieties of Tomato.	09	03
	Mango + Turmeric	Intercropping of turmeric production with Mango orchard.	09	03
Integrated Pest Management	Paddy	Assessment of fungicides to control sheath blight.	06	03
	Black Gram	Assessment of insecticides to control white fly in Black Gram.	06	03
Small Scale Income Generation Enterprises & Nutritional Management	Pulses	Value addition of pulse and vegetables – Preparation of badi	10	05
Drudgery Reduction	Milching animals	Assessment the effectiveness of revolving stool to reduce drudgery while milching.	05	05
Resource Conservation Technology	Sugarcane	Planting of Sugarcane by Trench method	04	04
	Wheat	Sowing of wheat after incorporation of crop residue	04	04
<b>Total</b>			<b>77</b>	<b>42</b>

## I.C. TECHNOLOGY ASSESSMENT IN DETAIL

### *INTEGRATED CROP MANAGEMENT* **On Farm Trial –1**

THEMATIC AREA: ICM

**Problem definition: Low income**

**Technology Assessed:** Assessment of profitability under intercropping of mustard in Sugarcane.

To assess the performance of intercropping of Mustard in Sugarcane. An On Farm Trial was conducted with two treatment as sugarcane as a sole crop and mustard as intercrop with sugarcane. By this time mustard has been harvested while sugarcane crop still is in the field. Mustard gave 12.75 qtls production in the system with Rs.50066.00 net profit/ha.

**Table:** Performance of **Intercropping Sugarcane in Mustard**

Technology Option	No. of trials	Yield (q/ha)	Increase in yield (%)	Cost of cultivation (Rs)	Gross income (Rs)	Net returns (Rs)	BC ratio (Rs)
T <sub>1</sub> : Farmer Practice (Single crop, Co-238 )	06	Result awaited					
T <sub>2</sub> : Sugarcane( Autumn) + Mustard (RH-749)		12.75	-	3484.00	53550.00	50066	-

Sale rate of mustard : Rs. 4200/Qt.

**Feed Back:** It is expected that the production of mustard will be the extra without any adverse effect on productivity of sugarcane.



**Farm Trial –2**  
THEMATIC AREA: ICM

**Problem definition:** Low yield of Sugarcane as single crop.

**Technology Assessed:** Assessment of profitability under intercropping of Urd in Sugarcane

**Table:** Performance of **Intercropping Sugarcane in Urd**

Technology Option	No. of trials	Yield (q/ha)	Increase in yield (%)	Cost of cultivation (Rs)	Gross income (Rs)	Net returns (Rs)	BC ratio (Rs)
T <sub>1</sub> : Farmer Practice (Single crop, Co-238 )	06	Result awaited					
T <sub>2</sub> : Sugarcane( Autumn) + Urd (PU-31)		14.35	-	30294.00	80360.00	50066	1:2.65

Sale rate 5600 @/Q.





## On Farm Trial –3

### THEMATIC AREA: INTEGRATED NUTRIENT MANAGEMENT

**Problem definition:** Imbalanced use of nutrients in Wheat.

**Technology assessed:** Assessment of fertilizer dose in Wheat.

KVK Hastinapur (Meerut) has conducted an “On Farm Trial” entitled Assessment of fertilizer dose in Wheat(DBW-71) on the basis of soil testing compared with farmers practice. An appraisal of data collected, balance use of fertilizer i.e. N:P:K:Zn:S:Fe @ 120,60,60:30:40:25 increased yield upto 51.55 qt./ha. As compared with farmers practice produces 45.15 qt/ha.

**Table:** Assessment of fertilizer dose in Wheat

Technology Option	No. of trials	Yield q./ha	% age increased	Cost of Cultivation (Rs./ha)	Gross Return (Rs)	Net Return (Rs)	B:C Ratio
T <sub>1</sub> - Imbalance use of fertilizers (Farmer practices) N:P: 150:60	06	45.15	-	45035	78561	33526	1.74
T <sub>2</sub> -N:P:K:Zn:S:Fe@ 120,60,60:30:40:25		51.55	14.1	48519	89697	41091	1.84

Variety DBW-71 Sale price Wheat @ Rs. 1740 /qt

S.No.	Name of Farmer	pH	EC	OC(%)	P (Kg/ha)	K (Kg/ha)	Zn (Kg./ha)	S (Kg./ha)	Fe (Kg./ha)
1	Sh. Amrish	7.45	0.26	0.55	22.0	110	0.42	4.9	2.5
2	Sh Mangal	7.55	0.20	0.52	19.0	125	0.40	5.2	2.9
3	Sh Rishi Pal	7.40	0.22	0.47	20.0	119	0.44	6.1	2.2

**Feed back:** *It is difficult for farmer of interior location to reach the soil testing laboratory.*

## On Farm Trial –4

### THEMATIC AREA: INTEGRATED NUTRIENT MANAGEMENT

**Problem definition:** Imbalanced use of fertilizer Paddy .

**Technology assessed:** Assessment of fertilizer dose in Paddy.

KVK Hastinapur (Meerut) has conducted an “On Farm Trial” entitled Assessment of fertilizer dose in Paddy (Pusa-1121) on the basis of soil testing compared with farmers practice. An appraisal of data collected, balance use of fertilizer i.e. N:P:K:Zn:S:Fe @ 80:60:60:25:30:25 increased yield upto 43.25 qt./ha. As compared with farmers practice produces 40.10 qt/ha.

**Table: Effect of balanced use of fertilizer**

Technology Option	No. of trials	Yield q./ha	% age increased	Cost of Cultivation (Rs.)	Gross Return (Rs)	Net Return (Rs)	B:C Ratio
T <sub>1</sub> - Imbalance use of fertilizers (Farmer practices) N:P: 100:60	06	40.10	-	49271	92230	42959	1.87
T <sub>2</sub> - Soil testing based N:P:K:Zn:S:Fe@ 80:60:60:25:30:25		43.25	7.85	50406	99475	83669	1.97

Variety- Pusa-1121, Sale price- Paddy@ Rs. 2300/Qt.

S.No.	Name of Farmer	pH	EC	OC(%)	P (Kg/ha)	K (Kg/ha)	Zn (Kg./ha)	S (Kg./ha)	Fe (Kg./ha)
1	Sh Amit Kumar	7.55	0.24	0.39	20.0	145	0.42	6.5	2.9
2	Sh Surjeet Singh	7.65	0.22	0.35	21.0	150	0.44	5.2	2.5
3	Sh Harjeet Singh	7.55	0.20	0.37	24.0	153	0.43	6.3	3.1

**Feed back:** *It is difficult for farmer of interior location to reach the soil testing laboratory.*

## On Farm Trial –5

### THEMATIC AREA: Varietal Evaluation

**Problem definition:** Low yield of tomato due to use of traditional varieties.

**Technology Assessed:** Assessment of Hybrid varieties of Tomato.

To assess the performance of hybrid varieties of tomato On Farm Trial was conducted to with 03 varieties of tomato under field condition. Data collected revealed that Pusa Hybrid- 2 was adjudged as better performer with 375.50 qt. production and Rs. 152500 net profit per ha. While other varieties under trial Raja and Pusa hybrid – 1 produced 305.0 and 362.50 qt. per ha., respectively.

**Table:** Performance of different Hybrid varieties of Tomato.

Technology Option	No. of trials	Yield (q/ha)	Increase in yield (%)	Cost of cultivation (Rs)	Gross income (Rs)	Net returns (Rs)	BC ratio (Rs)
T <sub>1</sub> : Farmer Practice (Variety - Raja)	09	305.00	-	67500	183000	115500	2.71
T <sub>2</sub> : Variety – Tomato Pusa Hybrid - 1		362.50	18.68	72500	217500	145000	3.00
T <sub>3</sub> : Variety – Tomato Pusa Hybrid - 2		375.50	23.11	72500	225000	152500	3.10

Sale price of tomato: Rs. 06/ Kg.

**Feed Back:** *Fruits of variety Tomato Pusa Hybrid-2 is medium in size, round, deep red after ripening with good keeping quality. It is suitable for processing and distance market.*





## On Farm Trial –6

### THEMATIC AREA: Farm Management

**Problem definition:** Low yield of Mango orchard.

**Technology Assessed:** Intercropping of turmeric production with Mango orchard.

KVK Hastinapur in Meerut district conducted on-farm trial to assess or refined (as the case may be) effect of intercropping on net return in Mango orchard. The intercrop system of under planting of Mango at 12 meter planting distance and with growing turmeric between space of Mango area had realized a net return of Rs. 375200.00 as compare to the recommended practice with net return of Rs. 95500.00

**Table:** Production performance and economic parameters of different varieties of Turmeric

Technology Option	No. of trials	Yield Eqi. (q./ha)	Cost of Cultivation	Gross Return (Rs)	Net Returns (Rs./ha)	B:C Ratio
T <sub>1</sub> -Use of Mango orchard ,Var. Dushahri (Farmer Practice)	09	68.5	41500.00	137000.00	95500.00	1:3.30
T <sub>2</sub> - Use of Mango + Turmeric (Pant Pritabh)		158.5	69500.00	375200.00	305700.00	1:5.41
T <sub>3</sub> - Use of Mango + Turmeric (Rajendra Sonia)		132.5	69500.00	335750.00	266250.00	1:4.83

**Sale price of mango: Rs. 20/Kg.**

**Feed Back:** To get more /additional income farmers are appreciating cultivating turmeric with mango as intercropping. The mango orchard was also found free from termite attack in the system and farmers got extra income without any adverse effect on mango crop..



## On Farm Trial –7

### THEMATIC AREA: INTEGRATED PEST MANAGEMENT

**Problem definition:** High infestation of white fly resulting mosaic disease in Black Gram(PU-31).

**Technology assessed:** Assessment of insecticides to control white fly in Black Gram.

KVK Hastinapur (Meerut) has conducted “On Farm Trial” entitled Assessment of insecticides to control white fly in Black Gram(PU-31) by comparing newer insecticide Spiromecifene @ 200 m.l./ acre with Monocrotophos @ 1000 m.l./ha 15 days interval as farmer practice along with Buprofezin @ 500 ml/ acre. at 15 days interval up to flowering stage. An appraisal of data collected, Difenturon has quite edge over the chemical insecticides in terms of insect incidence, yield potential and economic returns.

**Table: Effectiveness, yield and economic parameters of different treatments for the management of white fly in Black Gram**

Technology Option	No. of trials	Insect incidence (%)	Yield q./ha	% age increased	Cost of Cultivation	Gross Return (Rs)	Net Return (Rs)	B:C Ratio
T <sub>1</sub> - Spraying of Monocrotophos @ 1000 m.l./ha 15 days interval	06	12.5	8.50	-	36172	47600	11428	1:1.32
T <sub>2</sub> - Spraying of Spiromecifene @ 200 m.l./ acre at 15 days interval		3.95	11.20	31.76	37300	62720	25420	1:1.68
T <sub>3</sub> - Spraying of Buprofezin @ 500 ml/ acre. at 15 days interval		1.80	13.10	54.11	36900	73360	36400	1:1.98

Sale price of black gram: Rs 5600/qt.

**Farmers Feedback:** *Buprofezin is easily available in local markets. It is highly effective to manage white fly in Black Gram*





## On Farm Trial –8

### THEMATIC AREA: INTEGRATED DISEASES MANAGEMENT

**Problem definition:** Low yield due to severe infestation of Sheath blight in Paddy (Pusa-1121).

**Technology assessed:** Assessment of fungicide to control sheath blight in Paddy.

KVK Hastinapur (Meerut) has conducted “On Farm Trial” entitled Assessment of fungicide to control sheath blight in Paddy(Pusa-1121) by comparing fungicides Pencycuron @ 800 ml/ha and Azostrobin @ 800 ml/ha 15 days interval with Carbendazim @ 1000 g/ha as farmer practice, two sprays at 15 days interval. An appraisal of data collected, Propeconazole has quite edge over other fungicide the being used as farmer’s practice in terms of insect incidence, yield potential and economic returns.

**Table: Effectiveness, yield and economic parameters of different treatments for the management of Sheath blight in Paddy**

Technology Option	No. of trials	Insect incidence (%)	Yield q./ha	% age increased	Cost of Cultivation	Gross Return (Rs)	Net Return (Rs)	B:C Ratio
T <sub>1</sub> - Two Spray of Carbendazim @ 1000 g/ha 15 days interval	06	13.60	39.0	-	37400	93600	56200	1:2.50
T <sub>2</sub> - Two Spray of Pencycuron @ 800 ml/ha 15 days interval		8.50	45.15	15.76	37720	108360	70640	1:2.87
T <sub>3</sub> - Two Spray of Azostrobin @ 800 ml/ha 15 days interval		7.60	46.20	18.46	39300	110880	71580	1:2.80

**Farmers Feedback:** Azostrobin is more effective but expensive in respect of net profit application of Pencycuron is cheaper and more profitable however both chemeical are significantly effective.



## On Farm Trial –9

### THEMATIC AREA: Drudgery Reduction

**Problem definition:** Reduction of work efficiency and drudgery

**Technology assessed:** To assess the effectiveness of revolving stool to reduce drudgery while milching.

An on farm trial has been conducted to reduced drudgery reduced during milking of animal by sitting over revolving stool in comparison with traditional sitting position, on the basis of recorded data the technology was found highly acceptable and significantly reduced physical and bio mechanical stress and improved work output of the milking person.

Table –

Incidence of muscular/skeletal problem during milking of animal with existing (squat position) and improved technology sitting over revolving stool										
1. Physical Stress										
Body Parts	Existing (squat position)					improved technology (sitting over revolving stool)				
	Very sever pain	Sever pain	Mode ratre pain	Mild Pain	Low/No pain	Vsever pain	Sever pain	Mode ratre pain	Mild Pain	Low/No pain
Neck Pain			4	1				1	-	4
Shoulder Pain			3	2				-	2	3
Back Pain	1	3	1	-				-	4	1
Thumb Pain	-	-	1	4				-	2	3

Bio mechanical

Opinion	Existing (Respondent 5)		Improved(Respondent 5)	
	Yes	No	Yes	No
Maintain comfortable body posture	-	5	5	-
Twisting of trunk easily during activity	-	5	5	-
Easy to synchronize with movement of animal	1	4	4	1

## 2. Work Output

Opinion	Existing (Respondent 5)		Improved(Respondent 5)	
	Yes	No	Yes	No
Tool is effective as per time cost	NA	NA	4	1
Tool is effective in improving the production efficiency	NA	NA	1	4

## 3. Tool factor

Opinion	Existing (Respondent 5)		Improved(Respondent 5)	
	Yes	No	Yes	No
The milking activity is light enough while using the revolving stool	NA	NA	5	-
Height of the stool needs to be adjusted	NA	NA	3	2

**Feed back:** *Recommended technology of using revolving stool while milching is highly appreciated by farm women to reduce their drudgery.*





## On Farm Trial –10

### THEMATIC AREA: HOUSE HOLD FOOD SECURITY

**Problem definition:** Nutrient inadequacy

**Technology Assessed:** Assessment of role of SHG for income generation through preparation from different pulses and vegetable Badi.

Preparation of Badi were assessed at different locations in comparison to often in practice. Badi with pulses & vegetable + spices was found better in respect of local practice. Badi with pulses & vegetable is more nutritional property, tasty, more self life and also add additional income .

**Table: Performance**

Technology Option	No. of trials	Yield (kg)	Increase in yield (%)	Performance indicators		Cost of cultivation (Rs)	Gross return (Rs)	Net Profit (Rs)	B:C Ratio
				Indicator	Performance				
T <sub>1</sub> - Farmer practice – Preparation of Badi from few pulses	10	1.5	--	Nutritive value	Rich in protein & minerals Better keeping quality Income Generating	120	150	30	1:1.25
				Self life					
T <sub>2</sub> - Preparation of Badi from different type of pulses and vegetables.				Sale opportunity			210	390	180

**FEED BACK:** Remarkable acceptance of Badi due to readily availability, more nutritional property and help in income generation.



## On Farm Trial –11 Resource Conservation

### THEMATIC AREA: Planting of Sugarcane by Trench method

**Problem diagnosed** : Low yield of Sugarcane

**Technology Assessed:** Trench Planter was tested in field to enhance the productivity of Sugarcane

To assess the yield performance of Sugarcane Trench planter yield of Trench method of planting method gave 976 Q/ha, Whereas the ridge method of planting technique yield was recorded 825 q/ha. The net return was enhanced from 163825 to 205440 Rs. And B:C ratio was also recorded which was increased 1:2.7 to 1:3.01.

**Table:** Performance of different method of planting of Sugarcane.

Technology Option	No. of trials	Yield (q/ha)	Increase in yield (%)	Cost of cultivation (Rs)	Gross income (Rs)	Net returns (Rs)	BC ratio (Rs)
T <sub>1</sub> : Farmer practice – Planting of Sugarcane by raiser	04	825	-	96156	259825	163669	2.7
T <sub>2</sub> : Trench method		976	18.30	102000	307440	205440	3.01

Sale price of Sugarcane: Rs 315/qt.

**Feed Back:** *The method of Trench* planting was found better and given 50 thousand additional income/ ha

## On Farm Trial –12

### THEMATIC AREA: Sowing of wheat after incorporation of crop residue

**Problem diagnosed :** Low yield of Wheat

**Technology Assessed:** The crop residue of paddy incorporated in the field to enhance the productivity of wheat

To assess the performance of sowing of wheat after incorporation of crop residue by mulcher . On Farm Trial was conducted with 04 treatments under field condition. Data was collected 4.4 % more yields was obtained whereas about 4000 extra income was obtained.

**Table: Sowing of wheat after incorporation of crop residue**

Technology Option	No. of trials	Yield (q/ha)	Increase in yield (%)	Cost of cultivation (Rs)	Gross income (Rs)	Net returns (Rs)	BC ratio (Rs)
T <sub>1</sub> : Farmer practice – Sowing of without incorporation of crop residue	04	47.7	-	24500	87768	63268	3.58
T <sub>2</sub> : Sowing of wheat after incorporation of crop residue by mulcher		49.8	4.4	25400	91632	65932	3.61

**Feed Back:** In treatment no, T<sub>2</sub> recorded maximum yield as 49.8 q/ha which is more than 4.4% as T<sub>1</sub> therefore farmers are happy to incorporation of crop residue. They are ready to repeat this process in next year also.





## II. FRONTLINE DEMONSTRATION

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

SN	Crop/ Enterprise	Thematic Area	Technology demonstrated	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
					No. of villages	No. of farmers	Area (ha)
1	Urd	Varietal evaluation	Promotion of improved variety PU-31(NFSM)	Demonstration, Training and Advisory Services	10	25	10.0
2	Urd	Varietal evaluation	Promotion of improved variety PU-31(NFSM)		15	30	12.0
3	Lentil	Varietal evaluation	Promotion of improved variety PL-8(NFSM)		9	21	14.0
4	Mustard	Varietal evaluation	Introduction of high yielding RH-749 (NFSM)		6	11	8.0
5		INM	Use of Sulphur @ 40 Kg/ha.		12	130	48.0
6	Paddy	INM	Application of Ferrous sulphate in Paddy @ 25 kg /ha		04	19	9.00
7	Wheat	Varietal evaluation	Introduction of high yielding timely sown variety HD-2967		03	16	7.0
8	Marigold	Varietals Evaluation	Popularization of improved variety Pusa Narangi		02	16	3.40
9	Potato	Intercropping	Inter cropping of Potato variety Kufri Chipsona-3 (F1) with autumn planting of Sugarcane.		02	14	0.40
10	Garlic	Intercropping	Inter cropping of Potato variety G-282 with autumn planting of Sugarcane.		04	24	12.0
11	Garden Pea	Intercropping	Inter cropping of Potato variety PS-10 with autumn planting of Sugarcane.		02	23	6.4
12	Parwal	IPM	Management of fruit fly in Parwal		02	12	5.4
13	Paddy	IPM	Management of Srem borer of paddy through chlorantriliprole 0.4 %		04	20	10.0

14	Sugarcane	IDM	Management of Pokkabowing diseases		04	24	12.0
15	Tomato	IPM	Management of fruit borer by spinosd 45 %		05	25	12.0
16	Tomato	Value addition	Preparation of Tomato Ketchup & Puri		04	15	-
17	Kitchen garden	House hold food security	Demonstration of well planned Kitchen Garden (100 m <sup>2</sup> )		05	15	0.15
18	Ag. Engg.	Resource Conservation	Use of Power sprayer for spraying of insecticides in Paddy crop		04	10	4.0

#### b. Details of FLDs implemented during year 2019

SN	Crop/ Enterprise	Thematic area	Technology Demonstrated	Season / year	Area (ha)	No. of farmers/ demonstration		
						SC/ST	Others	Total
<b>Pulses</b>								
1	Urd	Varietal evaluation	Promotion of improved variety PU-31(NFSM)	Kharif 2019	10.0	06	19	25
2	Lentil	Varietal evaluation	Promotion of improved variety PL-8(NFSM)	Rabi 2018-19	10.0	05	20	25
3	Lentil	Varietal evaluation	Promotion of improved variety PL-8(NFSM)	Rabi 2019-20	10.0	05	20	25
<b>Oilseeds</b>								
4	Mustard	Varietal evaluation	Introduction of high yielding RH-749 (NFSM)	Rabi 2018-19	10.0	03	22	25
5		INM	Use of Sulphur @ 40 Kg/ha.	Rabi 2018-19	4.0	03	07	10
<b>Other crop</b>								
6	Paddy	INM	Application of Ferrous sulphate in Paddy @ 25 kg /ha	Kharif 2019	4.0	01	09	10
7	Wheat	Varietal evaluation	Introduction of high yielding timely sown variety HD-2967 (Post office)	Rabi 2018-19	1.20	-	03	03
8	Marigold	Varietals Evaluation	Popularization of improved variety Pusa Narangi	Rabi- 2018-19	1.00	02	08	10
9	Garlic	Varietals Evaluation	Inter cropping of Garlic variety G-282 with autumn planting of Sugarcane.	Rabi- 2019	0.40	04	01	05

10	Garden Pea	Varietals Evaluation	Inter cropping of Potato variety PS-10 with autumn planting of Sugarcane.	Rabi 2019	0.40	04	01	05
11	Potato	Varietals Evaluation	Inter cropping of Potato variety Kufri Chipsona-1 with autumn planting of Sugarcane.	Rabi 2019	0.40	03	02	05
12	Marigold	Varietals Evaluation	Popularization of improved variety Pusa Narangi	Rabi- 2019-20	1.00	02	08	10
13	Potato	Varietals Evaluation	Popularization of improved variety Kufri Mohan and Kufri Surya	Rabi 2019-20	0.4	05	-	05
14	Potato	Varietals Evaluation	Seed production of improved variety Kufri Mohan under insect free net house	Rabi 2019-20	0.02	01	-	01
15	Potato	Varietals Evaluation	Inter cropping of Potato variety Kufri Chipsona-1 with autumn planting of Sugarcane.	Rabi- 2019-20	1.6	-	45	45
16	Garden Pea	Varietals Evaluation	Inter cropping of Potato variety PS-10 with autumn planting of Sugarcane.	Rabi- 2019-20	0.40	-	05	05
17	Paddy	IPM	Management of Srem borer of paddy through chlorantriliprole 0.4 %	Kharif 2019	2.0	2	8	10
18	Sugarcane	IDM	Management of Pokkabowing diseases	Rabi 2018-19	2.0	3	7	10
19	Parwal	IPM	Management of fruit fly in Parwal	Kharif 2019	4.0	2	8	10
20	Tomato	IPM	Management of fruit borer by spinosad 45 %	Rabi 2019-20	1.0	-	5	5
21	Tomato	Value addition	Preparation of Tomato Ketchup	Kharif 2019	0	5	5	10
22	Tomato	Value addition	Preparation of Tomato Puree	Kharif 2019	0	5	5	10
23	Kitchen garden	House hold food security	Demonstration of well planned Kitchen Garden (100 m <sup>2</sup> )	Rabi 2018-19	0.1	3	7	10
24	Paddy	Resource Conservation	Use of Power sprayer for spraying of insecticides in Paddy crop	Kharif- 2018	4.0	3	7	10
25	Wheat	Resource Conservation	Sowing of wheat by Happy seeder	Rabi 2018-19	<b>6.0</b>	<b>5</b>	<b>10</b>	<b>15</b>
			<b>Total</b>		<b>73.92</b>			<b>304</b>

## Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P	K					
<b>Pulses</b>											
Urd (NFSM)	Kharif 2019	Irrigated	Sandy loam	174	35	211	Sugarcane	20-07-19 to 06-08-2019	16-10-19 to 09-11-19	74.1	14
Lentil (NFSM)	Rabi 2018-19	Irrigated	Sandy loam	187	24	217	Paddy, Jowar	15-11-18 to 13-12-18	20.03.2019 to 15.04.2019	21.2	6
Lentil (NFSM)	Rabi 2019-20	Irrigated	Sandy loam	187	24	217	Paddy, Jowar	15-11-19 to 13-12-19	-	21.2	6
<b>Oilseeds</b>											
Mustard (NFSM)	Rabi 2018-19	Irrigated	Sandy loam	129	29	257	Jowar	11-10-18	22-03-19 to 30-03-19	16.8	3
Mustard	Rabi 2018-19	Irrigated	Sandy loam	165	28	228	Jowar	10-30 Oct. 2018	22Feb.- 25Mar. 2019	16.8	3
<b>Cereal</b>											
Paddy (Pusa-1)	Khairf 2019	Irrigated	Sandy Loam	178	32	227	Sorghum	21-07-19	25-10-19 to 10-11-19	401.7	29
Wheat (HD-2967)	Rabi 2018-19	Irrigated	Sandy loam	208	29	218	Sorghum (Fodder)	22 Nov., 2018	25-4-19	21	6

**Commercial crops**

**Horticultural crops**

Garlic	Rabi- 2018-19	Irrigated	Sandy Loam	173	28	227	Dhaincha	23.10.2018	12.03.2019	183.7	21
Garden Pea	Rabi 2018-19	Irrigated	Sandy Loam	246	35	228	Paddy	16.10.2018	20.02.2019	51.1	11
Potato	Rabi 2018-19	Irrigated	Sandy Loam	184	23	190	Brinjal	06.10.2018	28.02.2019	45.1	11
Marigold	Rabi- 2018-19	Irrigated	Sandy Loam	158	19	188	Brinjal	13.10.2018	07.03.2019	42.6	14
Marigold	Rabi- 2019-20	Irrigated	Sandy Loam	148	18	187	Fodder	10.10.2019	-	-	-
Potato	Rabi 2019-20	Irrigated	Sandy Loam	151	19	186	Okra	14.10.2019			
Potato	Rabi 2019-20	Irrigated	Sandy Loam	157	21	192	Okra	12.10.2019			
Potato	Rabi- 2019-20	Irrigated	Sandy Loam	155	23	185	Okra	20.10.2019			
Garden Pea	Rabi- 2019-20	Irrigated	Sandy Loam	156	22	188	Paddy	17.10.2019			

**Plant Protection**

Paddy	Kharif 2019	Irrigated	Sandy Loam	174	27	221	Potato	17.03.2019	08.07.2019	173.7	19
Sugarcane	Rabi 2018-19	Irrigated	Sandy Loam	209	34	229	Jowar	22.09.2019	28.11.2019	27.2	11
Parwal	Kharif 2019	Irrigated	Sandy Loam	239	25	120	Paddy	12.03.2019	18.08.2019	21.2	4
Tomato	Rabi 2019-20	Irrigated	Sandy Loam	209	34	229	Jowar	22.10.2019	Continuous	27.2	11

**Kitchen gardening**

Kitchen garden	Rabi 2018-19	Irrigated	Sandy Loam	165	28	228	NA	26.10.2018	28 .10.2018 to Feb. 2019	355.9	27
----------------	--------------	-----------	------------	-----	----	-----	----	------------	--------------------------	-------	----

**Agri. Engg**

Paddy	Kharif 2019	Irrigated	Sandy Loam	186	32	227	NA	05.07.19	23.10.19	411.2	29
Wheat	Rabi 2018-19	Irrigated	Sandy Loam	176	29	224	NA	25.10.2018	27.04.19	42.5	11

### Technical Feedback on the demonstrated technologies

SN	Crop/ Animal	Feed Back
1	Urd (NFSM)	Variety PU-31 is susceptible to mosaic disease. Production of PU-31 variety is 24.85% higher over check var.
2	Lentil (NFSM)	Wilting disease appeared in some fields just after irrigation and highly damaged by blue bulls at the stage of pod formation. Production of PL-8 variety is 11.26% higher over check var.
3	Mustard	An application of sulphur 40 kg/ha. Resulted 9.7 % more yield along with little bit higher oil content in the mustard grains in the same variety RH-749
4	Paddy	An application of Feerous Sulphate @25 kg/ha. Resulted 5.81 % more yield and good market value.
5	Wheat	HD- 2967 varieties observed under demonstration over locally grown variety. Rust disease did not appear in the variety while Aphid attacks at milking stage.
6	Marigold	Near about three times more yield was adjudged through Pusa Narangi hybrid variety in comparison to local variety Jafri and market demand is higher due to attractive color, size, good keeping quality and compactness of flower.
7	Garlic	G – 282 variety is particularly recommended for intercropping with autumn sugarcane.
8	Garden Pea	Variety PS – 10 gave additional income and also causes nitrogen fixation in soil resulting less use of urea.
9	Potato	Early maturity & low starch value so it has a demand for chips industry.
10	Parwal	Use of bio agents as Installation of 05 traps /acre were proved very effected and feasible for the management of fruit fly in parwal and give 11.58 % increase in yield.
11	Paddy	Chlorantraniliprole was found very effective to control stem borer 12.85 % increased yield.
12	Sugarcane	An increase 12.85 % increase in yield of Sugarcane was recorded after application of spraying of blitox 50@ 3kg./ha to control pokkabowing.
13	Tomato	Value addition of Tomato through preparation of ketchup & Puri increased gradational income as compared to direct selling of Tomato in local market.
14	Kitchen Garden	Under the demonstration on household food security the respondents are getting fresh and potable green seasonal vegetables throughout the year. In addition to this, a handsome amount is being saved by using the home produced vegetables. Farm women were very much happy by getting plenty of vegetable and fruits.

15	Paddy	Power sprayer was demonstrated on farmers field in paddy crop for even spraying of insecticide/ pesticides for better control of insects and diseases
16	Wheat	Line sowing of wheat to increases the yield of wheat by seed drill.

### Farmers' reactions on specific technologies

S. No	Crop	Feed Back
1	Urd	Severe infestation of YVM.
2	Lentil	Production of demonstrated variety is significantly higher than their local variety.
3	Mustard	Mustard is persuading as a good oil seed crop & farmers are keen to incorporation as a rabi crop in existing sugarcane based cropping system. Easy availability and cheaper technology favors its adoption among farmers.
4	Mustard	Sulpher is easily available in local market and cheaper technology to increase oil content resulting higher income.
5	Paddy	Application of Ferrous Sulphate gave good results it reflects In productivity as well as checks in rice.
6	Paddy	Chlorantranilprole was found very effective to control stem borer and found very effective and economic to control stem borer in rice.
7	Wheat	Farmers found variety HD-2967 gives good yield in late sown condition and there is no rust disease found in the field.
8	Marigold	The yield performance of Pusa narangi was highly appreciated due to its standard size of flowers, attractive color and market value. Thereby the same is getting space among the farming community.
9	Potato	Due to medium and manageable size, softness, darkness in color and market price acceptance is better.
10	Garlic	It is evident that the intercropping of Garlic with autumn planted Sugarcane is more profitable as well as reduce incidence of insect in S.cane
11	Vegetable Pea	Sowing of garden pea with sugarcane decreased the gross cost of cultivation as use of urea is almost half.
12	Parwal	Application of traps is feasible for the management of fruit fly in parwal and easily available in the market.
13	Tomato	Its gives longer protection against white fly while chemical control causes resistance, proved expenses and needed repeatedly..
14	Sugarcane	Application of spraying of blitox 50 to control pokkabowing. resulting higher yield.
15	Tomato	Ketchup & Puree is easy to prepare and proved a viable technology to get additional income by selling it in nearby market and get better price.
16	Kitchen Garden	Farmers enjoyed the sufficient, chemical free, cheaper and quality green fresh vegetables for almost throughout the year.
17	Paddy	Farmer are using power sprayer for better control of insects. It also reduced the drudgery and improve the efficiency of the labour.

18	Wheat	By use of seed drill enhancement of yield and control of lodging. Therefore farmers are liking the seed drill.
----	-------	--

## Performance of Frontline demonstrations

### Pulse crops

Crop	Thematic Area	Technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)			Check	% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo					Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR
						High	Low	Average										
Urd (Kharif-2019)	Varietal evaluation	Popularization of improved variety	PU-31	25	10.0	11.65	9.80	10.72	8.65	23.93	36172	60032	32860	1.65	32363	48446	16077	1.49
Lentil (Rabi-2018-19)	Integrated Crop Management	Scientific Production of Lentil variety-PL-8	PL-8	25	10.0	15.45	12.60	14.02	12.6	11.26	40900	70100	29200	1.71	41300	63000	21700	1.53
Lentil (Rabi-2019-20)	Integrated Crop Management	Scientific Production of Lentil variety-PL-8	PL-8	25	10.0	14.35	12.15	13.25	11.35	16.74	38290	59293	21003	1.54	37425	50791	13266	1.35

\* Sale price – Urd @ 5600/qlt. Lentil @ 5000/qlt **CFLD Black Gram (Kharif-2019)**







CFLD (Mustard)-2018-19



CFLDs (Lentil)-2019-20



## Oilseed crops

Crop	Thematic Area	Technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Mustard (2018-19)	Varietal evaluation	Popularization of improved variety	RH-749	25	10.0	18.75	14.50	18.62	14.7	26.66	23245	78204	54959	3.36	22630	61740	39110	2.27
Mustard (2018-19)	INM	Use of Sulphur @ 40 Kg/ha.	RH-749	10	4.0	18.25	12.25	17.58	13.37	31.48	22032	73836	51804	3.35	21998	56154	34156	2.55

\* Sale price of Mustard: @ Rs 4200/ Qt.



CFLDs (Mustard)

## FLD on Other crops:

Crop	Thematic Area	Name of the technology	No. of Farmers	Area (ha)	Yield (q/ha)			% increase in Yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)				
					Demo		Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)	
					High	Low											Av.
Paddy (Pusa-1)	INM	Application of Ferrous sulphate in Paddy @ 25kg /ha	10	4.0	48.25	43.15	45.69	43.18	5.18	55573	105087	49514	1.89	54198	90678	36480	1.67
Wheat (PO)	Varietal Evaluation	Improved variety HD-2967	03	1.2	52.25	46.35	49.3	42.95	14.78	34345	85782	51437	2.50	36215	74733	38518	2.06
Mari gold	Varietal Evaluation	Popularization of improved variety Pusa Narangi	10	1.0	192.0	145.2	168.6	128.0	31.71	48500	202320	153820	4.17	41200	153600	112400	3.73

\* Sale price –Wheat@ Rs1740/qt, Paddy@ Rs. 2300/ Qt. , Marigold : @ Rs 1200/ctl ,



Crop	Thematic	Name of the technology	No. of Farmers	Area (ha)	Equivalent Yield (q/ha)			Economics of demo. Rs./ha					Economics of check (Rs./ha)			
					Main crop (Q/ha.)	Enter crop (Q/ha.)	Av. Yield (Q/ha.)	Gross Cost	Gross Return	Net Return	LER	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Garlic	ICM	Inter cropping of Garlic variety G-282 with autumn planting of Sugarcane.	05	0.4	835.0	131.53	1670.11	155000.0	526084.0	371084.0	1:3.39	2-00	86500-00	263025.0	176525.0	1:3.04
Garden Pea	ICM	Inter cropping of Garden pea variety PS-10 with autumn planting of Sugarcane.	05	0.4	815.0	93.15	1406.42	118100.00	443022.00	324922.00	1:3.75	1-72	86500-00	256725.0	170225.0	1:2.96
Potato	ICM	Inter cropping of Potato variety Kufri Chipsona-1 with autumn planting of Sugarcane.	05	0.4	835.0	251.7	1474.23	172100.00	464382.45	292282.45	1:2.69	1-76	86500-00	263025.0	176525.0	1:3.04
Marigold	VE	Popularization of improved variety Pusa Narangi	10	1.0	Result awaited											
Potato	VE	Popularization of improved variety Kufri Mohan and Kufri Surya	05	0.4	Result awaited											



Potato	VE	Seed production of improved variety Kufri Mohan under insect free net house	01	0.02	Result awaited
Potato	ICM	Inter cropping of Potato variety Chipsona-1 with autumn planting of Sugarcane.	45	1-6	Result awaited
Garden Pea	ICM	Inter cropping of Garden pea variety PS-10 with autumn planting of Sugarcane.	05	0.4	Result awaited



Sale price Potato @ 800, Garlic @ 2000, Garden Pea @ 1500

Category & Crop	Thematic Area	Name of the technology	No. of Farmers	Area (ha)	Yield (q/ha)				% Change in Yield	Economics of demo. Rs./ha)				Economics of check (Rs./ha)			
					Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
					High	Low	Av.										
Paddy /Pusa-1121	IPM	Management of Srem borer of paddy through chlorantriliprole 0.4 %	10	2.0	50.3	40.0	45.15	39.2	15.18	37400	108360	70960	1:2.90	36600	94080	57480	1:2.57
Sugarca ne/ Co-238	IDM	Management of Pokkabowing by using of CoC@3g/lit	10	2.0	980	837	908.50	788	15.29	98980	286178	187198	1:2.89	92260	248220	155960	1:2.69
Parwal/ Sel.-16	IPM	Management of fruit fly in Parwalby using Cue-lure traps @5 traps/acre	10	4.0	122	98	110.0	95	15.79	43280	220000	176720	1:5.08	41910	190000	148090	1:4.53
Tomato/ Hybrid-2	IPM	Management of fruit borer by spinosad 45 %	5	1.0	Result awaited												

Sale price : Parwal @ Rs 20.0/kg, Paddy @ Rs 2400/qtl., Sugarcane @ 315/Qt.





Category & Crop	Thematic Area	Name of the technology	No. of Farmers	Area (ha)	Yield (q/ha)				% Change in Yield	Economics of demo. Rs./ha)				Economics of check (Rs./ha)			
					Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
					High	Low	Av.										
Paddy/ Pusa-1121	RCT	Use of Power sprayer for spraying of insecticides in Paddy crop	10	4.0	42.5	39.5	41.0	38.7	5.9	32500	71750	39250	2.21	31500	67725	36225	2.15
Wheat /HD-2967	RCT	Sowing of wheat by Seed Drill	15	6.0	49.3	44.6	46.95	42.1	11.5	24500	86388	61888	3.52	22500	77464	54964	3.44



## FLD on Other Enterprise: Kitchen Gardening

Category and Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units	Yield (Kg)		% change in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demo.	Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Kitchen garden	House hold food security	Kitchen gardening	10	10	70	25	180	450	1750	1300	1:3.8	250	500	250	1:2.0

## FLD on Women Empowerment

Category and Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units	Yield	Economics of demonstration (Rs./ha)			
					Demo.	Gross Cost	Gross Return	Net Return	BCR (R/C)
Tomato	Value Addition	Gradational income though Tomato by preparing Ketchup	10	10	3 Kg	140	390	250	2.7
		Gradational income though Tomato by preparing Tomato Puree	10	10	2.5 Kg	80	250	170	3.1

Tomato Ketchup @ Rs130., Tomato Puree @ Rs.100.





### III. Training Programme

#### Farmers' Training including sponsored training programmes (On campus)

Thematic area	ON CAMPUS									
	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>I Crop Production</b>										
Nursery management	2	35	0	35	5	0	5	40	0	40
Crop management	4	70	0	70	10	0	10	80	0	80
<b>Total</b>	<b>6</b>	<b>105</b>	<b>0</b>	<b>105</b>	<b>15</b>	<b>0</b>	<b>15</b>	<b>120</b>	<b>0</b>	<b>120</b>
<b>II Horticulture</b>										
Layout and Management of Orchards	1	9	0	9	11	0	11	20	0	20
Management of young plants/orchards	1	8	0	8	12	0	12	20	0	20
Nursery management	1	11	0	11	9	0	9	20	0	20
<b>Total (b)</b>	<b>3</b>	<b>28</b>	<b>0</b>	<b>28</b>	<b>32</b>	<b>0</b>	<b>32</b>	<b>60</b>	<b>0</b>	<b>60</b>
<b>III Soil Health and Fertility Management</b>										
Integrated Nutrient Management	1	17	0	17	3	0	3	20	0	20
Production and use of organic inputs	1	15	0	15	5	0	5	20	0	20
Micro nutrient deficiency in crops	1	18	0	18	2	0	2	20	0	20
Soil and Water Testing	1	15	0	15	5	0	5	20	0	20
<b>Total</b>	<b>4</b>	<b>65</b>	<b>0</b>	<b>65</b>	<b>15</b>	<b>0</b>	<b>15</b>	<b>80</b>	<b>0</b>	<b>80</b>
<b>IV Home Science/Women empowerment</b>										
Household food security by kitchen gardening and nutrition gardening	1	0	2	2	0	18	18	0	20	20
Minimization of nutrient loss in processing	2	0	9	9	0	31	31	0	40	40
Women & Child care	1	0	9	9	0	11	11	0	20	20
<b>Total</b>	<b>4</b>	<b>0</b>	<b>20</b>	<b>20</b>	<b>0</b>	<b>60</b>	<b>60</b>	<b>0</b>	<b>80</b>	<b>80</b>
<b>Ag. Engg</b>										
Repair & Maintenance	3	51	-	51	9	-	9	60	-	60
Drip Irrigation	1	17	-	17	3	-	3	20	-	20
<b>Total</b>	<b>4</b>	<b>68</b>	<b>-</b>	<b>68</b>	<b>12</b>	<b>-</b>	<b>12</b>	<b>80</b>	<b>-</b>	<b>80</b>
<b>Plant Protection</b>										
Integrated Pest management	4	46	-	46	34	-	34	80	-	80
<b>GRAND TOTAL</b>	<b>25</b>	<b>312</b>	<b>20</b>	<b>332</b>	<b>108</b>	<b>60</b>	<b>168</b>	<b>420</b>	<b>80</b>	<b>500</b>



Off Campus

Thematic area	Off CAMPUS									
	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>I Crop Production</b>										
Residue management	1	15	0	15	5	0	5	20	0	20
Resource Conservation Technologies	7	130	0	130	10	0	10	140	0	140
Nursery management	2	12	0	12	8	0	8	20	0	20
Integrated Crop Management	1	14	0	14	6	0	6	20	0	20
<b>Total</b>	<b>11</b>	<b>171</b>	<b>0</b>	<b>171</b>	<b>29</b>	<b>0</b>	<b>29</b>	<b>220</b>	<b>0</b>	<b>220</b>
<b>II Horticulture</b>										
<b>a) Vegetable Crops</b>										
Production of low value and high volume crops	1	18	0	18	2	0	2	20	0	20
Nursery management	2	40	0	40	0	0	0	40	0	40
Methods of sowing techniques	2	38	0	38	2	0	2	40	0	40
<b>Total (a)</b>	<b>5</b>	<b>96</b>	<b>0</b>	<b>96</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>100</b>	<b>0</b>	<b>100</b>
<b>b) Fruits</b>										
Layout and Management of Orchards	1	20	0	20	0	0	0	20	0	20
Rejuvenation of old orchards	1	19	0	19	1	0	1	20	0	20
<b>Total (b)</b>	<b>2</b>	<b>39</b>	<b>0</b>	<b>39</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>40</b>	<b>0</b>	<b>40</b>
<b>c) Ornamental Plants</b>										
Nursery Management	2	40	0	40	0	0	0	40	0	40
Methods of sowing techniques	1	20	0	20	0	0	0	20	0	20
<b>Total (c)</b>	<b>3</b>	<b>60</b>	<b>0</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>60</b>	<b>0</b>	<b>60</b>
<b>d) Spices</b>										
Production and Management technology	1	16	0	16	4	0	4	20	0	20
<b>GT (a-d)</b>	<b>11</b>	<b>211</b>	<b>0</b>	<b>211</b>	<b>9</b>	<b>0</b>	<b>9</b>	<b>220</b>	<b>0</b>	<b>220</b>
<b>III Soil Health and Fertility Mangmt.</b>										
Soil fertility management	2	30	0	30	10	0	10	40	0	40
Integrated Nutrient Management	2	32	0	32	8	0	8	40	0	40
Micro nutrient deficiency in crops	2	34	0	34	6	0	6	40	0	40
Soil and Water Testing	2	32	0	32	8	0	8	40	0	40
<b>Total</b>	<b>08</b>	<b>128</b>	<b>0</b>	<b>128</b>	<b>32</b>	<b>0</b>	<b>32</b>	<b>160</b>	<b>0</b>	<b>160</b>
<b>V Home Science/Women empowerment</b>										
Household food security by kitchen gardening and nutrition gardening	2	0	14	14	0	26	26	0	40	40
Minimization of nutrient loss in processing	1	0	18	18	0	02	02	0	20	20
Design and development of low cost diet	1	0	20	20	0	0	0	0	20	20
Women empowerment	3	0	56	56	0	4	4	0	60	60



Women and child care	2	0	27	27	0	13	13	0	40	40
Drudgery reduction	3	0	48	48	0	12	12	0	60	60
Value addition	1	0	18	18	0	2	2	0	20	20
<b>Total</b>	<b>13</b>	<b>0</b>	<b>201</b>	<b>201</b>	<b>0</b>	<b>59</b>	<b>59</b>	<b>0</b>	<b>260</b>	<b>260</b>
<b>Agri. Engg</b>										
Repair & Maintenance	11	166	12	178	42	-	42	208	12	220
Protected cultivation	1	15	-	15	5	-	5	20	-	20
<b>Total</b>	<b>12</b>	<b>181</b>	<b>12</b>	<b>193</b>	<b>47</b>	<b>-</b>	<b>47</b>	<b>228</b>	<b>12</b>	<b>240</b>
<b>V Plant Protection</b>										
Integrated Pest management	7	120	-	120	20	-	20	140	-	140
Integrated Diseases management	5	88	-	88	12	-	12	100	-	100
<b>Total</b>	<b>12</b>	<b>208</b>		<b>208</b>	<b>32</b>	<b>-</b>	<b>32</b>	<b>240</b>	<b>-</b>	<b>240</b>
<b>G Total</b>	<b>67</b>	<b>899</b>	<b>206</b>	<b>1112</b>	<b>149</b>	<b>59</b>	<b>208</b>	<b>1048</b>	<b>272</b>	<b>1320</b>



**Consolidated (On + Off)**

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>I Crop Production</b>										
Nursery management	4	47	0	47	13	0	13	60	0	60
Crop management	4	70	0	70	10	0	10	80	0	80
Residue management	1	15	0	15	5	0	5	20	0	20
Resource Conservation Technologies	7	130	0	130	10	0	10	140	0	140
Integrated Crop Management	1	14	0	14	6	0	6	20	0	20
<b>Total</b>	<b>17</b>	<b>276</b>	<b>0</b>	<b>276</b>	<b>44</b>	<b>0</b>	<b>44</b>	<b>320</b>	<b>0</b>	<b>320</b>

<b>II Horticulture</b>										
<b>a) Vegetable Crops</b>										
Production of low value and high value crops	1	18	0	18	2	0	2	20	0	20
Nursery management	3	51	0	51	9	0	9	60	0	60
Method of sowing technique	2	38	0	38	2	0	2	40	0	40
<b>Total (a)</b>	<b>6</b>	<b>107</b>	<b>0</b>	<b>107</b>	<b>13</b>	<b>0</b>	<b>13</b>	<b>120</b>	<b>0</b>	<b>120</b>
<b>b) Fruits</b>										
Layout and Management of Orchards	2	29	0	29	11	0	11	40	0	40
Management of young plants/orchards	1	8	0	8	12	0	12	20	0	20
Rejuvenation of old orchards	1	19	0	19	1	0	1	20	0	20
<b>Total (b)</b>	<b>4</b>	<b>56</b>	<b>0</b>	<b>56</b>	<b>24</b>	<b>0</b>	<b>24</b>	<b>80</b>	<b>0</b>	<b>80</b>
<b>c) Ornamental Plants</b>										
Nursery Management	2	40	0	40	0	0	0	40	0	40
Method of sowing technique	1	20	0	20	0	0	0	20	0	20
<b>Total (c)</b>	<b>3</b>	<b>60</b>	<b>0</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>60</b>	<b>0</b>	<b>60</b>
<b>d) Spices</b>										
Production and Management technology	1	16	0	16	4	0	4	20	0	20
<b>G.T</b>	<b>14</b>	<b>239</b>	<b>0</b>	<b>239</b>	<b>41</b>	<b>0</b>	<b>41</b>	<b>280</b>	<b>0</b>	<b>280</b>

<b>III Soil Health and Fertility Management</b>										
Soil fertility management	2	30	0	30	10	0	10	40	0	40
Integrated Nutrient Management	3	49	0	49	11	0	11	60	0	60
Micro nutrient deficiency in crops	3	52	0	52	8	0	8	60	0	60

Soil and Water Testing	3	47	0	47	13	0	13	60	0	60
Production and use of organic input	1	15	0	15	5	0	5	20	0	20
<b>Total</b>	<b>12</b>	<b>193</b>	<b>0</b>	<b>193</b>	<b>47</b>	<b>0</b>	<b>47</b>	<b>240</b>	<b>0</b>	<b>240</b>
<b>V Home Science/Women empowerment</b>										
Household food security by kitchen gardening and nutrition gardening	3	0	16	16	0	44	44	0	60	60
Design and development of low/minimum cost diet	1	0	20	20	0	0	0	0	20	20
Minimization of nutrient loss in processing	3	0	27	27	0	33	33	0	60	60
Women empowerment	3	0	56	56	0	4	4	0	60	60
Women and child care	3	0	36	36	0	24	24	0	60	60
Drudgery reduction	3	0	48	48	0	12	12	0	60	60
Value addition	1	0	18	18	0	2	2	0	20	20
<b>Total</b>	<b>17</b>	<b>0</b>	<b>221</b>	<b>221</b>	<b>0</b>	<b>119</b>	<b>119</b>	<b>0</b>	<b>340</b>	<b>340</b>
<b>Plant Protection</b>										
Integrated Pest management	11	166	-	166	54	-	54	220	-	220
Integrated Diseases management	5	88	-	88	12	-	12	100	-	100
<b>Total</b>	<b>16</b>	<b>254</b>	<b>-</b>	<b>254</b>	<b>66</b>	<b>-</b>	<b>66</b>	<b>320</b>	<b>-</b>	<b>320</b>
<b>VI Agric. Engg.</b>										
Repair & Maintenance	14	217	12	229	51	-	51	268	12	280
Drip Irrigation	1	17	-	17	3	-	3	20	-	20
Protected cultivation	1	15	-	15	5	-	5	20	-	20
<b>Total</b>	<b>16</b>	<b>249</b>	<b>12</b>	<b>261</b>	<b>59</b>	<b>-</b>	<b>59</b>	<b>308</b>	<b>12</b>	<b>320</b>
<b>Grand Total</b>	<b>92</b>	<b>1211</b>	<b>233</b>	<b>1444</b>	<b>257</b>	<b>119</b>	<b>376</b>	<b>1478</b>	<b>352</b>	<b>1820</b>



## Training for Rural Youths including sponsored training programmes (On campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Seed Production	1	8	-	8	2	-	2	10	0	10
Value addition	2	-	9	9	-	11	11	-	20	20
Vermin Compost	1	7	-	7	3	0	3	10	0	10
Nursery raising under poly house	1	8	0	8	2	0	2	10	0	10
Repair & maintenance	2	11	-	11	9	-	9	20	-	20
Integrated Pest Management	1	8	-	8	2	-	2	10	-	10
Integrated Nutrient Management	1	3	-	3	7	-	7	10	-	10
<b>Total</b>	<b>9</b>	<b>45</b>	<b>9</b>	<b>54</b>	<b>25</b>	<b>11</b>	<b>36</b>	<b>70</b>	<b>20</b>	<b>90</b>



## Training programmes for Extension Personnel including sponsored training programmes (on campus)

Area of Training	No. of courses	ON CAMPUS								
		Participants								
		Others			SC/ST			Grand Total		
Male	Female	Total	Male	Female	Total	Male	Female	Total		
Crop Management	4	50	0	50	10	0	10	60	0	60
Integrated Nutrient management	3	30	0	30	15	0	15	45	0	45
Layout and management of orchard	1	16	0	16	0	0	0	16	0	16
Nutrient management	1	15	0	15	0	0	0	15	0	15
Women and Child care	3	0	35	35	0	10	10	0	45	45
House hold food security	1	0	12	12	0	3	3	0	15	15
Integrated Pest Management	4	40	0	40	20	0	20	60	0	60
Repair & maintenance	3	45	0	45	0	0	0	45	0	45
Irrigation	1	15	0	15	0	0	0	15	0	15
<b>TOTAL</b>	<b>21</b>	<b>211</b>	<b>47</b>	<b>258</b>	<b>45</b>	<b>13</b>	<b>58</b>	<b>256</b>	<b>60</b>	<b>316</b>



## Sponsored training programmes

Area of training	Sponsoring Agency	No. of Courses	No. of Participants								
			General			SC/ST			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
Farmers Technical Training	U.P. Government	04	140	10	150	28	22	50	168	32	200
<b>TOTAL</b>		<b>04</b>	<b>140</b>	<b>10</b>	<b>150</b>	<b>28</b>	<b>22</b>	<b>50</b>	<b>168</b>	<b>32</b>	<b>200</b>



#### IV. Extension Activity

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	Total
Advisory Services	678	921	41	962
Diagnostic visits	21	53	17	70
Field Day	9	183	31	214
Group discussions	-	-	-	-
Kisan Ghosthi	31	1411	233	1644
Film Show	7	1221	78	1299
Self -help groups	4	64	7	71
Kisan Mela (Attended)	24	2631	78	2709
Exhibition	8	3543	27	3570
Scientists' visit to farmers field	68	363	9	372
Plant/animal health camps	-	-	-	-
Farm Science Club	-	-	-	-
Ex-trainees Sammelan	-	-	-	-
Farmers' seminar/workshop	-	-	-	-
Method Demonstrations	-	-	-	-
Celebration of important days	4	320	22	342
Special day celebration	2	155	16	171
Exposure visits	5	172	0	172
Others(Farmer visited KVK)	-	-	-	0
<b>Total</b>	<b>861</b>	<b>11037</b>	<b>559</b>	<b>11596</b>





## Details of other extension programmes

Particulars	Number
Electronic Media (CD./DVD)	0
Extension Literature	12
News paper coverage	45
Popular articles	15
Radio Talks	04
TV Talks	02
Animal health amps (Number of animals treated)	0
Others(Success Story,Book Published)	6
<b>Total</b>	<b>15</b>



## Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	
Meerut	Text only	273	15	10	21	35	28	764
	Voice only	1321	8	28	10	385	190	3884
	Voice & Text both							
	<b>Total Messages</b>	<b>1594</b>	<b>23</b>	<b>38</b>	<b>31</b>	<b>420</b>	<b>218</b>	<b>4648</b>
<b>Total farmers Benefitted</b>								



## VI. PRODUCTION OF SEED/PLANTING MATERIAL AND FODDER

### Production of seeds by the KVKs

Crop	Name of the crop	Name of the variety	Name of the hybrid	Quantity of seed (q)	Value (Rs)
Rabi 2018-19	Wheat	HD - 2967	-	240.0	468000.00
	Jowar	PC - 9	-	Auction	116000.00
<b>Total</b>				<b>240.00</b>	<b>584000.00</b>

### Production of planting materials by the KVKs

Crop	Name of the crop	Name of the variety	Name of the hybrid	Number	Value (Rs.)
Vegetables	Tomato	Selection 22	-	1000	640
	Cauliflower	Pusa Early kuwari	-	1000	620
	Cabbage	Kaveri	Kaveri	3000	1000

	Brinjal	Nav Kiran	Nav Kiran	3000	400
	Chilli	Soldier	Soldier	1000	400
	Onion	Pusa Red	-	6000	1250
Flowers	Marigold	Pusa Narangi	-	2500	700
	Gailardia	Normal	-	4500	650
	Kochia	Normal	-	2000	450
	Zinnea	Normal	-	2500	400
Total				<b>26500</b>	<b>6510</b>

Product	Quantity (Kg)	Value
Honey Production (Kg.)	12.00	2400.00
Milk Production	1072 lit	48240.00
Mushroom Production	25 Kg	2500.00

#### Production of Bio-Products: Vermi compost – 10.0 Qt. ( Farm use)



Vermi Compost Demonstration Unit KVK Campus

#### Performance of Crop Cafeteria

Kharif		Rabi	
Name of crop	Variety	Name of crop	Variety
Broccoli	1. Green curd	Mustard	1. YSH 402
			2. YSH 401
Brinjal	1. Navkiran		3. RH 749



			4. RH 406
			5. PITAMBRI
Chilli	1. Ashwarya		6. NRCHB-101
			7. BAYER
Tomato	1. Ajanta	Timely sown Wheat	1. PBW-292
Onion	1. Pusa Red		2. HD - 3086
			2. PBW-1105
			3. WB-02
Cauliflower	1. K - 10		4.
Cabbage	1. Parvati	Late sown wheat	1. PBW 292
			2. PBW -509
			3. DBW 16
			4. DBW 71



## VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS

Samples	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
Soil	1231	3971	28	184650
Water				
Plant				
<b>Total</b>	1231	3971	28	184650

## VIII. SCIENTIFIC ADVISORY COMMITTEE

Name of KVK	Number of SACs conducted
Meerut	1. 28.01.2019
	2. 16.12.2019

## IX. NEWSLETTER/MAGAZINE

Name of News letter/Magazine	No. of Copies printed for distribution

## X. PUBLICATIONS

Category	Number
Books	-
Training Manual	-
Book Chapter	3
Research papers	5
Seminar Papers	2
Technical bulletins	5
Technical reports	17
<b>Total</b>	32

## XI. DETAILS ON RAIN WATER HARVESTING STRUCTURE AND MICRO-IRRIGATION SYSTEM

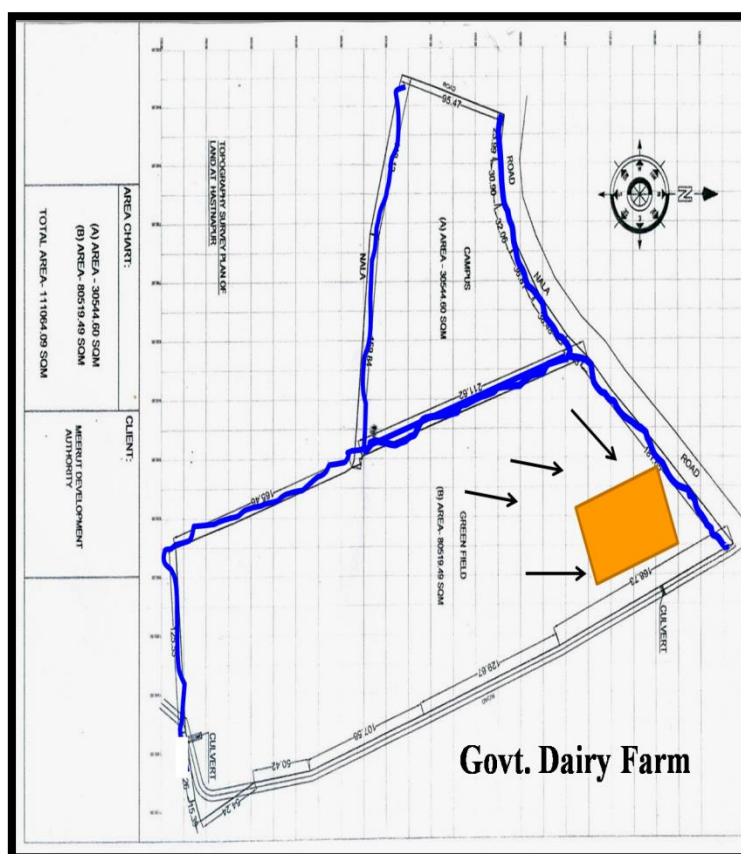
### Rain Water Harvesting at KVK

Water is becoming a scarce commodity and it is considered as a liquid god in the country. Demand of water is also increasing day by day not only for irrigation but also for household and industrial purposes. At the same time more area should be brought under irrigation to feed the increasing population of the country, which also needs more water. But we are not going to get 1liter more water than we get at present though the demand is alarming.

#### Objectives

- To demonstrate the technology among farmers
- To avoid water stagnation and crop damage
- Recycling of waste drain water
- To utilize the stored water for irrigation and other farm purposes during dry season
- To avoid sole dependency on electricity to irrigate farm as well as reducing costly electricity charges

#### Total Encatchment Area – 6



Summary of project for water harvesting structure:

S. N.	Item	Amount (Rs)
<b>(A) Cost of ponds</b>		
1	Cost of ponds	834440.00
2	Cost of barbed wire fencing	132452.70
3	Cost of Syphon work	51476.00
4	Cost of sign board	5000.00
	<b>Total</b>	<b>1023368.70</b>



<b>(B) Additional charges</b>		
	Cost of labour cess @ 1 % on A	10233.68
	Centage charges @ 6.875 % on A	70556.60
	Total	80970.28
<b>(C) Cost of Percolation treatment</b>		
	Filling of clay soil and common salt in bottom of pond to prevent water percolation	100000.00
<b>(D) Cost of Solar pump</b>		
	Cost of solar pump (3 HP)	434000.00
	Cost of trolley for panel installation	42000.00
		476000.00
	Grand Total = A + B + C + D =	1680338.98
	Say = Rs Sixteen lac and eighty thousand only	1680000.00

It is very important to make water everybody's business. It means a role for everybody with respect to water. Every household and community has to become involved in the provision of water and in the protection of water resources. As far as the KVK is concern, a water harvesting being a long life structure at KVK, not only useful for irrigation and money saving asset but also may serve the farming community to aware them about conservation of natural resources to counter water crises in future and may be integrate as component to develop integrated farming system as entrepreneurship development.

## **XII. INTERVENTIONS ON DISASTER MANAGEMENT/UNSEASONAL RAINFALL/HAILSTORM/COLD WAVES ETC**

Introduction of alternate crops/varieties

<b>Crops/cultivars</b>	<b>Area (ha)</b>	<b>Extent of damage</b>	<b>Recovery of damage through KVK initiatives if any</b>
<b>Total</b>			

Major area coverage under alternate crops/varieties

<b>Crops</b>	<b>Area (ha)</b>	<b>Number of beneficiaries</b>
Oilseeds		
Pulses		
Cereals		
Vegetable crops		
Tuber crops		
<b>Total</b>		

Farmers-scientists interaction on livestock management

Livestock components	Number of interactions	No.of participants
<b>Total</b>		

Animal health camps organised

Number of camps	No.of animals	No.of farmers
<b>Total</b>		

Seed distribution in drought hit states

Crops	Quantity (qtl)	Coverage of area (ha)	Number of farmers
<b>Total</b>			

Large scale adoption of resource conservation technologies

Crops/cultivars and gist of resource conservation technologies introduced	Area (ha)	Number of farmers
<b>Total</b>		

Awareness campaign

	Meetings		Gosthies		Field days		Farmers fair		Exhibition		Film show	
	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers	No.	No.of farmers

**XIII. DETAILS ON HRD ACTIVITIES**

**A. HRD activities organized in identified areas for KVK staff by the Directorate of Extension**

Name of the SAU	Title of the training programmes	No of programmes	No. of Participants	No. of KVKs involved
<b>Total</b>				

**HRD activities organized in identified areas for KVK staff by Zonal Project Directorate**

Title of the training programmes	No of programmes	No. of Participants	No. of KVKs involved
<b>Total</b>			

**Publications (Print & Electronic media)**

S. No	Particulars	Number sold	Revenue generated in Rs.	Number of farmers benefited
01	Books			
02	Technical bulletins			
03	Technology Inventory			
04	CDs			
05	DVDs			
06	Video films			
07	Audio CDs			
08	Others if any (please specify)			

**Technology Products provided**

Particulars	Quantity	Unit of quantity	Value in Rs.	Number of farmers benefited
Seeds	240.0	Quintal	468000	-
Planting materials	26500	Numbers	6510.00	54
Livestock		Numbers		
Poultry birds		Numbers		
Bio-products (Honey production )	12	Quintals	2400	
Others (Fodder)			116000	

**Technology services provided**

S. No	Particulars	Number of farmers benefited
01	Soil and water testing	3971
02	Plant diagnostics	70
03	Details about the services to line Departments	480
04	Others if any (please specify)	

#### XIV. AGRICULTURAL TECHNOLOGY INFORMATION CENTRE (2019)

##### A. Details on ATICs

S. No	Name of the ATIC	Name of the Host Institute	Name of the ATIC Manager
1.	Krishi Vigyan Kendra, Hastinapur, Meerut	SardarVallabhbhai Patel University of Agriculture & Technology, Meerut	Dr. Omvir Singh, Professor & Head

##### B. Details on Farmer's visit (Jan 2019 to Dec 2019)

S. No	Purpose of visit	Number of farmer's visited
01	Technology Information	1250
02	Technology Products	
03	Others if any pl. specify	

##### C. Facilities in the ATIC which are in operation

S. No	Particulars	Availability (Please $\sqrt$ mark)	Number of ATICs
01	Reception counter	$\sqrt$	
02	Exhibition / technology museum	$\sqrt$	
03	Touch screen Kiosk		
04	Cafeteria	$\sqrt$	
05	Sales counter	$\sqrt$	
06	Farmer's feedback register	$\sqrt$	
07	Others if any (please specify)		

##### D. Technology information provided

##### D.1. Details on technology information (Jan 2019 to Dec 2019)

S. No	Information category	Number of ATICs	Total number of farmers benefited	Category of information						
				Varieties / hybrids	Pest management	Disease management	Agro-techniques	Soil and water conservation	Post Harvest technology and Value addition	Animal Husbandry and fisheries
01	Kisan Call Centre / other Phone calls from farmers									
02	Video shows	11	162		4	2	2	2	1	

03	Letters received									
04	Letters replied									
05	Training to farmers / technocrats / students	2	64		2					
06	Others pl. specify									

#### D.2 . Publications (Print & Electronic media) (Jan 2019 to Dec 2019)

S. No	Particulars	Number sold	Revenue generated in Rs.	Number of farmers benefited
01	Books			
02	Technical bulletins			
03	Technology Inventory			
04	CDs			
05	DVDs			
06	Video films			
07	Audio CDs			
08	Others if any (please specify)			

#### E. Technology Products provided (Jan 2019 to Dec 2019)

S. No	Particulars	Quantity	Unit of quantity	Value in Rs.	Number of farmers benefited
01	Seeds	240	Quintal	468000	
02	Planting materials	26500	Numbers	6510	
03	Livestock		Numbers		
04	Poultry birds		Numbers		
05	Bio-products	12	Quintals	2400	
06	Fodder			116000	
07	Milk production	1072	Lit	48240	
08	Mushroom Production	25	Kg	2500	45

#### F. Technology services provided (Jan 2019 to Dec 2019)

S. No	Particulars	Number of farmers benefited
01	Soil and water testing	3971
02	Plant diagnostics	70
03	Details about the services to line Departments	480
04	Others if any (please specify)	

## XV. TECHNOLOGICAL BACKSTOPPING BY DIRECTORATES OF EXTENSION

States covered:

Number of Directorates of Extension:

### A. Details on Directors of Extension

S. No	Name of the SAU	Name of the Director of Extension	Number of KVKs for which technological backstopping is provided						
			SAU/CAU	DU	ICAR	NGO	SDA	Others (pl. specify)	

### B. Workshops / meetings organized during Jan 2019 to Dec 2019

S. No.	Details of workshop/meeting conducted	No. of KVKs participated

### C. Visits made by DE / Officials in the Directorate to KVKs during Jan 2019 to Dec 2019

S. No.	Particulars	Number of visits
01	SAC meetings	
02	Field days	
03	Workshops / seminars	
04	Technology week	
05	Training programmes	
06	Others pl. specify	

### D. Overseeing of KVKs activities during Jan 2019 to Dec 2019

S. No.	Particulars	Number of fields visited	Major observations / remarks	Major suggestions given
01	On Farm Trials			
02	Front Line Demonstration			
03	Others pl. specify			

### E. Publication on Technology inventory during Jan 2019 to Dec 2019

S. No.	Particulars	Number
01	Directorates published the technological inventory	
02	Directorates constantly updating the technological inventory	

### F. Technological Products provided to KVKs during Jan 2019 to Dec 2019

S. No.	Major technologies provided	Number of KVKs
01	Seeds	
02	Planting materials	
03	Bio-products	
04	Livestock breed	
05	Livestock products	
06	Poultry breed	
07	Poultry products	
08	Others pl. specify	

# **Studies an Intervention and Adoption of Flowers Production Technologies among the Farmers in Meerut district conditions: A successful venture**

**VIRENDRA PAL<sup>1</sup>, NAVEEN CHANDRA<sup>2</sup>, MANOJ KUMAR SINGH<sup>3</sup>, AND VIPIN KUMAR<sup>4</sup>**

<sup>1&2</sup>Krishi Vigyan Kendra, Hastinapur, Sardar Vallabhbhai Patel University of Agriculture & Technology, Meerut- 250110 (Uttar Pradesh)

[dvpgangwar77@gmail.com](mailto:dvpgangwar77@gmail.com) & [nchandra120@gmail.com](mailto:nchandra120@gmail.com)

<sup>3&4</sup>Department of Horticulture, Sardar Vallabhbhai Patel University of Agriculture & Technology, Meerut- 250110t (Uttar Pradesh)

## **ABSTRACT**

The case study was observed in Meerut conditions with the part of western Uttar Pradesh. The six villages *viz.*, Hastinapur khas, Ganeshpur, Phulawda, Lawar, Dabka and Pipli khera were randomly selected, further four blocks namely Hastinapur, Mawana, Sardhana and Kharkhonda in Meerut district were selected. From each block 40 farmers were selected. Thus, in all 160 farmers were randomly selected. The finding indicated on cost returns aspect of flower crops cultivation. The data collected on during 2016-17 and 2017–18 was subjected to the anglicized. It can be effectively, virtually and successfully venture put under the cultivation of flowers like marigold, chrysanthemum, gladiolus and tuberose under the programme of front line demonstrations (FLDs) and their update knowledge like is practices farmers (PF) trainings. Due to weather is good for better in flowers cultivation during period and availability of irrigation facility, potential seeds and fertilizers, farmers in Meerut district. The case study was also monitored regularly. The high yielding varieties of flowers recorded significantly higher yield and with quality produces in the field over the local varieties. The farmers recoded on average yield of marigold (168.6 q/ha), chrysanthemum (217840 sticks/ha), gladiolus (128520 spikes/ha) and tuberose (120600 spikes/ha) in high yielding varieties respectively.

## **INTRODUCTION:**

Floriculture has been a major thrust area for diversification of horticulture. Growing of flowers and ornamental crops is rapidly expanding enterprise. The floriculture continues to generate employment opportunities to people in rural area. An area under flower cultivation can support a family consisting of 4 to 6 members. Flowers are the beauty and better in human life. All flowers cultivation in condition of Meerut is getting popular among the farmers. The state Uttar Pradesh is blessed with some famous religious shrines and huge amount of flowers are needed for worship. In spite of the increasing demand for the crop the production is low to fulfil the domestic demand. Main reason for low production and less adoption of flower crops in their farming system is lack of awareness regarding scientific package of practice and its economic importance (Indira, P. Gopal Krishna, T.R. and Peter, P.V., 2001). There is expansive or wide potential for growing flowers because the Meerut district areas can be effectively, virtually and successfully put under the cultivation of flowers like marigold, chrysanthemum, gladiolus and tuberose. Due to weather is good for better in flowers cultivation during period and availability of irrigation facility, potential seeds and fertilizers, farmers in Meerut district areas, Western Uttar Pradesh conditions. Hastinapur khas, Ganeshpur, Phulabda, Lawar, Dabka and Pipli Khera villages district Meerut can be grown these flowers throughout the year. As these villages were well connected by road, there will be no problem of marketing also. There is also near NCR New Delhi area, due to huge demand and supply gap of flowers in the local market, the traders directly come to the farmers field to collect fresh flowers regularly. The recommendations for suitable high yielding varieties of flowers were also available with the IARI, New Delhi and NBRI, Lucknow. Thus,



it was hypothesized that cultivation of flowers will improve the household economy of flowers in the villages.

### **INTERVENTION AND ADOPTION OF TECHNOLOGIES:**

Observing the interest of few farmers in flower cultivation, FLD's, and training programme was organized to provide the "Know How and Do How" of farmers cultivation for the farmers in Meerut villages. Initially farmers were provided with the quality seeds and seedlings of high yielding varieties (HYV) of Marigold, Chrysanthemum, Gladiolus and Tuberose.

The planting was done by the farmers under the scientific knowledge their update and supervision with advised of Horticulture Scientist (HS) of Krishi Vigyan Kendra, Hastinapur, Meerut but the crop was managed by the farmers himself with his inputs and labour. The high yielding varieties of flowers results is recorded significantly higher yield and with quality produces in the field over the local varieties. The farmers recoded on average yield of marigold (168.6 q/ha), chrysanthemum (217840 sticks/ha), gladiolus (128520 spikes/ha) and tuberose (120600 spikes/ha) in high yielding varieties respectively. To the introduction of Pusa Narangi, Pusa Arpita and Calcutta variety in marigold during the programmes. It has been observed that the plants of marigold grow straight upwards to their height and develop into terminal flower bud. However, if the terminal portion of shoot is removed early, emergence of side branches starts earlier and more number of flowers of good quality and uniform size are produced. By production of terminal flower bud, side buds become free from correlative inhibition of apical dominance and these buds develop into branches to produce flowers. and the Jaimla, Golden Bounty and Indian pink variety in chrysanthemum is very effective in Western Uttar Pradesh condition. The standard chrysanthemum varieties have the genetic potential to produce single bigger sized bloom on a branch if disbudding and proper feeding is done. Similarly more number of pinching can be done to produce more standard flowers per plant. and gladiolus varieties considered as a White Prosperity ,Friendship, Nova Lux, American beauty, Pusa Kiran and Pusa Chandni. Now, as well as Tuberose varieties is Shirangar, Pearl double, Vaibhav and Subhasini, it produce waxy, white and fragrant flowers on long spikes which are mostly used as cut flower, for making garlands and extracting essential oil. All flowers crop are recorded 30 - 42 percent higher flowers yield over the farmer's local variety. It is more importantly flowers with the considered of varieties were cultivated commercially and scientifically for the first time by the progressive farmers in these Meerut district conditions.

### **METHODOLOGY:**

The present study was carried out and observed by Krishi Vigyan Kendra , Hasatinapur during 2016-17 to 2017-18 in the farmers field of Meerut district conditions. The district comprises of six villages viz., Hastinapur khas, Ganeshpur, Phulabda, Lawar, Dabka and Pipli khera were randomly selected, further four blocks namely Hastinapur khas, Mawana, Sardhana and Kharkhonda in Meerut district were selected. From each block 40 farmers were selected. Thus, in all 160 farmers were randomly selected. All the intercultural operations were adopted according to package of practice. Materials for the present study with respect to Front Line Demonstrations (FLD's) and Farmers Practice (PF) were given in the table B. Trainings, field day and regular monitoring were also conducted. All the finding indicated on cost returns aspect of flower crops cultivation. The data collected on during 2016-17 and 2017-18 was subjected to the anglicized. The cost ratio concepts approaches to farm casting are widely used in India (Raja, V.T. and Rao, D.V.S.,1990) and study of the technology gap and technology index were calculated as suggested by (Samui,S.K. Maitra, S. Roy,D.K. and Mondal, A.K., 2000).

## IMPACT AND IMPLICATIONS:

Successful and commercial cultivation of flowers created a positive impact and uplifted the socio economic of the farmers in the villages. Their net return varied marigold, chrysanthemum, gladiolus and tuberose from 153820.00 Rs/ha, 257810.00 Rs/ha, 182050 Rs/ha and 154800.00 Rs/ha due to cultivation of flowers successfully. The farmers wife and children were also engaged in value addition of flowers through making boundless, packaging, garland and there by more employment was generated along with more empowerment of the farm woman, thus through the introduction of floriculture, a positive and significant impact was created in the villages. At present about 30 – 35% of the requirement of flowers are met locally from the farmers field (Singh, Ranjeet, Soni, R.L., Singh, Virendra and Bugalia, H.L., 2011). There is increasing demand for flower cultivation in these villages after successful demonstration of technology in the farmer's field through Front Line Demonstrations (FLD's). Flowers cultivation has for reaching beneficial consequences in these areas. Commercial flowers cultivation has increased the income stability of the flower crops with better income distribution throughout the year (Singh, S.N., Singh, V.K., Singh, R. K. and Singh, K.R., 2007). As flower cultivation is less require much application of pesticide, irrigation, fertilizers and extensive cultivation of flowers (replacing sugarcane farmers) also have the potential to prevent environmental pollution and save the ecosystem of these western Uttar Pradesh conditions.

Similarly, if we compare the productivity of varieties (grown by the there is wide gap in potential yield of the flowers recent developed varieties and with yield obtained at farmers field). The main reasons of low productivity in this region are use of obsolete varieties susceptible to pest and diseases, imbalanced fertilizer use, poor management of soil and available water resource and with conventional farming practices lacking in the utilisation of improved production technology etc. (Behera, U.K., Bhawsar, R.C., Ruwali, K. N., Mishra, A. N., Verma, P.K. and H.N. Pandey, 1999).

**Table A. Impact of adoption of commercial floriculture in farmers field.**

<b>Impact indicators</b>	<b>Before</b>	<b>After</b>
a. Employment generated	38	186
b. Average household (Rs.)	16500.00	29500.00
c. Income stability	More fluctuating	Stable

This can be realized by applying advanced, environmental friendly technology, which can be manage and allocate all resources efficiently for income stability. Floriculture has emerged as an important agribusiness, providing employment opportunities and entrepreneurship in both urban and rural areas. It has been found that commercial floriculture has higher potential per unit area than most of the field crops and therefore, a lucrative business.

**Table B. Yield and Economics of flowers in the farmers field in Meerut conditions.**

Crops (Local variety/ High Yielding Variety)	Yield (q/ha or No. of spikes & stick/ha)	Cost of cultivation (Rs/ha)	Total Gross return (Rs/ha)	Net return (Rs/ha)	B.C. Ratio
Marigold					
Local	128.0	41200.00	153600.00	112400.00	1:3.72
HYV	168.6	48500.00	202320.00	153820.00	1:4.17
Chrysanthemum					
Local	182450.00	63430.00	273675.00	210245.00	1:4.31
HYV	217840.00	68950.00	326760.00	257810.00	1:4.70
Gladiolus					
Local	100140.00	124800.00	250350.00	125550.00	1:1.20
HYV	128520.00	139250.00	321300.00	182050.00	1:1.34
Tuberose					
Local	85230.00	67500.00	170460.00	102960.00	1:1.92
HYV	120000.00	85200.00	240000.00	154800.00	1:2.81

**Sale price:** Marigold 1200/- qtl., Chrysanthemum 1.5/- stick, Gladiolus 2.5/- spike and Tuberose 2.0/- spike.

### FARMERS REACTION:

The front line demonstration, on farm testing and practice farmers has revealed that the farmers of the area were highly impressed by the technologies. Also the farmers were thoroughly convinced that the improved practices like high yielding varieties and application of balanced fertilizer dose (right proportion, adequate quantity and right time of application) contributed a more efficient in realising higher yields.

### CONCLUSION:

It may be concluded that as per the agro- climatic conditions in Meerut, the technological intervention should be adopted for the technological viability, suitability and sustainability in context of more profit of farmers smart income. Technological and extension gap extended can be bridged by improved package of practices with emphasis on improved production technology including all cultural operations. Replacement of local variety with the high yielding variety (HYV) of flower crops would increase the production and net income of the farmers also.

### REFERENCES:

- Indira, P., Gopal Krishan, T.R. and Peter, P.V. (2001). Spices in India. Paper presented in Silber Jubilee Seminar on Spices, *Indian Institute of Spices Research, Calicut*, October 8-9, pp 143-152.
- Raja, V.T. and Rao, D.V.S. (1990). Economic of farm production and management. *Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi*.
- Samui, S.K., Maitra, S., Roy, D.K. and Mondal, A.K. (2000). Evaluation of on farm front line demonstration on groundnut. *Journal of Indian Social Costal Agric. Res.*21 (2): 69-70.
- Singh, Ranjeet, Soni, R.L., Singh, Virendra and Bugalia, H.L. (2011). Dissemination of improved production technologies of solanaceous vegetables in Banswara district of Rajasthan through front line demonstration. *Rajasthan Journal of Ext. Edu*,19 : 97-100.
- Singh, S.N., Singh, V.K., Singh, R.K. and Singh, K.R. (2007). Evaluation of on farm front line demonstration on the yield of mustard in central plain zone of Uttar Pradesh. *Indian Res. Journal of Ext. Edu.*,7 (2&3):79-81.
- Behera,U.K., Bhawsar, R.C., Ruwali, K. N., Mishra, A. N., Verma, P.K. and H.N. Pandey (1999). Bridging yield gap of wheat through front line demonstration. *Agricultural Extension Review*,11 (2):23-26.

## Doubling Income through Sugarcane value addition

A farmer Sh. Naresh sirohi S/o Sh Mahavir Singh R/o hitkari, block Sardhana, Distt. Meerut has 1.25 acre land with canal irrigation facility. Earlier he was growing traditional crops like Sugarcane – wheat by which he was getting approximately 50.00 thousands per year. The annual earning of Sh. Sirohi was insufficient to met out the expenditure required for smoothly running of the family.



Sh. Sirohi is a graduate and ambitious person with a zeal to do something better for the family. Being a educated person he contacted to KVK, Meerut and got idea to process the sugarcane. He started preparation of vinegar with the technical support of KVK , and first time in 2015 started with Only 1.5 Qtl. Sugarcane, by which he extracted 100 lit. juice and finally prepared 90.0 lit. Vinegar. He got total Rs. 3150 after sale of vinegar @ Rs. 35/ Lit, and Rs. 1440.00 net profit after deduction of all expenses on equipments and labour etc in comparison of Rs. 420.00 total income from direct sale of 1.5 Qntl. Sugarcane.

Now Sh. Sirohi is preparing 20 tons. Of vinegar mainly from Sugarcane produced in his own field and getting total Rs.700000.00 net profit in a year out of which 4.0 lacs only from sugarcane vinegar and other 03.0 lacs from Jamun, Pine Apple, Apple, Litchi etc. fortified with Tulsi extract, garlic and other bio ascence. Sh. Sirohi has no marketing problem with sufficient demand of the product. To meet out the demand he is associating other youth in the enterprenure.

For publicity, he started putting exhibition in Kisan mela organized by KVK and Deptt. Of Agriculture in Meerut and nearby districts. He has registered his products with the trade name of **Village Vinegar** with GST No. also and These products are being supplied in several sized packing with brand name at Ayurvedic stores, Grossary stores, Medical stores and road side dhabas. Keeping in mind the demand of products, Sh. Sirohi is planning to double the production.He honoured with silver medal in North Zone Krishi Mela held at Vegetable Research Institute from 23-25 Feb, 2018 by Hon'ble minister of Agriculture, Govt. of India.



## Important Events

### Kisan Samman Nidhi

135 farmers were benefitted directly connected to the programme of direct telecast on the occasion of inauguration of Kisan Samman Nidhi on 24, February 2019. Total 135 farmers were present in the event



### Programme on DD Kisan Channel

Organised four programme of Kisan Chaupal Charcha by recorded by DD Kisan Channel in village Lawar, Andawali, Ganeshpur and Krishi Vigyan Kendra, Hastinapur.



### Participation in Krishi Vigyan Mela

Participated in Krishi Vigyan Mela organized by IARI, New Delhi during 5-7 March 2019 as put a stall by KVK, Meerut and represented zone III at the occasion. 100 farmers were mobilized to the event by buses.





### **Innovators meet**

Participated in the innovators meet at NASC complex, New Delhi held on 16-17, July 2019 organised by the ICAR. Dr PS Tiwari, Professor of this centre and one innovator farmer Sh. Naresh Sirohi have participated with installing an exhibition on the occasion.



### **Kisan Mela**

An exhibition have been displayed in All India Kisan Mela held at SVPUA&T, Meerut on 08, Nov. 2019. Sh Surya Pratap Shahi, Hon'ble Agriculture Minister of UP, Dr. A.K. Singh, DDG. AE. ICAR and Dr. R. K. Mittal, Hon'ble Vice Chancellor have visited the stall of the centre.

### **Kisan Pathshala**

Kisan Pathshala Programme has been launched by the Hon'ble Chief minister of U.P. on 09.06.19 in the state. This programme live telecasted at KVK in the present of 213 farmers and 22 officials.





### **Master trainers training for kisan Pathshala**

A training for master trainers of Deptt. of Agril, Meerut for conducting Kisan Pathshala has been conducted at KVK on 25.04 2019 in the chairmanship of Deputy Director Agriculture Meerut. Trainers are scientists of this KVK and 72 participants have participated.

### **campaign of plantation**

A campaign of plantation of large scale was organized with district administration line departments on 09.09.2019 at KVK farm by plantation of 1225 plants of timber. These plants are provided by plants of forestry



### **Jal Shakti Abhiyan**

A Kisan Mela and awareness programme on judicious use of water in agriculture and daily use was organised under Jal Shakti Abhiyan on 07.08.19 at Meerut block. On the occasion central nodal officer GOI was chairman in the presence of CDO Meerut, PD,DRDA, DD Agril. and other officers.





### **Wide scale plantation**

Wide scale plantation and Kisan Gosthi was organized at Krishi Vigyan Kendra on 17.09.2019 funded by IFFCO. In this programme 1000 plants of Aonla, Guava, Sahjan, Jamun, Mango were distributed among the farmer present in this programme.

### **Jal Shakti Abhiyan Kisan Mela**

Jal Shakti Abhiyan Mela was organised by on conservation of water in agriculture in the chairmanship of hon'able M.P. Sri Rajendra Prasad at Datawali village of Meerut block on 02.10.2019. About 600 farmer were participated in the programme.



### **Jal Shakti Abhiyan**

A Kisan Mela and Gosthi was organized in the chairman ship of Sri Nripendra Singh IAS, Deputy Secrety Railways on 03.09.2019 at Krishi Vigyan Kendra. Gosthi was organized on judicious use of water in agriculture through advance technology. Project Director, DRDA, Joint Director Agril, DD Agril. And other officials were present in this programme.





### Educational tour

B.Sc. Ag. IIIrd year students of MIET Meerut were visited our ATIC, Soil Testing Lab, Home Science Lab and Bio Control Lab and Farm under the educational tour on 30.04.2019.

### Fertilizer Use awareness Programme

Fertilizer Use awareness Programme at Krishi Vigyan Kendra on 22.10.2019. 152 farmers participated in this programme. Live Telecast from Krishi Bhawan new Delhi, was displayed and lecture were delivered on judicious use of fertilizer.



### Educational tour

140 students of District institute of education and training (DIET) visited our ATIC, Soil Testing Lab, Home Science Lab and Bio Control Lab and Farm under the educational tour on 22.10.2019 in the guidance of KVK scientists and principal of the institute.

### **Hon'ble V C visit**

Hon'ble Vice Chancellor has visited the KVK on 19.08.2019. During his visit he directed the staff to improve effectiveness of KVK among farmer community.



### **Hon'ble Minister of State Visit**

Hon'ble Minister of State of Agriculture UP has visited KVK on 28, Nov. 2020. He suggested on several point to improve activities for service to the farmers to achieve double income



### **Celebration of Soil Health Day**

Soil Health Day was been celebrated at the centre on 05, December 2019. On the occasion 72 farmers were benefited by getting soil health cards and total 100 farmers were present in the event



## **Kisan Samman Diwas**

Kisan Samman Diwas has been celebrated at Krishi Vigyan Kendra, Hastinapur, Meerut on 23, December 2019. Total 80 farmers were present on the event and 05 farmers were honored for their remarkable efforts in the field of Agriculture



**STATUS REPORT**

**OF**

**PROJECTS**

**(Jan to Dec 2019)**

## Year wise status of CFLD

### Total CFLD demonstrations under NFSM During 2015-16 to 2018-19

S.No.	Demo.	Crop	Variety	Area (ha.)	No.of farmers	No. of villages
<b>Rabi 2015-16</b>						
1	CFLD	Lentil	L 4594	16	40	5
<b>Summer 2016</b>						
2	CFLD	Black gram	P U 31	16	40	15
3	CFLD	Green gram	IPM 02-3	20	50	18
<b>Rabi 2016-17</b>						
4	CFLD	Mustard	RH 749	20	43	17
5	CFLD	Lentil	PL 8	15	26	12
<b>Summer 2017</b>						
6	CFLD	Black gram	P U 31	20	27	11
<b>Rabi 2017-18</b>						
7	CFLD	Mustard	YSH 401	10	22	5
8	CFLD	Lentil	PL 8	20	31	7
<b>Summer 2018</b>						
9	CFLD	Urd bean	P U 31	10	13	7
<b>Kharif 2018</b>						
10	CFLD	Urd bean	P U 31	10	25	6
<b>Rabi 2018-19</b>						
10	CFLD	Mustard	RH 459	10	25	6
11	CFLD	Lentil	PL 8	10	25	7
<b>Kharif 2019</b>						
12	CFLD	Urd bean	P U 31	10	25	6
<b>Rabi 2019-20</b>						
13	CFLD	Lentil	PL 8	10	25	9

## Cluster Frontline Demonstrations on pulses under NFSM Summer 2018

### I. General Information

1	Name of the KVK	Hastinapur (Meerut)
2	Year of establishment	1992
3	Host Institution	S.V.P. University of Agriculture & Technology, Meerut (U.P.)
4	Address for communication including phone and fax numbers	KVK, Hastinapur (Meerut)
5	District	Meerut
6	State	Uttar Pradesh

### II. Cluster FLDs on pulses under NFSM

#### Cluster Frontline Demonstrations on pulses under NFSM Rabi 2018-19

##### I. General Information

1	Name of the KVK	Hastinapur (Meerut)
2	Year of establishment	1992
3	Host Institution	S.V.P. University of Agriculture & Technology, Meerut (U.P.)
4	Address for communication including phone and fax numbers	KVK, Hastinapur (Meerut)
5	District	Meerut
6	State	Uttar Pradesh

##### II Cluster FLDs on Lentil under NFSM (Rabi 2018 - 19)

1	Name of the crop	Lentil
2	Season and year	Rabi 2018 -19
3	No. of FLDs (farmers) sanctioned	25
4	No. of FLDs (farmers) conducted	25
5	Area (ha) sanctioned	10
6	Area (ha) actually conducted	10
7	Sanctioned budget (Rs.)	90000.00
8	Budget received actually (Rs.)	154179.00 (Balance of previous year)



9	Actual expenditure (Rs.)	22500.00
10	Balance amount (Rs.)	67500.00 (As on 20 Nov, 2018)
11	FLDs implemented in how many clusters?	Six
12	No. of villages and farmers in each cluster	3 villages & 5-9 farmers in each clusters
13	Land situation (irrigated, rainfed, others specify)	Irrigated
14	Name of variety/varieties demonstrated	PL 8
15	Technologies/package of practices demonstrated in each cluster	Seed 30 kg/ha + Flubendamide 39.35 SC
16	Sowing date/dates as per clusters	Cluster 1,2,3 - 2 to 10 November, & Cluster 4, 5,6 - 12 to 20 November, 2018
17	Number of field operations taken so far like manuring, weeding, irrigation etc. and name them with approximate date/week	<b>Plant protection schedule-</b> 80 – 90days : Spray of Flubendamide 39.35 SC 125 ml/ha
18	Stage of the crop	Sowing time
19	Expected harvesting date/dates as per clusters	15 to 16 April , 2019

### III. Critical inputs provided for demonstration

Sl. No.	Critical inputs	Name of critical input	Quantity	Value (Rs.)	No. of farmers	No. of villages	No. of clusters
1	Seeds (name variety)	PL-8	12 kg/acre	1680.0	50	15	06

### IV. Training programmes organized

Sl. No.	Date	Type of training (on/off campus)	Title of training programme	Participant farmers (general)-A			Participant farmers (SC/ST)-B			Total participants (A+B)		
				Men	Women	Total	Men	Women	Total	Men	Women	Total
1.	25.11.18	On campus	Agronomics practices of Lentil	15	-	15	05	-	05	20	-	20
2.	03.12.18	On campus	Agronomics practices of Lentil	13	-	13	07	-	07	20	-	20



## V. Extension activities including field visits organized

Sl. No.	Date	Name of extension activity	Participant farmers			Participant extension personnel		
			Men	Women	Total	Men	Women	Total
1.	05.12.18	Visit of Demonstration field	20	-	20	02	-	02
2.	11.01.19	Visit of Demonstration field	20	-	20	03	-	03
3.	23.02.19	Visit of Demonstration field	20	-	20	03	-	03

## VI. Performance (results) of the demonstrations

### (A) General information

Name of the crop	Demos (No.)	Variety		National average yield (q/ha)	State average yield (q/ha)	District average yield (q/ha)	Characteristics of the demo variety	Potential yield of the demo variety (q/ha)	Yield gap – I (%)	Yield gap – II (%)
		Check	Demo							
Lenti	25	Local	PL-8	6.33	7.15	5.43	1. Disease resistance. 2. One time maturity	18.00	20	10.12

### (B) Yield and net returns

Yield obtained (q/ha)						Yield increase (%)	Expenditure and returns (Rs./ha)								Net returns increase (%)
Check			Demo				Check				Demo				
Max.	Min.	Av.	Max.	Min.	Av.		Gross Cost (Rs/ ha)	Gross return (Rs/ ha)	Net Return (Rs/ha)	B:C ratio	Gross Cost (Rs/ ha)	Gross return (Rs/ ha)	Net Return (Rs/ha)	B:C ratio	
13.45	11.75	12.6	15.45	12.60	14.02	11.26	41300	63000	21700	1.52	40900	70100	29200	1.71	25.6

### (C) Socio-economic impact parameters

Sl. No.	Parameters	Crop-1	Crop-2	Crop3
1	Name of the crop	<b>Lentil</b>		
2	Variety	<b>PL-8</b>		
3	No. of clusters	<b>06</b>		
4	No. of farmers	<b>25</b>		
5	Total area (ha)	<b>10</b>		
6	Selling price (Rs./q)	<b>8000</b>		

### VII. Observations and feed-back

(a) Observations by Scientist(s) from KVK- Less incidence of disease

(b) Farmers opinion/feed-back-

1. Maturity stage 125days
2. Low water requirement
3. High yielding variety in comparisons to old variety

### VIII. Visitors to cluster FLDs/study tours etc.-

### IX. Visitors to cluster FLDs/study tours etc.



## Cluster Frontline Demonstrations on Oilseeds under NFSM Rabi 2018-19

### I. General Information

1	Name of the KVK	Hastinapur (Meerut)
2	Year of establishment	1992
3	Host Institution	S.V.P. University of Agriculture & Technology, Meerut (U.P.)
4	Address for communication including phone and fax numbers	KVK, Hastinapur (Meerut)
5	District	Meerut
6	State	Uttar Pradesh

### II. Cluster FLDs on Oilseed under NFSM (Rabi 2018 - 19)

1	Name of the crop	Mustard
2	Season and year	Rabi 2018 -19
3	No. of FLDs (farmers) sanctioned	25
4	No. of FLDs (farmers) conducted	25
5	Area (ha) sanctioned	10
6	Area (ha) actually conducted	10
7	Sanctioned budget (Rs.)	60000.00
8	Budget received actually (Rs.)	119543.00 (Balance amount of 2017 – 18)
9	Actual expenditure (Rs.)	14000.00
10	Balance amount (Rs.)	36000 (as on November 20, 2018)
11	FLDs implemented in how many clusters?	Seven
12	No. of villages and farmers in each cluster	3 villages & 5-9 farmers in each clusters
13	Land situation (irrigated, rainfed, others specify)	Irrigated
14	Name of variety/varieties demonstrated	RH 749
15	Technologies/package of practices demonstrated in each cluster	Seed 5 kg/ha + Sulphur 12.5 Kg/ha + Pendamethelene 2.5 lt/ha + Neem oil 1 lit/ha + Carbendazim 12% WP 1kg/ha
16	Sowing date/dates as per clusters	Cluster 1,2,3 & 4- 15 to 30 September, & Cluster 4, 5,6 & 7 - 17 to 25 October, 2018
17	Number of field operations taken so far like manuring, weeding, irrigation etc. and name them with approximate date/week	<p><b>Plant protection schedule-</b></p> <p>Pre : Spray Pendamethelene 2.5 lt/ha. to control of emergence weeds</p> <p>40-45 days : Broadcasting of Sulphur 12.5 Kg/ha</p>

		55 days : Spray of Carbendazim 12% WP 1kg/ha 70 days : Spray of Neem oil 1 lit/ha to control of aphids
18	Stage of the crop	Vegetative stage
19	Expected harvesting date/dates as per clusters	15 to 30 March , 2019

### III. Details on cluster FLD farmers

### IV. Critical inputs provided for demonstration

Sl. No.	Critical inputs	Name of critical input	Quantity	Value (Rs.)	No. of farmers	No. of villages	No. of clusters
1	Seeds (name variety) (RH-749)	Seed	5.0 Kg.	500.00	25	11	11
2	Micro-nutrients	Sulphur	25 Kg/ha.	115.00	25	11	11

### V. Training programmes organized

Sl. No.	Date	Type of training (on/off campus)	Title of training programme	Participant farmers (general)- A			Participant farmers (SC/ST)-B			Total participants (A+B)		
				Men	Women	Total	Men	Women	Total	Men	Women	Total
1.	11.09.2018	On campus	Technical farming in Mustard	20	-	20	5	-	5	25	-	25
2.	05.01.2019	Off Campus	Integrated weed management in Mustard	20	-	20	5	-	5	25	-	25

## VI. Extension activities including field visits organized

Sl.No.	Date	Name of extension activity	Participant farmers			Participant extension personnel		
			Men	Women	Total	Men	Women	Total
1.	12.12.2018	Field visit	5	-	5	5	-	5
2.	20.12.2018	Field visit	4	-	4	4	-	4
3.	24.01.2019	Field visit	10	-	10	10	-	10
4.	15.02.2019	Field visit	7	-	7	7	-	7

## VII. Performance (results) of the demonstrations

### (A) General information

Name of the crop	Demos (No.)	Variety		National average yield (q/ha)	State average yield (q/ha)	District average yield (q/ha)	Characteristics of the demo variety	Potential yield of the demo variety (q/ha)	Yield gap – I (%)	Yield gap – II (%)
		Check	Demo							
Mustard (Rabi 18-19)	25	Pusa Bold	RH-749	7.8	11.36	11.05	1. One time maturity 2.High yielding variety	24	30.75	41.63

### (B) Yield and net returns

Yield obtained (q/ha)						Yield increase (%)	Expenditure and returns (Rs./ha)								Net returns increase (%)
Check			Demo				Check				Demo				
Max.	Min.	Av.	Max.	Min.	Av.		Gross Cost (Rs/ ha)	Gross return (Rs/ ha)	Net Return (Rs/ha)	B:C ratio	Gross Cost (Rs/ ha)	Gross return (Rs/ ha)	Net Return (Rs/ha)	B:C ratio	
15.65	8.75	14.7	18.75	14.50	18.62	26.66	22630	61740	39110	2.72	23245	78204	54959	3.36	40.52



### (C) Results on specific technologies other than varieties

### (D) Socio-economic impact parameters

Sl. No.	Parameters	Crop-1	Crop-2	Crop3
1	Name of the crop	Mustard		
2	Variety	RH-749		
	No. of clusters	11		
3	No. of farmers	25		
4	Total area (ha)	10.0		
8	Selling price (Rs./q)	4000		

### VIII. Observations and feed-back

(a) Observations by Scientist(s) from KVK-Higher oil content up to 42 %

(b) Farmers opinion/feed-back- High Yielding Variety

### IX. Quality photographs for all activities to be submitted along with this format



## II. Cluster FLDs on pulses under NFSM (Kharif 2019)

1	Name of the crop	Urdbean (Blackgram)
2	Season and year	Kharif 2019
3	No. of FLDs (farmers) sanctioned	25
4	No. of FLDs (farmers) conducted	25
5	Area (ha) sanctioned	10
6	Area (ha) actually conducted	10
7	Sanctioned budget (Rs.)	180000.00
8	Budget received actually (Rs.)	180000.00
9	Actual expenditure (Rs.)	37700.00
10	Balance amount (Rs.)	33772.00
11	FLDs implemented in how many clusters?	Eleven
12	No. of villages and farmers in each cluster	5 villages & 5-9 farmers in each clusters
13	Land situation (irrigated, rainfed, others specify)	Irrigated
14	Name of variety/varieties demonstrated	PU-31
15	Technologies/package of practices demonstrated in each cluster	Seed 180 kg + Emizthpyr 750 gm/ha + Difenthuran 50% 1.25 Kg/ha
16	Sowing date/dates as per clusters	Cluster 1,2,&3- 15 to 30 August, & Cluster 4 & 5 - 17 to 25 August, 2018
17	Number of field operations taken so far like manuring, weeding, irrigation etc. and name them with approximate date/week	<p><b>Plant protection schedule-</b></p> <p>25-30 : Spray Emamectin Benzoate 5 % SG 250 g/ha. to control of green caterpillar</p> <p>45-50 : Carbendazim 50% WP 750 g/ha to control Corynespora leaf spot. + Imidacloprid 17.8 SL 250 ml /ha., to control of whitefly</p> <p>62 : Second spray Imidacloprid 17.8 SL 250 ml /ha., to control of whitefly &amp; aphids</p> <p>72 : Third spray Imidacloprid 17.8 SL 250 ml /ha., to control of whitefly &amp; aphids</p>
18	Stage of the crop	Harvested
19	Expected harvesting date/dates as per clusters	2 November to 15 November , 2019

#### IV. Critical inputs provided for demonstration

Sl. No.	Critical inputs	Name of critical input	Quantity	Value (Rs.)	No. of farmers	No. of villages	No. of clusters
1	Seeds (name variety)	Seed (PU 31)	180 Kg	15120.00	25	05	11
2	Fertilizers (Organic and inorganic)	-	-	-	-	-	-
3	Micro-nutrients	-	-	-	-	-	-
4	Weedicides, Pesticides, Fungicides etc.	1- Difenthran 50 %	6 Kg	17500.00	25	6	6
5	Bio-agents						
6	Bio-products	-	-	-	-	-	-
7	Nutrient complex/ nutrient special	-	-	-	-	-	-

#### V. Training programmes organized

Sl. No.	Date	Type of training (on/off campus)	Title of training programme	Participant farmers (general)-A			Participant farmers (SC/ST)-B			Total participants (A+B)		
				Men	Women	Total	Men	Women	Total	Men	Women	Total
1	04-08-19	Off	Improved cultivation of kharif pulses	18	-	18	02	-	02	20	-	20

#### VI. Extension activities including field visits organized

Sl.No.	Date	Name of extension activity	Participant farmers			Participant extension personnel		
			Men	Women	Total	Men	Women	Total
1	10-07-19	Field selection	03	-	03	-	-	-
2	16-07-19	Sowing of demo.	06	-	06	-	-	-
3	26-08-19	Field visit	04	-	04	-	-	-
4	29-08-19	Field visit	03	-	03	-	-	-
5	03-09-19	Field visit	02	-	02	06	-	06

## VII. Performance (results) of the demonstrations

### (A) General information

Name of the crop	Demos (No.)	Variety		National average yield (q/ha)	State average yield (q/ha)	District average yield (q/ha)	Characteristics of the demo variety	Potential yield of the demo variety (q/ha)	Yield gap – I (%)	Yield gap – II (%)
		Check	Demo							
Urdbean (Kharif 2019)	25	8.65	10.72	5.85	4.50	3.54	Year of release- 2008 Average yield (Q/ha.)-15 Days of maturity- 75 to 80 Resistant - YMV	12.5	14.24	19.30

### (B) Yield and net returns

Yield obtained (q/ha)						Yield increase (%)	Expenditure and returns (Rs./ha)								Net returns increase (%)
Check			Demo				Check				Demo				
Max.	Min.	Av.	Max.	Min.	Av.		Gross Cost (Rs/ ha)	Gross return (Rs/ ha)	Net Return (Rs/ha)	B:C ratio	Gross Cost (Rs/ ha)	Gross return (Rs/ ha)	Net Return (Rs/ha)	B:C ratio	
9.68	7.62	8.65	11.65	9.80	10.72	23.93	32363.0	48446.0	16077.0	1:1.49	36172.0	60032.0	23860.0	1:1.65	48.41

Sale rate – Rs.5600 /q

## VIII. Observations and feed-back

(a) Observations by Scientist(s) from KVK – Whitefly & green caterpillar are controlled only by chemical pesticides.

(b) Farmers opinion/feed-back- Blue bull & rain fall menace at pod formation stage.

IX. Visitors to cluster FLDs/study tours- D. D. Agriculture has visited the field.

X. Quality photographs for all activities to be submitted along with this format-





## Cluster Frontline Demonstrations on pulses under NFSM 2019-2020

### I. General Information

1	Name of the KVK	Hastinapur (Meerut)
2	Year of establishment	1992
3	Host Institution	S.V.P. University of Agriculture & Technology, Meerut (U.P.)
4	Address for communication including phone and fax numbers	KVK, Hastinapur (Meerut)
5	District	Meerut
6	State	Uttar Pradesh

### II. Cluster FLDs on Lentil under NFSM (Rabi 2019-20)

1	Name of the crop	Lentil
2	Season and year	Rabi 2019 -20
3	No. of FLDs (farmers) sanctioned	25
4	No. of FLDs (farmers) conducted	25
5	Area (ha) sanctioned	10
6	Area (ha) actually conducted	10
7	Sanctioned budget (Rs.)	129511.00
8	Budget received actually (Rs.)	0.00.00
9	Actual expenditure (Rs.)	41000.00
10	Balance amount (Rs.)	88511.00
11	FLDs implemented in how many clusters?	Six
12	No. of villages and farmers in each cluster	3 villages & 5-9 farmers in each clusters
13	Land situation (irrigated, rainfed, others specify)	Irrigated
14	Name of variety/varieties demonstrated	PL 8
15	Technologies/package of practices demonstrated in each cluster	Seed 30 kg/ha
16	Sowing date/dates as per clusters	Cluster 1,2,3 - 2 to 10 November, & Cluster 4, 5,6 - 12 to 20 Nov, 2019
17	Number of field operations taken so far like manuring, weeding, irrigation etc. and name them with approximate date/week	<b>Plant protection schedule-</b> 80 – : Spray of Flubendamide 39.35 SC 125 ml/ha 90days
18	Stage of the crop	Sowing time
19	Expected harvesting date/dates as per clusters	-

### III. Critical inputs provided for demonstration

Sl. No.	Critical inputs	Name of critical input	Quantity	Value (Rs.)	No. of farmers	No. of villages	No. of clusters
1	Seeds (name variety)	PL-8	12 kg/acre	1680.0	50	15	06

### IV. Training programmes organized

Sl. No.	Date	Type of training (on/off campus)	Title of training programme	Participant farmers (general)-A			Participant farmers (SC/ST)-B			Total participants (A+B)		
				Men	Women	Total	Men	Women	Total	Men	Women	Total
1.	25.11.19	On campus	Agronomics practices of Lentil	15	-	15	05	-	05	20	-	20
2.	03.12.19	On campus	Agronomics practices of Lentil	13	-	13	07	-	07	20	-	20

### V. Extension activities including field visits organized

Sl. No.	Date	Name of extension activity	Participant farmers			Participant extension personnel		
			Men	Women	Total	Men	Women	Total
1.	05.12.19	Visit of Demonstration field	20	-	20	02	-	02
2.	11.01.20	Visit of Demonstration field	20	-	20	03	-	03
3.	23.02.20	Visit of Demonstration field	20	-	20	03	-	03

## VI. Performance (results) of the demonstrations

### (A) General information

Name of the crop	Demos (No.)	Variety		National average yield (q/ha)	State average yield (q/ha)	District average yield (q/ha)	Characteristics of the demo variety	Potential yield of the demo variety (q/ha)	Yield gap – I (%)	Yield gap – II (%)
		Check	Demo							
Lentil (Rabi 19-20)	25	Local	PL-8	6.33	7.15	10.53	1. Disease resistance. 2. One time maturity	17.00	12.64	23.90

### (B) Yield and net returns

Yield obtained (q/ha)						Yield increase (%)	Expenditure and returns (Rs./ha)								Net returns increase (%)
Check			Demo				Check				Demo				
Max.	Min.	Av.	Max.	Min.	Av.		Gross Cost (Rs/ ha)	Gross return (Rs/ ha)	Net Return (Rs/ha)	B:C ratio	Gross Cost (Rs/ ha)	Gross return (Rs/ ha)	Net Return (Rs/ha)	B:C ratio	
12.50	10.20	11.35	14.35	12.15	13.25	16.74	37425	50791	13266	1.35	38290	59293	21003	1.54	58.32

### (C) Socio-economic impact parameters

Sl. No.	Parameters	Crop-1	Crop-2	Crop3
1	Name of the crop	Lentil		
2	Variety	PL-8		
3	No. of clusters	09		
4	No. of farmers	25		
5	Total area (ha)	10		
6	Selling price (Rs./q)	4475		

## VII. Observations and feed-back

(a) Observations by Scientist(s) from KVK- Less incidence of disease

(b) Farmers opinion/feed-back-

1. Maturity stage 125days
2. Low water requirement
3. High yielding variety in comparisons to old variety

## VIII. Visitors to cluster FLDs/study tours etc.-

## IX. Visitors to cluster FLDs/study tours etc.



## Progress Report of CRM

### Status of implements

Happy Seeder			Paddy Straw Chopper / Shredder / Mulcher			Shrub Master / Cutter Cum Spreader			Reversible M.B. Plough			Zero Till Seed Cum Fertilizer Drill		
Physical targets (Nos)	Physical Ach. (Nos)	Financial Ach. (Rs)	Physical targets (Nos)	Physical Ach. (Nos)	Financial Ach. (Rs)	Physical targets (Nos)	Physical Ach. (Nos)	Financial Ach. (Rs)	Physical targets (Nos)	Physical Ach. (Nos)	Financial Ach. (Rs)	Physical targets (Nos)	Physical Ach. (Nos)	Financial Ach. (Rs)
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

### IEC Activities Under CRM

District level		Block level		Village Panchayat level		Expenditure (Rs.)
No. of Camps	No. of farmers	No. of Camps	No. of farmers	No. of Camps	No. of farmers	
2	1750	12	739	3	290	25000

Training courses conducted (Nos.)			Demonstration conducted			
No. of Programmes	No. of Trainees Participated	Expenditure (Rs.)	No. of Demonstration	Area	No. of Farmers Participated	Expenditure



<b>Mobilization of schools through essay competition, painting, debates, etc.</b>				<b>Mobilization of college through essay competition, painting, debates, etc.</b>			
No. of School mobilized	No. of activities	No. of students participated	Expenditure (Rs.)	No. of School mobilized	No. of activities	No. of students participated	Expenditure (Rs.)
3	3	620	25000	3	2	315	12600

<b>Column / Articles in newspaper and magazines etc.</b>		<b>Publicity material - leaflets/pamphlets etc. distributed</b>		<b>Participated in TV programmes / panel discussions Doorsarshan/ DD-Kisan and other private channels</b>	
No	Expenditure (Rs.)	No	Expenditure (Rs.)	No	Expenditure (Rs.)
6	0	5000	14700	2	0

<b>Field Days Organized</b>			<b>Advertisement in Print media</b>		<b>Award for village/Gram Panchayat for achieving zero stubble burning</b>	
No. of field days	No. of Farmers participated	Expenditure	No.	Expenditure	No.	Expenditure (Rs.)
3	178	0	1000	26000	5	0







# Programmes under NARI – Jan to Dec, 2019

## SUMMARY

### TRAINING PROGRAMMES

Clientele	No. of Courses	Female	Total participants
Technology Assessment	01	05	05
FLDs	03	30	30
Training Programmme	20	360	360
	<b>24</b>	<b>395</b>	<b>395</b>



## I. TECHNOLOGY ASSESSMENT

### Summary of technology assessed

Thematic areas	Crop	Name of the technology assessed	No. of trials	No. of farmers
Small Scale Income Generation Enterprises & Nutritional Management	Pulses	Value addition of pulse and vegetables – Preparation of badi	10	05

### On Farm Trial –1

#### THEMATIC AREA: Nutritional Management

**Problem definition:** Nutrient inadequacy

**Technology Assessed:** Assessment of role of SHG for income generation through preparation from different pulses and vegetable Badi.

Preparation of *Badi* were assessed at different locations in comparison to often in practice. *Badi* with pulses & vegetable + spices was found better in respect of local practice. *Badi* with pulses and vegetable is more nutritional property, tasty, more self life and also add additional income .



**Table: Production performance**

Technology Option	No. of trials	Yield (kg)	Increase in yield (%)	Performance indicators		Cost of cultivation (Rs)	Gross return (Rs)	Net Profit (Rs)	B:C Ratio
				Indicator	Performance				
T <sub>1</sub> - Farmer practice – Preparation of Badi from few pulses	10	1.5	--	Nutritive value	Rich in protein & minerals Better keeping quality Income Generating	120	150	30	1:1.25
T <sub>2</sub> - Preparation of Badi from different type of pulses and vegetables.		1.5	-	Sale opportunity		210	390	180	1:1.8

**FEED BACK:** Remarkable acceptance of Badi due to easy availability, more nutritional property and help in income generation.



## II. Details of FLDs implemented during year 2019

SN	Crop/ Enterprise	Thematic area	Technology Demonstrated	Season / year	Area (ha)	No. of farmers/ demonstration		
						SC/ST	Others	Total
1	Kitchen garden	House hold food security	Demonstration of well planned Kitchen Garden (100 m <sup>2</sup> )	Rabi 2018-19	0.1	3	7	10
2	Tomato	Value addition	Preparation of Tomato Ketchup	Kharif 2019	0	5	5	10
3	Tomato	Value addition	Preparation of Tomato Puree	Kharif 2019	0	5	5	10

### FLD on Other Enterprise: Kitchen Gardening

Category and Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units	Yield (Kg)		% change in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demo.	Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Kitchen garden	House hold food security	Kitchen gardening	10	10	70	25	180	450	1750	1300	1:3.8	250	500	250	1:2.0



## FLD on Women Empowerment

Category and Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units	Yield	Economics of demonstration (Rs./ha)			
					Demo.	Gross Cost	Gross Return	Net Return	BCR (R/C)
Tomato	Value Addition	Gradational income though Tomato by preparing Ketchup	10	10	3 Kg	140	390	250	2.7
		Gradational income though Tomato by preparing Tomato Puree	10	10	2.5 Kg	80	250	170	3.1



### Technical Feedback on the demonstrated technologies

SN	Crop/ Animal	Feed Back
1	Tomato	Value addition of Tomato through preparation of ketchup & Puri increased gradational income as compared to direct selling of Tomato in local market.
2	Kitchen Garden	Under the demonstration on household food security the respondents are getting fresh and potable green seasonal vegetables throughout the year. In addition to this, a handsome amount is being saved by using the home produced vegetables. Farm women were very much happy by getting plenty of vegetable and fruits.

### Farmers' reactions on specific technologies

S. No	Crop	Feed Back
1	Tomato	Preparation of Ketchup & Puri is easy to prepare and proved a viable technology to get additional income by selling it in nearby market and get better price.
2	Kitchen Garden	Farmers enjoyed the sufficient, chemical free, cheaper and quality green fresh vegetables for almost throughout the year.



### III. Training Programme

#### Farmers' Training including sponsored training programmes (On campus)

Thematic area	ON CAMPUS									
	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Household food security by kitchen gardening and nutrition gardening	1	0	2	2	0	18	18	0	20	20
Minimization of nutrient loss in processing	2	0	9	9	0	31	31	0	40	40
Women & Child care	1	0	9	9	0	11	11	0	20	20
<b>Total</b>	<b>4</b>	<b>0</b>	<b>20</b>	<b>20</b>	<b>0</b>	<b>60</b>	<b>60</b>	<b>0</b>	<b>80</b>	<b>80</b>

#### Off Campus

Thematic area	Off CAMPUS									
	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Household food security by kitchen gardening and nutrition gardening	2	0	14	14	0	26	26	0	40	40
Minimization of nutrient loss in processing	1	0	18	18	0	02	02	0	20	20
Design and development of low cost diet	1	0	20	20	0	0	0	0	20	20
Women empowerment	3	0	56	56	0	4	4	0	60	60
Women and child care	2	0	27	27	0	13	13	0	40	40
Value addition	1	0	18	18	0	2	2	0	20	20
<b>Total</b>	<b>10</b>	<b>0</b>	<b>153</b>	<b>153</b>	<b>0</b>	<b>47</b>	<b>47</b>	<b>0</b>	<b>200</b>	<b>200</b>





**Consolidated (On + Off)**

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>V Home Science/Women empowerment</b>										
Household food security by kitchen gardening and nutrition gardening	3	0	16	16	0	44	44	0	60	60
Design and development of low/minimum cost diet	1	0	20	20	0	0	0	0	20	20
Minimization of nutrient loss in processing	3	0	27	27	0	33	33	0	60	60
Women empowerment	3	0	56	56	0	4	4	0	60	60
Women and child care	3	0	36	36	0	24	24	0	60	60
Value addition	1	0	18	18	0	2	2	0	20	20
<b>Total</b>	<b>14</b>	<b>0</b>	<b>173</b>	<b>173</b>	<b>0</b>	<b>107</b>	<b>107</b>	<b>0</b>	<b>280</b>	<b>280</b>



**Training for Rural Youths including sponsored training programmes (On campus)**

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Value addition	2	-	9	9	-	11	11	-	20	20



**Training programmes for Extension Personnel including sponsored training programmes (on campus)**

Area of Training	No. of courses	ON CAMPUS								
		Participants								
		Others			SC/ST			Grand Total		
Male	Female	Total	Male	Female	Total	Male	Female	Total		
Women and Child care	3	0	35	35	0	10	10	0	45	45
House hold food security	1	0	12	12	0	3	3	0	15	15
<b>TOTAL</b>	<b>4</b>	<b>0</b>	<b>47</b>	<b>47</b>	<b>0</b>	<b>13</b>	<b>13</b>	<b>0</b>	<b>60</b>	<b>60</b>



## Other Activities- Awareness Generation

1. Motivating to the Farm Women for Roof top Nutritional garden



Roof top Nutritional garden

2. Value Addition, Mixing and Enrichment through locally available Food Stuff to increase their nutritive value



Bottlegourd Burffi



Wheat Flour Jave



## Establishment of IFS Model

S.No.	Component	Area in ha	% share
<b>I.</b>	<b>CROP PRODUCTION</b>	<b>0.4</b>	<b>40</b>
A.	Wheat	0.3 (Rabi)	
B.	Paddy	0.3 (Kharif)	
c.	Fodder	0.1 (whole year)	
<b>II.</b>	<b>HORTICULTURE:</b>	<b>0.5</b>	<b>50</b>
A.	Vegetable Pea	0.1 ( Rabi)	
B.	Marigold	0.1 ( Kharif & Rabi )	
c.	Bhindi	0.1(Summer & Kharif)	
d.	Radish, Carrot,Onion, Garlic	On ridges	
e.	Mango Orchards	0.1	
f.	High Density Guava Orchard	0.15	
g.	Nursery	0.05	
<b>III.</b>	<b>Fodder on Bund</b>		
<b>IV.</b>	<b>COMPOSITE FISH FARMING</b>	<b>0.07</b>	<b>7</b>
<b>V.</b>	<b>LIVE-STOCK</b>	<b>0.24</b>	<b>2</b>
A.	Buffallow	02+ 3 no.	
B.	Goats	17+2 no.	
<b>VI</b>	<b>Other units</b>	<b>0.01</b>	<b>1</b>
A.	VermiCompost	01 unit ( 06 beds)	
B.	NADEP	01 unit	
C.	Bee Keeping	10 boxes	
VII	Layout, Road, Irrigation Channel, Fencing		
<b>TOTAL</b>		<b>1.0</b>	<b>100</b>



## AGRICULTURAL TECHNOLOGY INFORMATION CENTRE

Prof. Gaya Prasad, Hon'ble Vice Chancellor, Sardar Vallabhbhai Patel University of Agriculture and Technology, Modipuram, Meerut inaugurated "Agriculture Technology Information Centre cum Museum" at KVK Meerut. The ATIC established at KVK campus demonstrating the latest sustainable technologies and other farmer's oriented activities based on priority thrust areas covering various aspects of Crop Production, Plant Protection, Animal Husbandry, Horticulture and Home Science by displaying live demos, models, flex charts comprising information on livestock based entrepreneurship development, women empowerment, alternate cropping systems, various tools of bio intensive pest management, protected cultivation of horticultural crops, soil health management and technical literature.



### F. Details on ATICs

S. No	Name of the ATIC	Name of the Host Institute	Name of the ATIC Manager
1	KVK, Meerut	SVPUA&T, Meerut	Dr. Omvir Singh

### G. Details on Farmer's visit

S. No	Purpose of visit	Number of farmer's visited
01	Technology Information	1721

### Facilities in the ATIC which are in operation

S. No	Particulars	Availability (Please $\checkmark$ mark)	Number of ATICs
1	Reception counter	$\checkmark$	1
2	Exhibition / technology museum	$\checkmark$	
3	Cafeteria	$\checkmark$	
4	Sales counter	$\checkmark$	
5	Farmer's feedback register	$\checkmark$	
6	Others if any (Visitor Register)	$\checkmark$	



## D.2 . Publications (Print & Electronic media)

S. No	Particulars	Number sold	Number of farmers benefited
1	Books	2	Mass
2	Technical bulletins	11	Mass
3	TV Talk	09	Mass
4	Radio Talk	03	Mass

## Technology Products provided

Particulars	Quantity	Unit of quantity	Value in Rs.	Number of farmers benefited
Seeds	240.0	Quintal	468000.00	-
Planting materials	26500	Numbers	6510.00	54
Livestock	1244	lit. milk	55980	
Bio-products	Honey 12	Kg.	2400	
Vormi Compost	1000	Kg.	3000	

## F. Technology services provided

S. No	Particulars	Number of farmers benefited
1	Soil and water testing	3971
2	Plant diagnostics	63



## Revolving fund generated

Particulars	Quantity	Unit of quantity	Value in Rs.	Number of farmers benefited
Seeds	240.0	Quintal	468000.00	-
Planting materials	26500	Numbers	6510.00	54
Livestock	1244	lit. milk	55980	
Bio-products	Honey 12	Kg.	2400	
Vormi Compost	1000	Kg.	3000	

**Status of revolving fund :** Rs. 666000.00 current balance

## Celebration of Soil Health Day

Soil Health Day was celebrated at the centre on 05, December 2018. On the occasion 72 farmers were benefited by getting soil health cards and total 100 farmers were present in the event.



## Status of Budget

Sl. No.	Others Receipt & Expenditure			
	Head	Grant Sanction	Expenditure	Balance
1	Skill Development Training	330400.00	0	330400.00
2	Crop Residue Management	2965000.00	1587437.00	1377563.00
3	Pre Rabi Campaign (Krishi Unniti mela)	60000.00	34950.00	25050.00
4	Cluster FLD of Pulses	254179.00	74462.00	179717.00
5	Cluster FLD of Oilseeds	119543.00	20584.00	98959.00
	<b>Grand Total</b>	<b>3729122.00</b>	<b>1717433.00</b>	<b>2011689.00</b>