

**PROFORMA FOR PREPARATION OF ANNUAL REPORT (April-2017-March-2018)****APR SUMMARY**

(Note: While preparing summary, please don't add or delete any row or columns)

**1. Training Programmes**

Clientele	No. of Courses	Male	Female	Total participants
Farmers & farm women	86	1720	-	1720
Rural youths	06	59	01	60
Extension functionaries	23	230	-	230
Sponsored Training	02	100	-	100
Vocational Training	06	59	01	60
<b>Total</b>	<b>123</b>	<b>2168</b>	<b>02</b>	<b>2170</b>

**2. Frontline demonstrations**

Enterprise	No. of Farmers	Area (ha)	Units/Animals
Oilseeds	26	10.4	-
Pulses	100	40.0	-
Cereals	100	38.0	-
Vegetables	05	2.0	-
Other crops	10	4.0	-
Hybrid crops			-
<b>Total</b>	<b>241</b>	<b>94.4</b>	<b>-</b>
Livestock & Fisheries			-
Other enterprises			-
<b>Total</b>			<b>-</b>
<b>Grand Total</b>			<b>-</b>

**3. Technology Assessment & Refinement**

Category	No. of Technology Assessed & Refined	No. of Trials	No. of Farmers
<b>Technology Assessed</b>			
Crops	06	29	29
Livestock			
Various enterprises	02	07	07
<b>Total</b>	<b>08</b>	<b>36</b>	<b>36</b>
<b>Technology Refined</b>			
Crops			
Livestock			
Various enterprises			
<b>Total</b>			
<b>Grand Total</b>	<b>08</b>	<b>36</b>	<b>36</b>

**4. Extension Programmes**

Category	No. of Programmes	Total Participants
Extension activities	985	25335
Other extension activities	62	-
<b>Total</b>		

## 5. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	
Moradabad	Text only							
	Voice only							
	Voice & Text both							
	<b>Total Messages</b>							
	<b>Total farmers Benefitted</b>							

## 6. Seed & Planting Material Production

	Quintal/Number	Value Rs.
Seed (q)	59.60	299145.00
Planting material (No.)	1100	-
Bio-Products (kg)	25 kg	-
Livestock Production (No.)		
Fishery production (No.)		

## 7. Soil, water & plant Analysis

Samples	No. of Beneficiaries	Value Rs.
Soil	224	24200.00
Water		
Plant		
<b>Total</b>		-

## 8. HRD and Publications

Sr. No.	Category	Number
1	Workshops	02
2	Conferences	01
3	Meetings	
4	Trainings for KVK officials	06
5	Visits of KVK officials	02
6	Book published	
7	Training Manual	
8	Book chapters	
9	Research papers	02
10	Lead papers	
11	Seminar papers	
12	Extension folder	07
13	Proceedings	01
14	Award & recognition	
15	On going research projects	

## 1. GENERAL INFORMATION ABOUT THE KVK

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

Address	Telephone		E mail
Krishi Vigyan Kendra	Office	FAX	
Rustam Nagar (Bilari) Moardabad (U.P.) - 202411	-	-	moradabadkvk@gmail.com

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

Address	Telephone		E mail
	Office	FAX	
Director of Extension	0121-2888511	0121-2888511	
<b>S.V.P.U. Agri. &amp; Tech., Meerut</b> (U.P.) - 250110			

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. R.K.Singh	-	9412809032	moradabadkvk@gmail.com

### 1.4. Year of sanction: 2004 (F.No.2-11/99-AE-11(PT) dated 13.12.2004

### 1.5. Staff Position (as on 30<sup>th</sup> March 2018)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale (Rs.)	Present basic (Rs.)	Date of joining	Permanent /Temporary	Mobile No.	Age	Email id
1	Sr. Scientist & Head	Dr. R.K. Singh	Professor / Head.	Agricultural EXTension	37400-67400	53420 + 9000	14-10-2010	Permanent	9412809032	53	moradabadkvk@gmail.com
2	Subject Matter Specialist	Dr. P.L. Rawat	Assoc. Dir.	Horticulture	37400-67400	43110+ 9000	25.01.2010	Permanent	9411088138	61	Plr2008@gmail.com
3	Subject Matter Specialist	Dr. Hasan Tanveer	SMS/ Asst. Prof.	Plant Breeding	15600-39100	21390 + 6000	23-06-2008	Permanent	9369156642	48	htshahi@yahoo.com
4	Subject Matter Specialist	Dr. Arvind kumar	SMS/ Asst. Prof.	Plant Protection	15600-39100	25850 + 7000	23-06-2008	Permanent	9412170753	48	
5	Subject Matter Specialist	Dr. Mohan Singh	SMS/ Asst. Prof.	Soil Science	15600-39100	25020 + 7000	25-06-2008	Permanent	9457802593	46	drmsinghkvk@gmail.com
6	Subject Matter Specialist	Dr. A.K. Misra	SMS/ Asst. Prof.	Agronomy	15600-39100	25020+ 7000	09-07-2008	Permanent	9368566251	49	dr.misraak@rediffmail.com

7	Subject Matter Specialist	-	-	Home science	-	-	-	-			
8	Prog. Assistant	Sh. Ravinder Pal Singh	Prog. Assistant	Agri. Extension	9300-34800	46200	26-12-2008	Permanent	9411220240	47	rpskvkbsr@gmail.com
9	Prog. Assistant	Sri. Nagendra Pratap Singh	Computer Programmer/ Programme Assistant	PGDCA	9300-34800	47600	01-09-2007	Permanent	9412060554	43	nagendrapratap1973@gmail.com
10	Farm Manager	Dr. Hambir Singh	Farm Manager	Plant Breed	9300-34800	47600	18-08-2007	Permanent	9759173168	49	
11	Accountant / Superintendent	Sri. Sanjay Kumar Sharma	OS/ Accountant	Accounts	9300-34800	62200	18-09-2000	Permanent	9412650468	45	sksharmakvk@gmail.com
12	Stenographer/ computer operator	Sri. Ajay Tomar	Stenographer/ computer operator		5200-20200	35300	30-07-2007	Permanent	8171960800	34	
13	Driver	Sh. Virendra Kumar Mishra	Driver	-	5200-20200	31400	05.12.2003	Permanent	9984580773	44	
14	Driver		Vacant	Vacant					Vacant		
15	Supporting staff	Sri. Ram Kishore	Vill. Attendant	-	2550-3290	32300	09-01-1996	Permanent	9837137652	59	
16	Supporting staff	Sri Sarvesh Kumar	Attendant	-	2550-3290	24200	27-02-2008	Permanent	9760866548	34	

**1.6. Total land with KVK (in ha) : 17.5 ha**

S. No.	Item	Area (ha)
1	Under Buildings, ,Road, Channels and boundary etc.	3.0984
2.	Under Demonstration Units	0.0016
3.	Under Crops	13.0
4.	Orchard/Agro-forestry	0.9
5.	Others (specify)	0.5

## 1.7. Infrastructural Development:

### A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.) Lac	Starting date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR		510				Completed
2.	Farmers Hostel	ICAR		300				-do-
3.	Staff Quarters (6)	ICAR		431				-do-
4.	Demonstration Units (2)	ICAR		160				-do-
5	Fencing	ICAR		2000 R/M				-do-
6	Rain Water harvesting system	-	-	-				-
7	Threshing floor	ICAR		300				-do-
8	Farm godown	ICAR		60				-do-
9	Irrigation Channel	ICAR		1000 M				-do-

### B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.) Lac	Total kms. Run	Present status
Tractor	2005	3.45		Good condition
Bolero Jeep	2007	4.59		Good condition
Motor cycle	2008	0.52		Good condition

### C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
L.C.D. Projector	2007	57000.00	Good condition
U.P.S.	2007	TRF from H.Q.	Good condition
Solar (Lalten)	2007	4040.00	Good condition
Electric Padestral Fan	2005	2410.00	Good condition
Padestral Fan	2005	1725.00	Good condition
11 cultivator	2005	12265.00	Good condition
14 Tawa Harrow	2005	24540.00	Good condition
Leveller	2005	6870.00	Good condition
Nepsake Spray (Plastic)	2005	1428.00	Good condition
Foot Sprayer	2005	1362.00	Good condition
Disk Bund Farmer	2006	8250.00	Good condition
Seed Drill	2006	23415.00	Good condition
Hand Rotary Fan	2006	1161.00	Good condition
Trailer for Tractor	2006	64524.00	Good condition
Hand Vinoi Fan	2006	1450.00	Good condition
S.D. Memory cord of LCD with Recorder	2007	4000.00	Good condition
Solar domestic ligh (Model IV)	2008	25775	Good condition

### 1.8. A). Details SAC meeting\* conducted in the year

वैज्ञानिक सलाहकार समिति द्वारा दिये गये सुझावों का विवरण –

Sl.No.	Date	Name and Designation of participants	Silent Recommendations	Action taken
1	20 December 2017	डा० अतर सिंह प्रधान वैज्ञानिक अटारी – कानपुर	1. कृषि विज्ञान केन्द्र के प्रक्षेत्र के आधार पर बीज उत्पादन का लक्ष्य निर्धारित किया जाये।	डा० हम्वीर सिंह (प्रक्षेत्र प्रबन्धक)
			2. खरपतवार नियंत्रण पर प्रथम पंक्ति प्रदर्शन के साथ –साथ प्रशिक्षण भी दिया जाये।	डा० ए०के० मिश्र, वि०व०वि० / सहा०प्रा० (सस्य विज्ञान)
			3. हाइड्रोजेल के प्रयोग पर प्रदर्शन आयोजित किये जाये।	डा० ए०के० मिश्र, वि०व०वि० / सहा०प्रा० (सस्य विज्ञान)
			4. पादप प्रजनन की OFT में T <sub>1</sub> व T <sub>2</sub> स्पष्ट रूप से लिखी जाये।	डा० हसन तनवीर वि०व०वि० / सहा०प्रा० (पादप प्रजनन)
			5. जनपद की प्रमुख फसलों के बीज उत्पादन पर फसल की प्रत्येक अवस्था पर प्रशिक्षण दिया जाये।	डा० हसन तनवीर वि०व०वि० / सहा०प्रा० (पादप प्रजनन)

		<b>डा0 एस0के0 सचान निदेशक प्रसार</b>	<p>1. सभी विषयों पर प्रदर्शन लगाने से पूर्व मृदा परीक्षण कराया जायें ।</p> <p>2. केन्द्र पर स्थापित एटिक में धान व गेहूँ के उन्नत प्रजातियों के लाइव स्पेसीमेन गमलों में लगाये जायें ।</p> <p>3. कृषि तकनीकी के विभिन्न चार्ट, पोस्टर कृषकों की जानकारी हेतु केन्द्र पर लगाये जाये ।</p>	समस्त वैज्ञानिक
		<b>डा0 योगेश प्रसाद प्राध्यपक (उद्यान विज्ञान)</b>	<p>1. फलदार वाली फसलों पर प्रशिक्षण दिया जायें ।</p> <p>2. नाडेप/वर्मी कम्पोस्ट व मधुमक्खी पालन यूनिट की स्थापना केन्द्र पर की जायें ।</p>	डा0 हसन तनवीर वि0व0वि0 / सहा0प्रा0 (पादप प्रजनन)
				समस्त वैज्ञानिक
		<b>जिला कृषि अधिकारी, मुरादाबाद</b>	<p>1. सभी वैज्ञानिक अपने विषय से सम्बन्धित कृषि विज्ञान केन्द्र पर क्रापकैफेटेरिया लगाये तथा उसके आय –व्यय का लेखा जोखा रखें ।</p>	डा0 पी0एल0 रावत वि0व0वि0 / सहनिदेशक (उद्यान विज्ञान)
				डा0 अरविन्द कुमार वि0व0वि0 / सहा0प्रा0 (पादप सुरक्षा) एवं डा0 मोहन सिंह वि0व0वि0 / सहा0प्रा0 (मृदा विज्ञान)
				समस्त वैज्ञानिक

## 2.0 DETAILS OF DISTRICT (2017-18)

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

S.N.	Farming system/enterprise
1.	<b>Major crops</b> – Paddy, Wheat, Mustard, Sugarcane, Mentha, Lentil, Potato.
2.	<b>Crop rotation</b> – Rice-Sugarcane, Rice- Wheat, Urd-Mustard-Mentha, Jowar-Mustard-Mentha
3.	Agriculture + Hort. + Livestock
4.	Agri. + Livestock
5.	Landless + Livestock

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

S. No.	AES	Characteristics of A.E.S.	Major commodities	Farming system	Block
1	I- Central western plain zone of the district	-Loam and clay loam with high fertility - medium rainfall	Rice, wheat, mentha, sugarcane, chilli, cauliflower, cabbage, mango, guava, buffalo, cows	Paddy, wheat, sugarcane+ Poplar+ A.H. (Cow, buffalo)	Thakurdwara, Dilari, Moradabad, Bhagatpur tanda and Chhajlait
2	II. Central western Plain zone/ Central east southern region of the district	-Sandy loam to loam soil of medium fertility - medium rainfall	Rice, wheat, mentha, sugarcane, mustard as well as vegetables (pea, cucumber, chilli, tomato, potato) and mango fruit, buffalo, cows	Paddy, wheat, potato, sugarcane, mentha, mustard based systems + horticulture + A.H.	Billari
3	III Central western plain zone Central region of the district	-Sandy loam to loam and clay soil of medium fertility - medium rainfall	Rice, wheat, mentha, sugarcane, potato, guava, mango, poplar etc.	Paddy, wheat, sugarcane, mentha based systems poplar + A.H.+ Hort.	Munda pandey, Kundarki and Asmoli

### 2.3 Soil type/S

S.No.	Soil type	Area (ha)
1	Clay loam	81930
2	Sandy soil	25537
3	Sandy loam	84518
4	Loam	126433
	<b>Total</b>	<b>317919</b>



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

S. No	Crop	Area (ha)	Production (MT)	Productivity (Qtl /ha)
<b>A</b>	<b>FIELD CROPS INCLUDING OIL SEEDS AND PULSES</b>			
1.	Wheat	1,21959	37252	30.54
2.	Lentil	621	560	9.02
3.	Mustard /Toria	2256	2772	13.0
4.	Paddy (Rice)	94947	22652	23.86
5.	Bajra	31231	38.3	12.27
6.	Urd	3867	3046	14.73
7.	Sugarcane	46496	2951380	634.76
<b>B</b>	<b>VEGETABLES</b>			
1.	Potato	1071	24036	230.03
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				

#### 2.5 Weather data (rainfall in mm.) Dist. Moradabad

S. No.	Month	2017-18
1	Jan	3.13
2	Feb	3.01
3	March	2.51
4	April	0.00
5	May	0.00
6	June	53.70
7	July	218.20
8	Aug	142.39
9	Sept.	172.85
10	Oct.	0.00
11	Nov.	0.00
12	Dec.	0.00
	Total rainfall	595.97
	Avg. rainfall	49.66

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

Category	Population	Production	Productivity
<b>Cattle</b>			
<i>Crossbred</i>	11824	Data not available	Data not available
<i>Indigenous</i>	58421		
<b>Buffalo</b>	240704		
<b>Sheep</b>			
<i>Crossbred</i>	220		
<i>Indigenous</i>	40082		
<b>Goats</b>	208768		
<b>Pigs</b>	11195		
<i>Crossbred</i>	3165		
<i>Indigenous</i>	27159		
<b>Rabbits</b>	-		
<b>Poultry</b>	116205		
Hens	-		
<i>Desi</i>	-		
<i>Improved</i>	-		
Ducks	-		
Turkey and others	-		
Fish	172	3019	78.07

## 2.7 Details of operation area/villages (2017-18)

S. No.	Taluk/Village	Name of block	Major crops & enterprises	Major problem identified	Identified thrust area
1	Fattepur Natha	Bilari	Paddy, Wheat, Sugarcane Mentha, Mustard, Poplar, Dairy	Low Productivity of paddy, wheat, mustard, urd etc.  The main reason of low yield is due to lack of high yielding varieties, imbalance use of fertilizer & less awareness of insect and disease control timely.	Diversification in agriculture Lack of high yielding varieties.  Less availability of plant protection measures.
2	Bhurmaresi	Bilari	Paddy, Wheat, Sugarcane Mentha, Mustard, Poplar, Dairy	Low Productivity of paddy, wheat, mustard, urd etc.  The main reason of low yield is due to lack of high yielding varieties, imbalance use of fertilizer & less awareness of insect and disease control timely. Low yield of paddy, wheat, mentha & mustard	Diversification in agriculture Lack of high yielding varieties.  Less availability of plant protection measures.  Heavy infestation of weeds.
3	Khanpur	Bilari	Paddy, Wheat, Sugarcane Mentha, Mustard, Dairy, Chilli, bottle guard, colocacia	Poor milk production and infertility in animals. Lack of knowledge of quality planting material and	Diversification in Agriculture.  Use of improved variety and IPM, ICM.

				production technology in horticultural crops. Low yield of paddy, wheat, mentha & mustard	Heavy infestation of weeds.
4	Ram Nagar Gangpur	Bilari	Paddy, Wheat, Sugarcane Mentha, Mustard, Poplar, Dairy	Use of local varieties of different crops by the farmers.  Pest problems  Low yield of paddy, wheat, mentha & mustard	Diversification in Agriculture.  Use of improved variety and IPM, ICM.  Heavy infestation of weeds.
5	Sihari Ladda	Bilari	Paddy, Wheat, Sugarcane Mentha, Mustard, Dairy, Poplar,Chilli, Onion, Gartic, Cucurbits.	Lack of knowledge of improved varieties of different crops. - Pest problems - Lack of knowledge of inter cropping - Crop management & nutrient management. - Disease & insect control of cereals and vegetable crops. - Poor milk production and infertility in animals	- Diversification in agriculture. - Use of improved varieties.  - Inter cropping technique. - Crop management.  - Weed control  - Unawareness of diseases and insect control.

## 2.8 Priority thrust areas

S.N.	Crop/ Enterprise	Thrust area
1.	Rice/Wheat	Integrated plant nutrient management in rice -wheat cropping.
2.	Rice/Wheat	Integrated weed management in rice -wheat cropping
3.	Pulses	Enhancing the area under Kharif & Rabi pulses
4.	Oil seeds	Enhancing the area under Kharif & Rabi oil seeds.
5.	Cereals/Pulses/ Oil seeds	IPM in crops
6.	Cereals/Pulses/ Oil seeds	Promotion of new released varieties.
7.	Seed production	Promotion of seed production in different crops.
8.	Mango	Rejuvenation of old mango orchards
9.	Guava	Management of Guava orchards.
10	Vegetables	Promotion of organic farming in vegetables.
11	Floriculture	Promotion of income generating crops.
12	Bee-keeping	Popularization of Bee-keeping
13	Vermi compost	Popularization of Vermi composting

## 2.9 Intervention/ Programmes for the doubling the farmers income – during 2017-18

## Demonstrations

### Assesment of suitable combination of inter crop with spring S.cane (S.cane + Urd)

<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>Net income(Rs/ha)</b>	<b>B.C: Ratio</b>	<b>Remark if any</b>
Intercropping System(Zaid)							
Sole crop (S.cane)	753	-		115950/-	1,28937.0	1:2.11	

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

<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>Net income(Rs/ha)</b>	<b>B.C: Ratio</b>	<b>Remark if any</b>
Intercropping System(Zaid)							
(S.cane + Urd)	796.50	8.75	134.62	1,27450/-	1,73163.00	1:2.38	Inter crop with S.cane is more profitable as compare to sole crop.

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

**Sale rate – S.cane @ 325/- q Urd @ 5000/- q**

<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>Net income(Rs/ha)</b>	<b>B.C: Ratio</b>	<b>Remark if any</b>
Mono Cropping System(Kharif-Rabi-Zaid) -Livestock etc.							

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

<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>Net income(Rs/ha)</b>	<b>B.C: Ratio</b>	<b>Remark if any</b>
Mono Cropping System(Kharif-Rabi-Zaid) -Livestock etc.							

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

<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>Net income(Rs/ha)</b>	<b>B.C: Ratio</b>	<b>Remark if any</b>
Relay Cropping System(Kharif-Rabi-Zaid) -Livestock etc.							

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

<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>Net income(Rs/ha)</b>	<b>B.C: Ratio</b>	<b>Remark if any</b>
Relay Cropping System(Kharif-Rabi-Zaid)-Livestock etc.							

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

<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>Net income(Rs/ha)</b>	<b>B.C: Ratio</b>	<b>Remark if any</b>
Mixed Farming System(Kharif-Rabi-Zaid)-Livestock etc.							

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

<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>Net income(Rs/ha)</b>	<b>B.C: Ratio</b>	<b>Remark if any</b>
Mixed Farming System(Kharif-Rabi-Zaid) -Livestock etc.							

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

<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>Net income(Rs/ha)</b>	<b>B.C: Ratio</b>	<b>Remark if any</b>
IFS System(Kharif-Rabi-Zaid) - Livestock etc.							

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*



After Interventions	Main crop Yield(q/ha)	Inter crop Yield(q/ha)	Equivalent yield(q/ha)	Cost of cultivation(Rs/ha)*	Net income(Rs/ha)	B.C: Ratio	Remark if any
IFS System(Kharif-Rabi-Zaid) - Livestock etc.							

**Discussion:** Irrigation, Fertilizers, Labour, Land Preparation, Seed, Plant protection (Weed, Pest, disease) \*

Note- Same format may be used for OFT.

### 3.0 TECHNICAL ACHIEVEMENTS

#### 3.A. Details of targeted mandatory activities by KVK during 2017-18

OFT (Technology assessment & refinement)				FLD (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
06	08	26	36	67.2	44.0	191	115

CFLD (Oilseeds,Pulses,)			
3			
Area in ha.		Number of Farmers	
Targets	Achievement	Targets	Achievement
40.0	50.4	100	126

	Training (including sponsored, vocational trainings)				Extension Activities			
	4				5			
	Number of Courses		Number of Participants		Number of activities		Number of participants	
Clientele	T	A	T	A	T	A	T	A
Farmers	78	86	1560	1720	1463	1047	20000	25335
Rural youth	08	06	80	60				
Ext. Functionaries	18	23	180	230				
Sponsered traing	-	02		100				

Seed Production (Qtl.)			Planting material (Nos.)		
6			7		
Target	Achievement	Distributed to no. of farmers	Target	Achievement	Distributed to no. of farmers
200	480.60	Supply to NSC, Meerut	20000	1100	-

## I.A TECHNOLOGY ASSESSMENT

### A. Summary of technologies assessed under various CROPS by KVKs

Thematic areas	Crop	Name of the technology assessed	No. of trials	No. of Farmers
Integrated Nutrient Management	Wheat	Exaluation of Phosphorus & MOP fertilizer on soil test basis.	01	05
	Paddy	To test the different dose of fertilizers against soil test basis.	01	05
Varietal Evaluation	Wheat	Evaluation of higher yielding varities of wheat under late sown condition.	01	04
Integrated Pest Management	Paddy	Management of Stem borer in paddy	01	05
	S.cane	Control of early shoot borer in s.cane	01	04
Integrated Crop Management	Sugarcane with intercrope	Assisment of suitable combination of intercrop with spring sugarcane	01	03
Integrated Disease Management	Wheat	Management of yellow rust in wheat	01	05
Small Scale Income Generation Enterprises				
Weed Management	Paddy	Weed management in paddy	01	05
Resource Conservation Technology				
Farm Machineries				
Integrated Farming System				
Seed / Plant production				
Post Harvest Technology / Value addition				
Drudgery Reduction				
Storage Technique				
Others (Pl. specify)				
<b>Total</b>			<b>08</b>	<b>36</b>

## B. Summary of technologies assessed under livestock by KVKs

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Disease Management				
Evaluation of Breeds				
Feed and Fodder management				
Nutrition Management				
Production and Management				
Others (Pl. specify)				
<b>Total</b>				

## C. Summary of technologies assessed under various enterprises by KVKs

Thematic areas	Enterprise	Name of the technology assessed	No. of trials	No. of farmers

**Note:** Suppose **IPM in paddy** is the technology assessed by 50 KVKs in the Zone with 5 trials by each KVK, then IPM in paddy needs to be considered as a single technology, with  $50 \times 5 = 250$  trials and No. of KVKs will be 50. In addition, please note that even if IPM in paddy is done with various combinations of Technology Options (treatments), it may be considered as a single technology only.

## I.B. TECHNOLOGY REFINEMENT

### A. Summary of technologies refined under various CROPS by KVKs

Thematic areas	Crop	Name of the technology refined	No. of trials	No. of farmers
Integrated Nutrient Management				
Varietal Evaluation				
Integrated Pest Management				
Integrated Crop Management				
Integrated Disease Management				
Small Scale Income Generation Enterprises				
Weed Management				
Resource Conservation Technology				
Farm Machineries				
Integrated Farming System				
Seed / Plant production				
Value addition				
Drudgery Reduction				
Storage Technique				
Others (Pl. specify)				
<b>Total</b>				

## B. Summary of technologies refined under various livestock by KVKs

Thematic areas	Name of the livestock enterprise	Name of the technology refined	No. of trials	No. of farmers
Disease Management				
Evaluation of Breeds				
Feed and Fodder management				
Nutrition Management				
Production and Management				
Others (Pl. specify)				
<b>Total</b>				

## C. Summary of technologies refined under various enterprises by KVKs

Thematic areas	Enterprise	Name of the technology assessed	No. of trials	No. of farmers

**Note:** Suppose **IPM in paddy** is the technology refined by 50 KVKs in the Zone with 5 trials by each KVK, then IPM in paddy needs to be considered as a single technology, with  $50 \times 5 = 250$  trials and No. of KVKs will be 50. In addition, please note that even if IPM in paddy is done with various combinations of Technology Options (treatments), it may be considered as a single technology only.

## I.C. TECHNOLOGY ASSESSMENT AND REFINEMENT IN DETAIL

### OFT -1

#### **INTEGRATED CROP MANAGEMENT IN SUGARCANE (Zaid 2017)**

<b>Problem definition</b>	Low yield of sugarcane sole crop as compare to intercrop.
<b>Technology assessed or refined</b>	Assesment of suitable combination of inter crop with spring sugarcane.
<b>No. of Farmers</b>	03

KVK Moradabad has been conducted on-farm trials on suitable inter crop(Sugarcane, S.cane + Urd) combination with autumn s.cane.

Generally farmers are take a sole crop of s.cane, resulting low income of sole crop as compaired to inertcrop. The problem assessed on the basis of suitable & profitable combination selected.

**Table : Performance of sugarcane (CO - 0238) in relation to integrated crop management**

Technology Option	No.of trials	Yield of intercrop (q/ha.)	Cane yield (q/ha.)	Yield of Intercrop + Cane (q/ha.)	Yield increase (%)
Farmers practices (Single crop)	3	-	753.50	753.50	-
S.cane + Urd		8.75	796.50	805.25	5.47%

Gross return (Rs./ha.)			Net Return (Rs./ha)			B:C Ratio
S.cane	Intercrop	Cane + intercrop	S.cane	Intercrop	S.cane + intercrop	
244887	-	244887.0	128937	-	128937	2.11
258863	43750	302613	142913	32250	1731630	2.38

<b>Final recommendation</b>	The result indicated that intercropping of urd is sowing in two row spacing of S.cane gave, higher net return Rs. 1.73 lac/ha. in intercrop (S.cane + urd) over to control(Sole crop), 1.28 lakh/ha. with B:C ratio 1:2.38, & 1:2.11, respectively.
<b>Farmers reaction</b>	Farmers have positive response about urd intercropping with spring sugarcane is more profitable as compare to S.cane alone. Farmers are covinced to minimum weed infestation in S.cane + urd as compare to S.cane alone.

**Date of  
sowing/planting  
harvesting**

S.cane Planting – 02-05 March 2017.  
Harvesting 1st week of Jan.2018  
Urd – Sowing – 12-15 March, 2017  
Harvesting – 10-15 June.2017



## OFT -2

### **INTEGRATED CROP MANAGEMENT IN SUGARCANE (Zaid - 2018)**

**Problem definition** Low yield of sugarcane sole crop as compare to intercrop.  
**Technology assessed or refined** Assesment of suitable combination of inter crop with Spring sugarcane.  
**No. of Farmers** 03

KVK Moradabad has been conducted on-farm trials on suitable inter crop(Sugarcane, S.cane + Urdbean) combination with Spring s.cane.

Generally farmers are take a sole crop s.cane, resulting low income of sole crop as compaire to inertcrop. The problem assessed on the basis of suitable & profitable combination selected.

**Table : Performance of sugarcane(CO - 0238) in relation to integrated crop management**

<b>Technology Option</b>	<b>No.of trials</b>	<b>Yield of intercrop (q/ha.)</b>	<b>Cane yield (q/ha.)</b>	<b>Yield of Intercrop + Cane (q/ha.)</b>	<b>Yield increase (%)</b>
Farmers practices (Sole crop)	3	Result	awaited		
S.cane + Urdbean					

**Date of sowing/planting harvesting**

02-03 March 2018 S.Cane & 10-12 March, 2018 (Urd) .

## OFT -3

### **WEED MANAGEMENT (Kharif 2017)**

**Problem definition** Low yield of paddy due to heavy weed infestation.

**Technology assessed** Weed management in paddy.

**or refined**

**No. of Farmers** 05

KVK, Moradabad conducted on-farm trials on the basis of farmers problem in paddy crop, the low yield of paddy due to heavy weed infestation.

**Table : Effect of Chlorimuron + Metsulfuron 20 WP for weed control in paddy crop.**

Technology Option	No. of trials	Yield (q/ha.)	Increase in yield (%)	Net Return (Rs./ha)	B:C Ratio
T <sub>1</sub> – Farmers practice (Pratilachlore )50 EC . @ 1.25 lit/ha.	05	57.65		39946.00	1.80
T <sub>2</sub> – Chlorimuron + Metsulfuron 20 WP @ 20 gm/ha..		69.50	17.05	58223.00	2.17

**Recommendation**

- The result indicated that spraying of weedicide Chlorimuron + Metsulfuron 20 WP is more effective as compare to pretilacholre .
- The grain yield was increased 17.05% & net return Rs 58223/ha over to farmers practice.

**Farmers reactions –**

- Farmers had given positive response about new weedicide. –
- Chlorimuron + Metsulfuron 20 WP is more effective & economic as compare to pretilacholre.
- The grain yield was increased up to 19.0% due to timely weed management.

**Date of transplanting & harvesting** 03-05 July. 2017 & 29-31 Oct. 2017

## OFT - 4

### **INTEGRATED NUTRIENT MANAGEMENT (Kharif 2017)**

<b>Problem definition</b>	Low yield of paddy due to imbalance use of fertilizers.
<b>Technology assessed or refined</b>	To test the different dose of fertilizers against soil test basis.
<b>No. of Farmers</b>	05

KVK, Moradabad conducted on-farm trials on different doses of fertilizers on the basis of soil test in paddy.

**Table : Performance of paddy.**

Technology Option	No. of trials	Yield (q/ha.)	Increase in yield (%)	Net Return (Rs./ha)	B:C Ratio
T <sub>1</sub> – Farmers practice 120:40:0:0 N:P:K & Zn Kg/ha. (PB - 1509)	05	42.85	-	68130	2.18
T <sub>2</sub> – Soil test bases 158:60:52:25 N:P:K & Zn Kg/ha.		48.81	13.90	79443	2.38

**Recommendation** The data showed in table that T<sub>2</sub> (Use of fertilizer on **soil test basis**) in paddy crop. T<sub>2</sub> is found best for proper nutrient. This treatment is able to increase the crop production as compared to T<sub>1</sub>.

**Farmers reactions** Application of fertilizers on the basis of soil testing increase the yield in paddy crop.

**Date of Sowing &** 13-18 July. 2017 and 25-28 Oct. 2017

**harvesting**

## OFT - 5

### **INTEGRATED NUTRIENT MANAGEMENT (Rabi 2017-18)**

<b>Problem definition</b>	Assesment of suitable dose of fertilizer in wheat crop.
<b>Technology assessed or refined</b>	Evaluation of Phosphorus & MOP fertilizer on soil test basis.
<b>No. of Farmers</b>	05

KVK, Moradabad conducted on-farm trials on high yielding varieties of wheat under late sown condition. on soil test bases.

**Table : Performance of wheat.**

Technology Option	No. of trials	Yield (q/ha.)	Increase in yield (%)	Net Return (Rs./ha)	B:C Ratio
T <sub>1</sub> – Farmers practice 120:60:25:0 N:P:K & Zn Kg/ha. (HD - 2967)	05				
T <sub>2</sub> – 167:75:45:25. N:P:K & Zn Kg/ha		48.6	20%	50101	2.46

**Recommendation** The data given in table shows that T<sub>2</sub> (Use of Phosphorus & MOP 167:75:45:25. N:P:K & Zn Kg/ha.) in wheat crop. T<sub>2</sub> is found best for proper nutrient. This treatment is able to increase the crop production in comparison to T<sub>1</sub>.

**Farmers reactions** Application of Phosphorus & MOP 167:75:45:25. N:P:K & Zn Kg/ha. is very effective to enhancing in wheat yield.

**Date of Sowing &** 06-08 Dec. 2017 and 15-18 April. 2018

**harvesting**

**Salling Price – 1735 Rs./q**

## OFT - 6

### **PEST AND DISEASE MANAGEMENT (Kharif – 2017)**

<b>Problem definition</b>	Low yield of paddy due to infestation of <b>Stem borer</b> .
<b>Technology assessed or refined</b>	To test the efficacy of different insecticides against stemborer in paddy crop.
<b>No. of Farmers</b>	05

KVK Moradabad conducted on-farm trial to Control of Stem borer in paddy by the use of Chlorantraniliprole 0.4G @ 10Kg/ha. gave 11.72 % higher yield over farmers practice (Carbofuran 3 CG @ 20 Kg/ha.). The insect infestation showed 1.75 times more in farmers practice as compared to Chlorantraniliprole 0.4G treated plots.

**Table: Effect of Chlorantraniliprole 0.4G in control of Stem borer in paddy**

Technology Option	No.of trials	Incidence of Stem borer (%)	Yield (q/ha)	% Increase in yield over farmer's practice
T <sub>1</sub> - Use of <b>Carbofuran</b> 3CG @ 20 Kg/ha. (Farmers practice)	05	8%	40.50	-
T <sub>2</sub> - Use of <b>Chlorantraniliprole 0.4G</b> @ 10Kg/ha. in soil		6%	45.25	11.72

**Recommendation** The data showed in table shows that T<sub>2</sub> (**Chlorantraniliprole 0.4G @ 10Kg/ha.**) used in the soil in presence of approximate 3 inches of standing water after 30-35 days of transplanting, gave maxi. yield 45.25q./ha. This treatment was more effective to minimize and control the stem borer as compared to T<sub>1</sub> (**Carbofuran** 3CG).

**Farmers reactions** Application of **Chlorantraniliprole 0.4G @ 10Kg/ha.** is highly effective to control stem borer.

**Date of transplanting & harvesting** 07-11 July 2017 & 20-22 Oct. 2017

## OFT - 7

### **PEST AND DISEASE MANAGEMENT (Rabi – 2017-18)**

**Problem definition** Low yield of wheat due to incidence of **Yellow rust**.  
**Technology assessed** To test the efficacy of fungicide against yellow rust in wheat crop..  
**or refined**  
**No. of Farmers** 05

KVK Moradabad conducted on-farm trial to Control of yellow rust disease in wheat by the use of Propiconazole 25 EC @ 500ml/ha. (Two spray) gave 10.90% higher yield over farmers practice (No use of chemical.). The disease infestation showed 1.80 times more in farmers practice in comparison to Propiconazole 25 EC treated plots, respectively.

**Table: Effect of Propiconazole 25 EC in control of yellow rust in wheat**

<b>Technology Option</b>	<b>No.of trials</b>	<b>Incidence of disease yellow rust (%)</b>	<b>Yield (q/ha)</b>	<b>% Increase in yield over farmer's practice</b>
T <sub>1</sub> – No use of chemicals (Farmers practice)	05	11.75%	41.25	-
T <sub>2</sub> - Use of Propiconazole 25 EC @ 500ml/ha (Two spray)		6.5%	45.75	10.90

**Recommendation** The data given in table shows that in treatment T<sub>2</sub> (Use of **Propiconazole** 25 EC @ 500ml/ha (Two spray). Ist spray in first week of Feb and II after 10-15 days of Ist spray gave maxi. yield 45.75 q/hac. This treatment is able to control and minimize the incidence of yellow rust disease in wheat in comparison to other ( T<sub>1</sub>).

**Farmers reactions** The application of **Propiconazole** 25 EC @ 500ml/ha (Two spray) is very effective to control yellow rust in wheat.

**Date of transplanting** 27 Nov.-01 Dec 2017 and 12-14 April, 2018.

**& harvesting**

## OFT - 8

### **PEST AND DISEASE MANAGEMENT (Zaid - 2018)**

**Problem definition** Low yield of sugar cane due o infestation of early shoot borer.

**Technology assessed or refined** To test the efficacy of insecticide against early shoot borer in sugar cane.

**No. of Farmers** 04

KVK Moradabad conducted on-farm trial to Control of early shoot borer in sugar cane.

**Table: Effect of chlorantraniliprole 18.5 SC in control of early shoot borer in sugar cane.**

Technology Option	No.of trials	Infestation of early shoot borer (%)	Yield (q/ha)	% Increase in yield over farmer's practice
T <sub>1</sub> – use of chloropyriphos 20 EC @ 3.0 lit/ha. (farmers practice)	04	Result	awatied	
T <sub>2</sub> - Use of chlorantraniliprole 18.5 SC @ 375 ml/ha.				

#### **Recommendation**

#### **Farmers reactions**

**Date of transplanting** 28 Feb. – 04 March 2018

**& harvesting**

## VARIETAL EVALUATION (Rabi 2017-18)

<b>Problem definition</b>	Low yield under late sown condition and use of old variety.
<b>Technology assessed or refined</b>	Evaluation of higher yielding varieties of wheat under late sown condition.
<b>No. of Farmers</b>	04

KVK, Moradabad conducted on-farm trials on high yielding varieties of wheat under late sown condition.

**Table : Performance of Wheat.**

Technology Option	No. of trials	Yield (q/ha.)	Increase in yield (%)	Net Return (Rs./ha)	B:C Ratio
T <sub>1</sub> – Farmers practice PBW - 373	04	35.7	-	26285	1.87
T <sub>2</sub> – HD - 3059		41.3	15.69	33860	2.07
T <sub>3</sub> – DBW - 90		42.5	19.05	35762	2.13

**Recommendation** The data showed in table that T<sub>3</sub> (**DBW - 90**) is more suitable in relation to yield as compared to T<sub>1</sub> & T<sub>2</sub>. KVK recommend to the farmers of Moradabad area to use DBW – 90 for late sown condition.

**Farmers reactions** Use of DBW – 90 variety is good for late sown condition.

**Date of Sowing & harvesting** 03-06 Dec., 2017 and 14-15 April, 2018





## Front Line Demonstration on other than oil seeds & pulses

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

List of technologies demonstrated during previous year and popularized during 2017-18 and recommended for large scale adoption in the district.

S. N.	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 in ha.
1	Paddy	Weed management	Weed control through Bispyribac sodium 10 EC @ 200 ml/ha	Through training prog., Gosthi , Field day, Electronic & Print media, Kisan Mela	50	600	400
2	Paddy	IDM	Control of blast disease through Hexaconazole 4% + Zineb 68% @ 1Kg/ha. (Two spray)	Through training prog., Gosthi , Field day, Electronic & Print media, Kisan Mela	30	550	250
3	Wheat	INM	Application of zinc sulphate @ 25 kg/ha. as basal dose in rice-wheat cropping system	Through training prog., Gosthi , Field day, Electronic & Print media, Kisan Mela	70	1500	600
4	Paddy	IPM	Two spray of Imidacloprid 17.8SL @ 150 ml/hac. at tillering stage & second dough stage to control BPH	Through training prog., Gosthi , Field day, Electronic & Print media, Kisan Mela	60	950	450
5	Wheat	Weed management	Weed control through Sulfo-Sulfuron 75WP @ 33 gm/ha.	Through training prog., Gosthi , Field day, Electronic & Print media, Kisan Mela	90	850	600

## B. Front Line Demonstration on oil seeds & pulses under NFSM

### FLD - 1

#### Urdbean (Kharif – 2017)

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Urdbean	- ICM	- ICM through improved seed, weed & insect management	Kharif 2017	20.0	20.0	07	43	50	N.A.

#### 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					
Urdbean	Kharif 2017	Irrigated	Loam	Medium	Low	Medium	Mustard/Wheat	02-08 Aug, 2017	25 -31 Oct - 2017	8.65	-

#### Performance of FLD

Crop	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield q/ha			Yield of local Check q./ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)			
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Urd	- ICM	ICM through improved seed, weed & insect management	PU- 31	50	20.0	9.50	7.50	8.64	5.86	32.14	19825	43247	23036	2.18	18202	27402	10880	1.51

**a. Technical feedback**

1	Uniform maturity & bold grain.
2	Increase the grain yield due to improved & certified variety of PU- 31.
3	Timely application of insecticide (Imidacloprid 17.8 SL).
4	No incidence of pod borer due to timely application of insecticide (Imidacloprid 17.8SL).
5	Very low number of weeds due to timely spraying of Imazathyper 10 EC @ 250 ml/demo.

**b. Farmers reaction on specific technologies**

S. N.	Feedback
1	Farmers have give positive response about variety PU -31 is higher grain yield as compare to local variety Alankar.
2	Uniform& short day maturity (85-95 days).
3	Low incidence of yellow Mosaic.

**c. Extension and Training activities under FLD**

S.No.	Activity	No. of activity organised	No. of participants	Remarks
1	Field Day	01	22	
2.	Farmers Training	01	20	
3	Media coverage	02	mass	

## FLD - 2 Mustard

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Mustard	ICM	- Replacment of local variety of mustard by RGN -48	Rabi 2017-18	10.4	10.4	04	22	26	N.A.

### 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					
Mustard	Rabi 2017-18	Irrigated	Loam	Medium	Low	Medium	Paddy/Pulses	25-28 Oct-, 2017	10-15 March 2018	8.65	-

### Performance of FLD

Crop	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield q/ha			Yield of local Check q/ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)			
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Mustard	- ICM	- Replacment of local variety of mustard by RGN -48	RGN -48	26	10.4	22.8	19.45	21.00	17.53	16.52	23813	70010	47120	2.95	23383	60257	36875	2.50

**a. Technical feedback**

1	RGN - 48 is a bold seeded & high yielding variety with good oil content.
2	Grain yield has been increased due to timely sowing & no incidence of Aphids.

**b. Farmers reaction on specific technologies**

<b>S. N.</b>	<b>Feedback</b>
1	Farmers are agree to mustard variety RGN - 48 is good & high yielding variety.
2	Farmers are conveniced to no incidence of aphids due to timely sowing.

**c. Extension and Training activities under FLD**

<b>S.No.</b>	<b>Activity</b>	<b>No. of activity organised</b>	<b>No. of participants</b>	<b>Remarks</b>
1	Farmers Training	01	20	
2.	Media coverage	01	mass	

**FLD - 3**  
**Lentil (Rabi 2017-18)**

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Lentil	- ICM	- ICM through improved seed	Rabi 2017-18	20.0	20.0	11	39	50	N.A.

**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					
Lentil	Rabi 2017-18	Irrigated	Loam	Medium	Low	Medium	Paddy/Bajra	11-15 Oct. 2017	05-10 April 2018	8.65	-

**Performance of FLD**

Crop	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield q/ha			Yield of local Check q./ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)			
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Lentil	- ICM	ICM through improved seed	PL - 8	50	20.0	10.15	8.58	10.17	8.58	15.48	18007	36594	18987	2.04	14653	26883	12241	1.83

**a. Technical feedback**

1	Uniform maturity & bold grain.
2	Increase the grain yield due to improved & HYV of PL -8.

**b. Farmers reaction on specific technologies**

S. N.	Feedback
1	Farmers have give positive response about variety PL – 8 variety of lentil, is higher grain yield as compare to local traditional variety.
2	No incidence of Blight.

**c. Extension and Training activities under FLD**

S.No.	Activity	No. of activity organised	No. of participants	Remarks
1	Field Day	01	25	
2.	Farmers Training	01	20	
3	Media coverage	02	mass	



## C. Front Line Demonstration on other than oil seeds & pulses

### FLD - 1

Crop production : Paddy

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Paddy	- Weed management	- Weed control through Pyrazosulfuron 10 WP @ 365 gm/ha.	Kharif 2017	6.0	6.0	03	12	15	N.A.

### 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					
Paddy	Kharif 2017	Irrigated	Loam	Medium	Low	Medium	Mentha/Wheat	05-10 July 2017	29-31 Oct 2017	623.93	-

### Performance of FLD

Crop	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield Qtl/ha			Yield of local Check Qtl./ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)			
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Paddy	- Weed management	Weed control through Pyrazosulfuron 10 WP @ 365 gm/ha.	PHB-71	15	6.0	73.25	69.15	71.85	58.18	19.05	49.86	108316	54466	2.17	49433	95602	46206	1.90

Sale rate – Rs. 2800 per quintal.

**a. Technical feedback**

1	Pyrazosulfuron 10 WP is effectively for weed control (89.68%).
2	The grain yield has been increased up to 19% due to timely application of weedicide.

**b. Farmers reaction on specific technologies**

<b>S. N.</b>	<b>Feedback</b>
1	Farmers had given positive response of Pyrazosulfuron 10 WP, was more effective as compared to farmers practice
2	The grain yield has increased up to 19% due to timely application of weedicide.

**c. Extension and Training activities under FLD**

<b>S.No.</b>	<b>Activity</b>	<b>No. of activity organised</b>	<b>No. of participants</b>	<b>Remarks</b>
1	Field Day	01	25	
2.	Farmers Training	01	20	
3	Media coverage	02	mass	

## FLD - 2

### Crop production : Wheat

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Wheat	Weed management	Use of Sulfo-Sulfuron 75WP @ 33 gm/ha.	Rabi 2017-18	6.0	6.0	06	09	15	N.A.

### 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					
Wheat	Rabi 2017-18	Irrigated	Loam	Medium	Low	Medium	Paddy/Urd	25-30 Nov 2017	12-15 April 2018	-	-

### Performance of FLD

Crop	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield q/ha			Yield of local Check q./ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)			
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Wheat	WM	Use of Sulfo-Sulfuron 75WP @ 33 gm/ha.	HD-2967	15	6.0	48.65	45.75	48.65	41.50	14.70	38650	89008	50358	2.30	36500	76803	40303	2.10

Sale rate – Rs. 1735 per quintal.

**Technical feedback**

1	Sulfo Sulfuron 75 WP is more effective to weed control over to control plot up to 92.65%.
2	Due to timely management of weed, the grain yield has been increased up to 14.70% over to control.

**b. Farmers reaction on specific technologies**

<b>S. N.</b>	<b>Feedback</b>
1	Farmers are convinced the grain yield has been increased due to timely weed management.
2	Minimized the weed infestation.

**c. Extension and Training activities under FLD**

<b>S.No.</b>	<b>Activity</b>	<b>No. of activity organised</b>	<b>No. of participants</b>	<b>Remarks</b>
1	Field Day	01	25	
2.	Farmers Training	01	20	
3	Media coverage	02	mass	

**FLD - 3**  
**Horticulture : Potato**

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Potato Variety – Chipsona -1	Management of vegetable	Treated tubers and Ridge method sowing	Rabi 2017-18	2.0	2.0	01	04	05	

**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					
Potato	Rabi 2017-18	Irrigated	Loam	Low	Medium	Low	Paddy	25 Nov 2017	26 March 2018	-	-

**Performance of FLD**

Crop	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield q/ha			Yield of local Check q./ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)			
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Potato	Management of vegetable	Treated tubers and Ridge method sowing.	Chipsona -1	05	2.0	460	400	430	380	13.15	115000	344000	229000	2.99	109000	304000	105000	2.78

**Sale rate – Rs. 2800 per quintal.**

**Technical feedback**

1	After paddy crop potato seed sown results are poor, yield affected.
2	Using green manuring of Dhaineha, after that potato tuber vari. Chipsona – 1, sown in Nov. 2017 and increased production.

**b. Farmers reaction on specific technologies**

<b>S. N.</b>	<b>Feedback</b>
1	Low potato yield recovery after paddy crop, hence tuber crop affected.
2	Good result of Potato tuber yield, due to use of green manuring.

**c. Extension and Training activities under FLD**

<b>S.No.</b>	<b>Activity</b>	<b>No. of activity organised</b>	<b>No. of participants</b>	<b>Remarks</b>
1	Field Day	-	-	-
2.	Farmers Training	01	20	-
3	Media coverage	-	-	-

**FLD No. : 4**  
**Soil Science : Paddy**

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Paddy	INM	Micro-nutrient management through ZnSo <sub>4</sub> (25 Kg/ha.) + FeSo <sub>4</sub> (20 kg/ha) as basal dose	Kharif 2017	4.0	4.0	-	10	10	

**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					
Paddy	Kharif 2017	Irrigated	Sandy loam and loam	Medium	Medium	Medium	Wheat	12-19 July 2017	25-28 Oct. 2017	-	-

**Performance of FLD**

Crop	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield q/ha			Yield of local Check q./ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)			
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return	BCR (R/C)
Paddy	INM.	Micro-nutrient management through ZnSo <sub>4</sub> (25 Kg/ha.) + FeSo <sub>4</sub> (20 kg/ha) as basal dose	PB - 1509	10	4.0	48.8	47.9	48.46	43.60	12.0	53190	135688	81698	2.51	52985	120960	68075	2.28

**a. Technical feedback**

S. No	Feed Back
1	There was no occurrence of Khaira disease due to application of Zinc sulphate (25 Kg/ha.) in paddy crop.
2	There were no symptoms of iron deficiency due to application of Ferrous sulphate (20 Kg/ha.) in paddy crop.

**b. Farmers reaction on specific technologies**

S. N.	Feedback
1	Use of Zinc sulphate & Ferrous sulphate as basal dose in paddy crop to increase the yield.

**c. Extension and Training activities under FLD**

S.No.	Activity	No. of activity organised	No. of participants	Remarks
1.	Farmers Training	02	40	
2.	Media coverage	02	mass	

**Sale rate – Rs. 2800 per quintal.**



**FLD No. : 5**

**Soil Science : Paddy**

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Paddy	INM	Use of water soluble fertilizer 18:18:18 NPK @ 12.5 Kg/ha. (Three spray)	Kharif 2017	6.0	6.0	04	11	15	

**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					
Paddy	Kharif 2017	Irrigated	Sandy loam and loam	Medium	Medium	Medium	Wheat	12-19 July 2017	25-28 Oct. 2017	-	-

**Performance of FLD**

Crop	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield q/ha			Yield of local Check q./ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)			
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Paddy	INM.	Use of water soluble fertilizer 18:18:18 NPK @ 12.5 Kg/ha. (Three spray)	PB - 1509	15	6.0	48.9	47.8	48.24	41.25	14.49	52850	135072	91222	2.50	52880	120400	67520	2.27

Sale rate – Rs. 2800 per quintal

**a. Technical feedback**

S. No	Feed Back
1	Spray of water soluble fertilizer 18:18:18 NPK @ 12.5 Kg/ha. at tillering stage,before flowering & milking stage enhance crop yield.

**b. Farmers reaction on specific technologies**

S. N.	Feedback
1	Three spray of water soluble fertilizer 18:18:18 NPK is very effective to enhance the yield of paddy crop.
2	This technology save the cost of cultivation i.e. Fertilizers.

**c. Extension and Training activities under FLD**

S.No.	Activity	No. of activity organised	No. of participants	Remarks
1.	Farmers Training	02	40	
2.	Media coverage	02	mass	

**FLD No. : 6**

**Soil Science : Wheat**

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Wheat	INM	Use of water soluble fertilizers in wheat crop	Rabi 2017-18	6.0	6.0	04	11	15	

**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					
Wheat	Rabi 2017-18	Irrigated	Sandy loam and loam	Medium	Medium	Medium	Paddy	25.11.17 to 29.11.17	15-20.04.18	-	-

**Performance of FLD**

1	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield q/ha			Yield of local Check q./ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)			
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Wheat	INM.	Use of water soluble fertilizers in wheat crop	HD - 2967	15	6.0	48.6	47.8	48.2	40.1	20.19	36460	83627	45612	2.29	35540	69573	35033	2.01

Sale rate – Rs. 1735 per quintal

**a. Technical feedback**

S. No	Feed Back
1	Spray of water soluble fertilizer 18:18:18 NPK @ 12.5 Kg/ha. at tillering stage,before flowering & milk stage enhance crop yield.

**b. Farmers reaction on specific technologies**

S. N.	Feedback
1	Three spray of water soluble fertilizer 18:18:18 NPK is very effective to enhance the yield of wheat crop.
2	This technology save the cost of cultivation i.e. Fertilizers.

**c. Extension and Training activities under FLD**

S.No.	Activity	No. of activity organised	No. of participants	Remarks
1.	Farmers Training	02	40	
2.	Media coverage	02	mass	

## FLD No. : 7

### Plant Protection : Paddy

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Paddy	IDM	Control of blast disease through Hexaconazole 4% + Zineb 68% (Two spray) 1 kg/ha.	Kharif 2017	4.0	4.0	-	10	10	N.A.

### 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					
Paddy	Kharif 2017	Irrigated	Loam	Low	Medium	Medium	Wheat	07-13 July. 2017	28-30 Oct. 2017	-	-

### Performance of FLD

Crop	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield q/ha			Yield of local Check q/ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)			
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Paddy	IDM	Control of blast disease through Hexaconazole 4% + Zineb 68% (Two spray)	PHB-71	10	4.0	63.5	59.25	61.37	54.50	12.6	39299	95123	55824	2.42	38075	84475	46400	2.21

**Sale rate – Rs. 2800 per quintal.**

**a. Technical feedback**

S.No	Feed Back
1	First spray of Hexaconazole 4% + Zineb 68% should be done at the first occurrence of disease symptoms on leaf and after that second spray of Hexaconazole 4% + Zineb 68% should be done after 15 days intervals of first spray is very effective to control of blast disease in paddy.

**b. Farmers reaction on specific technologies**

S. N.	Feedback
1	Two spray of Hexaconazole 4% + Zineb 68% is very effective to control blast disease in paddy.

**c. Extension and Training activities under FLD**

S.No.	Activity	No. of activity organised	No. of participants	Remarks
1	Field Days	01	28	
2	Media coverage	01	Mass	

## FLD No. : 8

### Plant Protection: Paddy

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Paddy	IDM	Control of Brown plant hopper in paddy through Buprofezin 25 SC (Two Spray) @ 1 lit/ha.	Kharif 2017	4.0	4.0	-	10	10	N.A.

### 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					
Paddy	Kharif 2017	Irrigated	Loam	Low	Low	Medium	Wheat	07-13 July. 2017	27-30 Oct. 2017	-	-

### Performance of FLD

Crop	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield q/ha			Yield of local Check q/ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)			
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
paddy	IPM	Control of Brown plant hopper in paddy through Buprofezin 25 SC (Two Spray) @ 1 lit/ha.	PHB - 71	10	4.0	64.25	59.75	62	53.65	15.56	38898	96100	57202	2.47	38300	83157	44857	2.17

Sale rate – Rs. 2800 per quintal.

**a. Technical feedback**

S.No	Feed Back
1	First spray of Buprofezin 25 SC at the beginning of insect infestation and second spray of Buprofezin 25 SC after 12 to 15 days of first spray is very effective to control of Brown plant hoppers..

**b. Farmers reaction on specific technologies**

S. N.	Feedback
1	Two spray of Buprofezin 25 SC is very effective to control Brown plant hopper in paddy.

**c. Extension and Training activities under FLD**

S.No.	Activity	No. of activity organised	No. of participants	Remarks
1	Field Days	01	25	
2	Media coverage	01	Mass	



# FLD No. : 9

## Plant Breeding: Wheat

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Wheat	Promoting high yielding variety of wheat	To demonstrate the yield potential of new variety - DPW – 621-50	Rabi 2017-18	1.0	1.0	02	03	05	N.A.

### 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					
Wheat	Rabi 2017-18	Irrigated	Sandy loam and loam	Low	Medium	Medium	Paddy	18-11-17 to 21-11-17	14-16 April 2018	-	-

### Performance of FLD

Crop	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield q/ha			Yield of local Check q./ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)			
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Wheat	Promoting high yielding variety of wheat	To demonstrate the yield potential of new variety.	DPW – 621-50	05	1.0	53.5	46.7	50.1	42.8	17.06	32660	79408	46748	2.43	30960	67838	36878	2.19

Sale rate – Rs. 1735 per quintal.

**Technical feedback**

1	Use of quality seed and new improved variety is essential.
2	Increase production requires timely sowing.

**b. Farmers reaction on specific technologies**

<b>S. N.</b>	<b>Feedback</b>
1	Vareity DPW – 621-50 is higher yielder as compared to variety PBW - 550.

**c. Extension and Training activities under FLD**

<b>S.No.</b>	<b>Activity</b>	<b>No. of activity organised</b>	<b>No. of participants</b>	<b>Remarks</b>
1.	Farmers Training	01	20	
2.	Media coverage	-	-	

# FLD No. : 10

## Plant Breeding: Wheat

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Wheat	Promoting high yielding variety of wheat under late sown condition	To demonstrate the yield potential of wheat variety under late sown condition Variety - PBW – 590	Rabi 2017-18	1.0	1.0	02	03	05	N.A.

### 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					
Wheat	Rabi 2017-18	Irrigated	Sandy loam	Low	Medium	Medium	Paddy	3-5 Dec. 2017	15-16 April 2018	-	-

### Performance of FLD

Crop	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield q/ha			Yield of local Check q./ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)			
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Wheat	Promoting HYV of wheat under late sown condition	To demonstrate the yield potential of wheat variety under late sown condition.	PBW - 590	05	1.0	45.1	40.3	42.7	34.8	22.70	32100	67630	35580	2.12	30400	55158	24760	1.81

Sale rate – Rs. 1735 per quintal.

**Technical feedback**

1	Use of of new improved variety and quality seed is essential.
2	Use of recommended variety under late sown condition.

**b. Farmers reaction on specific technologies**

<b>S. N.</b>	<b>Feedback</b>
1	Vareity PBW - 590 is higher grain yielder as compared to variety PBW - 373.
2	Variety PBW – 590 is good under late sown condition.

**c. Extension and Training activities under FLD**

<b>S.No.</b>	<b>Activity</b>	<b>No. of activity organised</b>	<b>No. of participants</b>	<b>Remarks</b>
1.	Farmers Training	01	20	
2.	Field day	01	21	

## FLD No. : 11

### Soil Science : Sugarcane

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	S.Cane	INM	Nutrient mangement through Zinc sulphate - 25kg/ha & FeSo4 - 20kg/ha.	Zaid 2017	4.0	4.0	09	01	10	-

### 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					
S.cane	Zaid 2017	Irrigated	Sandy loam and loam	Medium	Medium	Low	Wheat	04-10 March 2017	20-25.03.2018	-	-

### Performance of FLD

Crop	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield q/ha			Yield of local Check q/ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)			
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
S.cane	INM	Nutrient mangement through Zinc sulphate - 25kg/ha & FeSo4 - 20kg/ha.	COJ-0238	10	4.0	890.3	755.3	888.5	698.2	27.25	88520	288762	200242	3.26	86720	226915	140195	2.61

Sale rate – Rs. 325 per quintal

**a. Technical feedback**

S.No	Feed Back
1	Use of Zinc sulphate (25 Kg/ha.) + Ferrous sulphate 20 Kg/ha. in S.cane crop is essential for healthy & vigourous crop & also to stop the stunting growth of the crop.

**b. Farmers reaction on specific technologies**

S. N.	Feedback
1	Use of Zinc sulphate (25 Kg/ha.) + Ferrous sulphate 20 Kg/ha. in S.cane crop gave better yield as compare to un treated plots.

**c. Extension and Training activities under FLD**

S.No.	Activity	No. of activity organised	No. of participants	Remarks
1	Farmers training	01	20	
2	Media coverage	01	Mass	

## FLD No. : 12

### Soil Science : Sugarcane

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	S.Cane	INM	Use of water soluble fertilizer 18:18:18 NPK @ 13.75 Kg/ha.	Zaid 2017	4.0	4.0	-	10	10	-

### 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					
S.cane	Zaid 2017	Irrigated	Sandy loam and loam	Medium	Medium	Low	Wheat	04-06 March 2017	25-30 March 2018	-	-

### Performance of FLD

Crop	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield q/ha			Yield of local Check q./ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)			
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
S.cane	INM	Use of water soluble fertilizer 18:18:18 NPK @ 13.75 Kg/ha.	COJ-0238	10	4.0	910.6	786.3	896.8	720.6	24.45	88542	291460	202918	3.29	87510	234195	149685	2.67

Sale rate – Rs. 325 per quintal

**a. Technical feedback**

S.No	Feed Back
1	Use of water soluble fertilizer 18:18:18 NPK 13.75 Kg/ha.in S.cane crop is essential for healthy & vigourous crop & also to stop the stunting growth of the crop.

**b. Farmers reaction on specific technologies**

S. N.	Feedback
1	Use of water soluble fertilizer 18:18:18 NPK 13.75 Kg/ha. in S.cane crop gave better yield as compare to un treated plots.

**c. Extension and Training activities under FLD**

S.No.	Activity	No. of activity organised	No. of participants	Remarks
1	Farmers training	01	20	
2	Media coverage	01	Mass	



# FLD No. : 13

## Plant Protection : Mentha

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Mentha	IPM	Control of leaf eating caterpillars through Quinalphos 25 EC @ 2.0 lit/ha. & Monocrotophos 36 SL @ 1.5 lit/ha. as I and II spray, respectively.	Zaid 2017	4.0	4.0	04	06	10	N.A.

### 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					
Mentha	Zaid 2017	Irrigated	Loam & Sandy loam	Low	Medium	Medium	Potato	08-12 Feb 2017	6 – 10 June 2017	-	-

### Performance of FLD

Crop	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield Kg./ha			Yield of local Check Kg./ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)			
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return	BCR (R/C)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Mentha	IPM	Control of leaf eating caterpillars through Quinalphos 25 EC @ 2.0 lit/ha. & Monocrotophos 36 SL @ 1.5 lit/ha. as I and II spray respectively	Kosi	10	4.0	122.5 Kg	117.5 Kg	120 Kg	106.5 Kg	12.67	63875	120000	56125	1.67	63000	106500	43500	1.69

### Technical feedback

S.No	Feed Back
1	First spray of quinalphos 25EC at the beginning of insect infestation and second spray of monocrotophos 36SL after 15 to 20 days of first spray is very effective to control the leaf eating caterpillars in mentha and others harmful insects.

### b. Farmers reaction on specific technologies

S. N.	Feedback
1	Spray of quinalphos and monocrotophos seperately as I and II spray, respectively is very effective to control leaf caterpillars in mentha crop.

### c. Extension and Training activities under FLD

S.No.	Activity	No. of activity organised	No. of participants	Remarks
1	Field Days	01	27	
2	Media coverage	01	Mass	

# FLD No. : 14

## Plant Protection : Mentha

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ Demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
1	Mentha	IPM	Control of leaf eating caterpillars through Emamectin Benzoate 5SG @ 250gm/ha. (Two spray)	Zaid 2018	4.0	4.0	04	06	10	N.A.

### 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					
Mentha	Zaid 2017	Irrigated	Loam & Sandy loam	Low	Medium	Medium	Potato	08-11 Feb 2018	-	-	-

### Performance of FLD

Crop	Thematic Area	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield Kg./ha			Yield of local Check Kg./ha	Increase in yield (%)	Economics of demonstration (Rs./ha.)				Economics of check (Rs./ha.)		
						H	L	A			Gross Cost	Gross Return	Net return	BCR (R/C)	Gross Cost	Gross Return	Net return
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Mentha	IPM	Control of leaf eating caterpillars through Emamectin Benzoate 5SG @ 250gm/ha. (Two spray)	Kosi	10	4.0	<b>Result awaited</b>											

### III. (A) Achievements on Training (April 2017 to March 2018) Brief Achievement of Training

Discipline	No. of courses	Others			SC/ST			G.Total
		Male	Female	Total	Male	Female	Total	
<b>Practicing Farmers &amp; Farm Women</b>								
<b>On Campus</b>								
Crop Production	10	130	-	130	70	-	70	200
Horticulture	05	94	-	94	06	-	06	100
Agro Forestry	-	-	-	-	-	-	-	-
Soil Sciene	08	131	-	131	29	-	29	160
Plant protection	07	115	-	115	25	-	25	140
Plant Breeding	06	105	-	105	15	-	15	120
Agri. Ext.	02	30	-	30	10	-	10	40
<b>Total</b>	<b>38</b>	<b>606</b>	<b>-</b>	<b>606</b>	<b>154</b>	<b>-</b>	<b>154</b>	<b>760</b>

<b>Practicing Farmers &amp; Farm Women</b>								
<b>Off Campus</b>								
Crop Production	12	145	-	145	95	-	95	240
Horticulture	05	67	-	67	33	-	33	100
Agro Forestry	02	37	-	37	03	-	03	40
Soil Science	13	248	-	248	12	-	12	260
Plant protection	09	154	-	154	26	-	26	180
Plant Breeding	06	117	-	117	03	-	03	120
Agri. Ext.	01	20	-	20	-	-	-	20
<b>Total</b>	<b>48</b>	<b>788</b>	<b>-</b>	<b>788</b>	<b>172</b>	<b>-</b>	<b>172</b>	<b>960</b>

<b>Rural Youth</b>								
Crop Production	01	08	-	08	02	-	02	10
Horticulture	-	-	-	-	-	-	-	-
Agro Forestry	-	-	-	-	-	-	-	-
Soil Science	01	08	-	08	02	-	02	10
Plant Protection	02	19	01	20	-	-	-	20
Plant Breeding	02	18	-	18	02	-	02	20
<b>Total</b>	<b>06</b>	<b>53</b>	<b>01</b>	<b>54</b>	<b>06</b>	<b>-</b>	<b>06</b>	<b>60</b>

<b>Extension functionaries</b>								
Crop Production	03	19	-	19	11	-	11	30
Horticulture	-	-	-	-	-	-	-	-
Agro Forestry	-	-	-	-	-	-	-	-
Soil Science	10	83	-	83	17	-	17	100
Plant protection	08	57	-	57	23	-	23	80
Plant Breeding	01	08	-	08	02	-	02	10
Agri. Ext.	01	10	-	10	-	-	-	10
<b>Total</b>	<b>23</b>	<b>177</b>	<b>-</b>	<b>177</b>	<b>53</b>	<b>-</b>	<b>53</b>	<b>230</b>

**III. (B) Training programme**  
**Farmers' Training including sponsored training programme**  
**A) On Campus)**

Thematic Area	No. of courses	No. of participants								
		Others			SC/ST			Grand Total		
		M	F	T	M	F	T	M	F	T
<b>A) Farmers &amp; Farm Women</b>										
<b>I. Crop production</b>										
- Weed management	01	18	-	18	02	-	02	20	-	20
Resource Conservation Technology	01	14	-	14	06	-	06	20	-	20
Cropping system	-	-	-	-	-	-	-	-	-	-
Micro irrigation/ irrigation	-	-	-	-	-	-	-	-	-	-
Nursery management	01	17	-	17	03	-	03	20	-	20
Integrated Crop Management	03	37	-	37	23	-	23	60	-	60
Integrated nutrient management	04	44	-	44	36	-	36	80	-	80
Others (Plant Breeding)	05	93	-	93	07	-	07	100	-	100
<b>Total</b>	<b>15</b>	<b>223</b>	<b>-</b>	<b>223</b>	<b>77</b>	<b>-</b>	<b>77</b>	<b>300</b>	<b>-</b>	<b>300</b>
<b>II. Horticulture</b>										
<b>(a) Vegetable crops</b>										
Nursery raising	01	19	-	19	01	-	01	20	-	20
<b>Others -</b> - Production technology	03	57	-	57	03	-	03	60	-	60
<b>Total (a)</b>	<b>04</b>	<b>76</b>	<b>-</b>	<b>76</b>	<b>04</b>	<b>-</b>	<b>04</b>	<b>80</b>	<b>-</b>	<b>80</b>
<b>(b) Fruits</b>										
- Cultivation of fruits	-	-	-	-	-	-	-	-	-	-
Training & Pruning	01	19	-	19	01	-	01	20	-	20
<b>Total (b)</b>	<b>01</b>	<b>19</b>	<b>-</b>	<b>19</b>	<b>01</b>	<b>-</b>	<b>01</b>	<b>20</b>	<b>-</b>	<b>20</b>
<b>(c) Ornamental plants</b>										
<b>Total (c)</b>										
<b>(e) Tuber Crops</b>										
<b>Total (e)</b>										

<b>(f) Spices</b>										
<b>Total (f)</b>	-	-	-	-	-	-	-	-	-	-
<b>(g) Medicinal &amp; Aeromatic plants</b>										
- Production & Management Tech.	01	12	-	12	08	-	08	20	-	20
- Cultivation of fruits										
<b>Total (g)</b>	<b>01</b>	<b>12</b>	<b>-</b>	<b>12</b>	<b>08</b>	<b>-</b>	<b>08</b>	<b>20</b>	<b>-</b>	<b>20</b>
<b>Total (a-g)</b>	<b>06</b>	<b>107</b>	<b>-</b>	<b>107</b>	<b>13</b>	<b>-</b>	<b>13</b>	<b>120</b>	<b>-</b>	<b>120</b>
<b>III. Soil Health and Fertility Management</b>										
Soil Fertility Management	-	-	-	-	-	-	-	-	-	-
INM	03	48	-	48	12	-	12	60	-	60
Production & use of organic inputs	02	32	-	32	08	-	08	40	-	40
Micro-nutrient deficiency in crops	01	15	-	15	05	-	05	20	-	20
Balance use of fertilizers	01	17	-	17	03	-	03	20	-	20
Soil & Water testing	01	19	-	19	01	-	01	20	-	20
<b>Total</b>	<b>08</b>	<b>131</b>	<b>-</b>	<b>131</b>	<b>29</b>	<b>-</b>	<b>29</b>	<b>160</b>	<b>-</b>	<b>160</b>
<b>IV. Livestock Production and Management</b>										
- Dairy Management	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>VII. Plant Protection</b>										
- IPM	05	83	-	83	17	-	17	100	-	100
- IDM	02	32	-	32	08	-	08	40	-	40
<b>Total</b>	<b>07</b>	<b>115</b>	<b>-</b>	<b>115</b>	<b>25</b>	<b>-</b>	<b>25</b>	<b>140</b>	<b>-</b>	<b>140</b>
<b>XI. Agro forestry</b>										
- Production technology	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>GRAND TOTAL</b>	<b>36</b>	<b>576</b>	<b>-</b>	<b>576</b>	<b>144</b>	<b>-</b>	<b>144</b>	<b>720</b>	<b>-</b>	<b>720</b>

## B) Off Campus

Thematic Area	No. of courses	No. of participants								
		Others			SC/ST			Grand Total		
		M	F	T	M	F	T	M	F	T
<b>A) Farmers &amp; Farm Women</b>										
<b>I. Crop production</b>										
- Weed management	01	12	-	12	08	-	08	20	-	20
Cropping System										
Integrated Crop Management	08	107	-	107	53	-	53	160	-	160
Integrated nutrient management	03	26	-	26	34	-	34	60	-	60
Others (Plant Breeding)	05	97	-	97	03	-	03	100	-	100
<b>Total</b>	<b>17</b>	<b>242</b>	<b>-</b>	<b>242</b>	<b>98</b>	<b>-</b>	<b>98</b>	<b>340</b>	<b>-</b>	<b>340</b>
<b>II. Horticulture</b>										
<b>(a) Vegetable crops</b>										
Others (Production technique)	02	26	-	26	14	-	14	40	-	40
<b>Total (a)</b>	<b>02</b>	<b>26</b>	<b>-</b>	<b>26</b>	<b>14</b>	<b>-</b>	<b>14</b>	<b>40</b>	<b>-</b>	<b>40</b>
<b>(b) Fruits</b>										
-Cultivation of fruits	01	19	-	19	01	-	01	20	-	20
<b>Total (b)</b>	<b>01</b>	<b>19</b>	<b>-</b>	<b>19</b>	<b>01</b>	<b>-</b>	<b>01</b>	<b>20</b>	<b>-</b>	<b>20</b>
<b>(c) Ornamental plants</b>										
<b>Total (c)</b>										
<b>(e) Tuber Crops</b>										
- Production & Management Tech.	02	22	-	22	18	-	18	40	-	40
<b>Total (e)</b>	<b>02</b>	<b>22</b>	<b>-</b>	<b>22</b>	<b>18</b>	<b>-</b>	<b>18</b>	<b>40</b>	<b>-</b>	<b>40</b>
<b>(f) Spices</b>										
- Production & Management Tech.										
<b>Total (f)</b>										

<b>(g) Medicinal &amp; Aeromatic plants</b>										
- Production & Management Tech.	01	20	-	20	-	-	-	20	-	20
- Cultivation of fruits										
<b>Total (g)</b>	<b>01</b>	<b>20</b>	<b>-</b>	<b>20</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>20</b>	<b>-</b>	<b>20</b>
<b>Total (a-g)</b>	<b>06</b>	<b>87</b>	<b>-</b>	<b>87</b>	<b>33</b>	<b>-</b>	<b>33</b>	<b>120</b>	<b>-</b>	<b>120</b>
<b>III. Soil Health and Fertility Management</b>										
Soil Fertility Management	-	-	-	-	-	-	-	-	-	-
INM	04	72	-	72	08	-	08	80	-	80
Production & use of organic inputs	01	20	-	20	-	-	-	20	-	20
Micro-nutrient deficiency in crops	03	57	-	57	03	-	03	60	-	60
Balance use of fertilizers	03	60	-	60	-	-	-	60	-	60
Soil & Water testing	02	39	-	39	01	-	01	40	-	40
<b>Total</b>	<b>13</b>	<b>248</b>	<b>-</b>	<b>248</b>	<b>12</b>	<b>-</b>	<b>12</b>	<b>260</b>	<b>-</b>	<b>260</b>
<b>IV. Livestock Production and Management</b>										
- Dairy Management										
- Animal Nutrition management										
- Disease Management										
- Feed & fodder technology										
<b>Total</b>										
<b>VII. Plant Protection</b>										
- IPM	05	94	-	94	06	-	06	100	-	100
- IDM	04	60	-	60	20	-	20	80	-	80
<b>Total</b>	<b>09</b>	<b>154</b>	<b>-</b>	<b>154</b>	<b>26</b>	<b>-</b>	<b>26</b>	<b>180</b>	<b>-</b>	<b>180</b>
<b>XI. Agro forestry</b>										
- Production technology	02	37	-	37	03	-	03	40	-	40
<b>Total</b>	<b>02</b>	<b>37</b>	<b>-</b>	<b>37</b>	<b>03</b>	<b>-</b>	<b>03</b>	<b>40</b>	<b>-</b>	<b>40</b>
<b>GRAND TOTAL</b>	<b>47</b>	<b>768</b>	<b>-</b>	<b>768</b>	<b>172</b>	<b>-</b>	<b>172</b>	<b>940</b>	<b>-</b>	<b>940</b>



## C. On + Off Campus

Thematic Area	No. of courses	No. of participants								
		Others			SC/ST			Grand Total		
		M	F	T	M	F	T	M	F	T
<b>A) Farmers &amp; Farm Women</b>										
<b>I. Crop production</b>										
- Weed management	02	30	-	30	10	-	10	40	-	40
Resource Conservation Technology	01	14	-	14	06	-	06	20	-	20
Cropping system										
Micro irrigation/ irrigation										
Nursery management	01	17	-	17	03	-	03	20	-	20
Integrated Crop Management	11	144	-	144	76	-	76	220	-	220
Integrated nutrient management	07	70	-	70	70	-	70	140	-	140
Others (Plant Breeding)	10	190	-	190	10	-	10	200	-	200
<b>Total</b>	<b>32</b>	<b>465</b>	<b>-</b>	<b>465</b>	<b>175</b>	<b>-</b>	<b>175</b>	<b>640</b>	<b>-</b>	<b>640</b>
<b>II. Horticulture</b>										
<b>(a) Vegetable crops</b>										
Nursery raising	01	19	-	19	01	-	01	20	-	20
- Others	05	83	-	83	17	-	17	100	-	100
Production technology										
<b>Total (a)</b>	<b>06</b>	<b>102</b>	<b>-</b>	<b>102</b>	<b>18</b>	<b>-</b>	<b>18</b>	<b>120</b>	<b>-</b>	<b>120</b>
<b>(b) Fruits</b>										
Training & Pruning	01	19	-	19	01	-	01	20	-	20
Cultivation of fruits	01	19	-	19	01	-	01	20	-	20
<b>Total (b)</b>	<b>02</b>	<b>38</b>	<b>-</b>	<b>38</b>	<b>02</b>	<b>-</b>	<b>02</b>	<b>40</b>	<b>-</b>	<b>40</b>
<b>(c) Ornamental plants</b>										
<b>Total (c)</b>										
<b>(e) Tuber Crops</b>										
- Prod. & Manag. Tech.	02	22	-	22	18	-	18	40	-	40
<b>Total (e)</b>	<b>02</b>	<b>22</b>	<b>-</b>	<b>22</b>	<b>18</b>	<b>-</b>	<b>18</b>	<b>40</b>	<b>-</b>	<b>40</b>

<b>(f) Spices</b>										
- Production & Management Tech.										
<b>Total (f)</b>										
<b>(g) Medicinal &amp; Aeromatic plants</b>										
- Production & Management Tech.	02	32	-	32	8	-	8	40	-	40
- Cultivation of fruits										
<b>Total (g)</b>	<b>02</b>	<b>32</b>	<b>-</b>	<b>32</b>	<b>8</b>	<b>-</b>	<b>8</b>	<b>40</b>	<b>-</b>	<b>40</b>
<b>Total (a-g)</b>	<b>12</b>	<b>194</b>	<b>-</b>	<b>194</b>	<b>46</b>	<b>-</b>	<b>46</b>	<b>240</b>	<b>-</b>	<b>240</b>
<b>III. Soil Health and Fertility Management</b>										
Soil Fertility Management	-	-	-	-	-	-	-	-	-	-
INM	07	120	-	120	20	-	20	140	-	140
Production & use of organic inputs	03	52	-	52	08	-	08	60	-	60
Micro-nutrient deficiency in crops	04	72	-	72	08	-	08	80	-	80
Balance use of fertilizers	04	77	-	77	03	-	03	80	-	80
Soil & Water testing	03	58	-	58	02	-	02	60	-	60
<b>Total</b>	<b>21</b>	<b>379</b>	<b>-</b>	<b>379</b>	<b>41</b>	<b>-</b>	<b>41</b>	<b>420</b>	<b>-</b>	<b>420</b>
<b>IV. Livestock Production and Management</b>										
- Dairy Management										
<b>Total</b>										
<b>VII. Plant Protection</b>										
- IPM	10	177	-	177	23	-	23	20	-	20
- IDM	6	92	-	92	28	-	28	120	-	120
<b>Total</b>	<b>16</b>	<b>269</b>	<b>-</b>	<b>269</b>	<b>51</b>	<b>-</b>	<b>51</b>	<b>320</b>	<b>-</b>	<b>320</b>
<b>XI. Agro forestry</b>										
- Production technology	02	37	-	37	03	-	03	40	-	40
<b>Total</b>	<b>02</b>	<b>37</b>	<b>-</b>	<b>37</b>	<b>03</b>	<b>-</b>	<b>03</b>	<b>40</b>	<b>-</b>	<b>40</b>
<b>GRAND TOTAL</b>	<b>83</b>	<b>1344</b>	<b>-</b>	<b>1344</b>	<b>316</b>	<b>-</b>	<b>316</b>	<b>1660</b>	<b>-</b>	<b>1660</b>

#### D. RURAL YOUTH / VOCATIONAL TRAINING (ON CAMPUS)

Area of training	No. of courses	No. of participants								
		Others			SC/ST			Grand Total		
		M	F	T	M	F	T	M	F	T
Production of organic inputs										
Vermi composting	-	-	-	-	-	-	-	-	-	-
Press mud composting	-	-	-	-	-	-	-	-	-	-
Mushroom production	-	-	-	-	-	-	-	-	-	-
Bee Keeping	-	-	-	-	-	-	-	-	-	-
Seed Production (Rice)	-	-	-	-	-	-	-	-	-	-
Seed Production (Rice & wheat)	02	18	-	18	02	-	02	20	-	20
<b>Grand Total</b>	<b>02</b>	<b>18</b>	<b>-</b>	<b>18</b>	<b>02</b>	<b>-</b>	<b>02</b>	<b>20</b>	<b>-</b>	<b>20</b>

#### E. RURAL YOUTH / VOCATIONAL TRAINING (OFF CAMPUS)

Area of training	No. of courses	No. of participants								
		Others			SC/ST			Grand Total		
		M	F	T	M	F	T	M	F	T
Production of organic inputs	02	16	-	16	04	-	04	20	-	20
Vermi composting										
Press mud composting										
Mushroom production										
Bee Keeping	02	16	01	17	03	-	03	19	01	20
Seed Production (Rice)										
Dairying										
Sheep and goat rearing										
Poultry production										
<b>Grand Total</b>	<b>04</b>	<b>32</b>	<b>01</b>	<b>33</b>	<b>07</b>	<b>-</b>	<b>07</b>	<b>39</b>	<b>01</b>	<b>40</b>

## F. RURAL YOUTH / VOCATIONAL TRAINING (ON + OFF CAMPUS)

Area of training	No. of courses	No. of participants								
		Others			SC/ST			Grand Total		
		M	F	T	M	F	T	M	F	T
Production of organic inputs	02	16	-	16	04	-	04	20	-	20
Vermi composting										
Press mud composting										
Mushroom production										
Bee Keeping	02	16	01	17	03	-	03	19	01	20
Seed Production (Rice)	-	-	-	-	-	-	-	-	-	-
Seed Production (Rice & wheat)	02	18	-	18	02	-	02	20	-	20
Planting Material Production (Medicinal & Aromatic plants)	-	-	-	-	-	-	-	-	-	-
Commercial spices production										
Commercial Fruit Production & Nursery	-	-	-	-	-	-	-	-	-	-
Dairying	-	-	-	-	-	-	-	-	-	-
Sheep and goat rearing	-	-	-	-	-	-	-	-	-	-
Poultry production	-	-	-	-	-	-	-	-	-	-
<b>Grand Total</b>	<b>06</b>	<b>50</b>	<b>-</b>	<b>50</b>	<b>09</b>	<b>-</b>	<b>09</b>	<b>59</b>	<b>01</b>	<b>60</b>

## G. EXTENSION PERSONNEL (OFF CAMPUS)

Area of training	No. of courses	No. of participants								
		Others			SC/ST			Grand Total		
		M	F	T	M	F	T	M	F	T
INM	09	76	-	76	14	-	14	90	-	90
Production & use of organic inputs	04	35	-	35	05	-	05	40	-	40
Productivity enhancement in field crops										
Integrated pests management	08	57	-	57	23	-	23	80	-	80
Productivity enhancement of Horticultural crops	-	-	-	-	-	-	-	-	-	-
Productivity enhancement of Agro-forestry	-	-	-	-	-	-	-	-	-	-
Disease Management of farm animals	-	-	-	-	-	-	-	-	-	-
Production enhancement of medicinal & aeromatic crop	-	-	-	-	-	-	-	-	-	-
Livestock feed and fodder production	-	-	-	-	-	-	-	-	-	-
Women and child care	-	-	-	-	-	-	-	-	-	-
Others (Seed Production)	01	08	-	08	02	-	02	10	-	10
<b>Grand Total</b>	<b>22</b>	<b>176</b>	<b>-</b>	<b>176</b>	<b>44</b>	<b>-</b>	<b>44</b>	<b>220</b>	<b>-</b>	<b>220</b>

## F. Sponsored training programmes

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Crop production and Management</b>										
Increasing production and Productivity of crops										
Commercial production of vegetables & Fruits										
<b>Production and value addition</b>										
Fruit Plants										
Ornamental plants										
Spices crops										
Soil health and fertility management Vermi composting										
Production of inputs at site										
Methods of protective cultivation										
<b>Others</b>										
Press mud composting										
F.T.T ( 01-03 Feb. 2018)	01	47	-	47	03	-	03	50	-	50
F.T.T (05-07 Feb 2018)	01	40	-	40	10	-	10	50	-	50
<b>Total</b>	<b>02</b>	<b>87</b>	<b>-</b>	<b>87</b>	<b>13</b>	<b>-</b>	<b>13</b>	<b>100</b>	<b>-</b>	<b>100</b>
<b>Post harvest technology and value addition</b>										
Processing and value addition										
Others (Pl. specify)										
Total										
<b>Farm machinery</b>										
Farm machinery,tools and implements										
Others (Pl. specify)										
<b>Total</b>										
<b>Livestock and fisheries</b>										
Livestock production and management Goat rearing										
Animal Nutrition management										
Animal disease management										
Fisheries nutrition										

Fisheries management										
Others(pl. specify) Poultry farming										
<b>Total</b>										
<b>Home science</b>										
Household nutritional security										
Economic empowerment										
Drudgery reduction of women										
Others (Pl. specify)										
<b>Total</b>										
<b>Agricultural Extension</b>										
Capacity Building and group dynamics										
<b>Others (Pl. specify)</b>										
<b>Total</b>										
<b>Grand Total</b>	<b>02</b>	<b>87</b>	<b>-</b>	<b>87</b>	<b>13</b>	<b>-</b>	<b>13</b>	<b>100</b>	<b>-</b>	<b>100</b>

**Name of sponsoring agencies involved – F.T.T. programme funded by U.P. Govt.**

## G. Details of vocational training programmes carried out by KVKs for rural youth

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Crop production and management</b>										
Commercial floriculture	-	-	-	-	-	-	-	-	-	-
Commercial fruit production (Papaya & banana)	-	-	-	-	-	-	-	-	-	-
Commercial spices production										
Integrated crop management	-	-	-	-	-	-	-	-	-	-
Organic farming										
<b>Total</b>										
<b>Post harvest technology and value addition</b>										
Value addition	-	-	-	-	-	-	-	-	-	-
Others (pl. specify)	-	-	-	-	-	-	-	-	-	-
<b>Total</b>										
<b>Livestock and fisheries</b>										
Dairy farming	-	-	-	-	-	-	-	-	-	-
Composite fish culture										
Goat rearing										
Piggery										
Poultry farming										
Others (pl. specify)										
<b>Total</b>										



<b>Income generation activities</b>										
Production of organic inputs	02	16	-	16	04	-	04	20	-	20
Vermicomposting										
Prees mud composting	-	-	-	-	-	-	-	-	-	-
Production of bio-agents, bio-pesticides, bio-fertilizers etc.	-	-	-	-	-	-	-	-	-	-
Repair and maintenance of farm machinery and implements	-	-	-	-	-	-	-	-	-	-
Rural Crafts	-	-	-	-	-	-	-	-	-	-
Seed production (Rice & Wheat)	02	18	-	18	02	-	02	20	-	20
Sericulture	-	-	-	-	-	-	-	-	-	-
Mushroom cultivation	-	-	-	-	-	-	-	-	-	-
Nursery (Planting material production).	-	-	-	-	-	-	-	-	-	-
Nursery (Planting material production). of Agroforestry trees	-	-	-	-	-	-	-	-	-	-
Tailoring, stitching, embroidery, dyeing etc.	-	-	-	-	-	-	-	-	-	-
Agril. para-workers, para-vet training	-	-	-	-	-	-	-	-	-	-
<b>Others (pl. specify) Bee-keeping</b>	02	16	01	17	03	-	03	19	01	20
<b>Total</b>										
<b>Agricultural Extension</b>										
Capacity building and group dynamics	-	-	-	-	-	-	-	-	-	-
Others (pl. specify)	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>06</b>	<b>50</b>	<b>-</b>	<b>50</b>	<b>09</b>	<b>-</b>	<b>09</b>	<b>59</b>	<b>01</b>	<b>60</b>
<b>Grand Total</b>	<b>06</b>	<b>50</b>	<b>-</b>	<b>50</b>	<b>09</b>	<b>-</b>	<b>09</b>	<b>59</b>	<b>01</b>	<b>60</b>

#### IV. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	-	-	-	-
Diagnostic visits	05	26	-	26
Field Day	05	129	-	129
Group discussions	-	-	-	-
Kisan Ghosthi	-	-	-	-
Film Show	38	1560	-	1560
Self -help groups	-	-	-	-
Kisan Mela	01	805	25	830
Exhibition	-	-	-	-
Scientists' visit to farmers field	302	2350	-	2350
Ex-trainees Sammelan	01	20	-	20
Farmers' seminar/workshop	01	50	-	50
Method Demonstrations	01	10	-	10
Celebration of important days	04	335	-	335
Special day celebration (World soil health Day)	01	113	-	113
Exposure visits	03	160	-	160
Others (pl. specify)				
Visit of farmers & farmer group to KVK	483	1153	-	1153
Sankalp Se Siddhi	01	805	25	830
Parthenium eradication campaign	01	55	-	55
Lecture delivered in other Dept. prog.	138	17475	239	17714
<b>Total</b>	<b>985</b>	<b>25046</b>	<b>289</b>	<b>25335</b>

### A. Details of other extension programmes

Particulars	Number
Electronic Media (CD./DVD)	-
Extension Literature	07
News paper coverage	40
Popular articles	03
Radio Talks	07
TV Talks	03
Animal health amps (Number of animals treated)	
Others (pl. specify) Research Paper	02
<b>Total</b>	<b>62</b>

### B. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						Total
		Crop	Lives tock	Weather	Marke-ting	Aware-ness	Other enterp rise	
Moradabad	Text only							
	Voice only							
	Voice & Text both							
	<b>Total Messages</b>							
	<b>Total farmers Benefitted</b>							

## V. DETAILS OF TECHNOLOGY WEEK CELEBRATIONS

Number of KVKs organised Technology Week	Types of Activities	No. of Activitie s	Number of Participants	Related crop/livestock technology
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## VI. PRODUCTION OF SEED/PLANTING MATERIAL AND BIO-PRODUCTS

### 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)	Number of farmers
Cereals	<b>Wheat Rabi 2017-18</b>	<b>WH - 1105</b>		<b>421.0</b>		
<b>Total</b>						
Oilseeds						
Pulses	<b>Urd Kharif 2017</b>	<b>PU - 31</b>		<b>59.60</b>	299145	supplied to NSC Meerut
	<b>Total</b>			<b>59.60</b>		
<b>G.Total</b>				<b>480.60</b>		

Commercial crops	Bajra		8141	5.0		To be auctioned
	<b>Total</b>			<b>5.0</b>		
Vegetables						
Flower crops						
Spices						
Fodder crop seeds						
Fiber crops						
Forest Species						

Others (Seed Mixture)						
<b>Grand Total</b>						

## A. Production of planting materials by the KVKs

Crop	Name of the crop	Name of the variety	Name of the hybrid	Number	Value (Rs.)	Number of farmers
Commercial						
Vegetable seedlings						
Fruits		Mango	Dasherri	60		
		Bael	Kagzi	40		
Ornamental plants						
Medicinal and Aromatic						
Plantation						
Spices						
Tuber						
Fodder crop saplings						
Forest species						
	Poplar	G-48		1000	-	-
Others						
Total				<b>1100</b>		

## B. Production of Bio-Products

Bio Products	Name of the bio-product	Quantity	Value (Rs.)	No. of Farmers
		Kg		
Bio Fertilisers				
Bio-pesticide				
Bio-fungicide				
Bio Agents		25		Used in KVK Farm
	Trichoderma			
Others				
<b>Total</b>		<b>25</b>		

## C. Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers
<b>Dairy animals</b>				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
<b>Poultry</b>				
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
<b>Piggery</b>				
Piglet				
Others (Pl. specify)				
<b>Fisheries</b>				
Indian carp				
Exotic carp				
Others (Pl. specify)				
<b>Total</b>				

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

Samples	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
Soil	224	224	25	24200.00
Water				
Plant				
Manure				
Others (pl.specify)				
<b>Total</b>	<b>224</b>	<b>224</b>	<b>25</b>	<b>24200.00</b>

## VIII. SCIENTIFIC ADVISORY COMMITTEE

Name of KVK	Number of SACs conducted
Krishi Vigyan Kendra, Moradabad (20th Dec. 2017)	01

## IX. NEWSLETTER

Name of KVK	Number of Copies printed for distribution

## X. PUBLICATIONS

Category	Number
Research Paper	02
Technical bulletins	-
Technical reports	06
Others (pl. specify) Article & Leaflets	10
<b>Toatl</b>	<b>18</b>

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

Activities conducted				
No. of Training programmes	No. of Demonstrations	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)
NA				



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

### A. Introduction of alternate crops/varieties - NA

Crops/cultivars	Area (ha)	Number of beneficiaries

### B. Major area coverage under alternate crops/varieties - NA

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

### C. Farmers-scientists interaction on livestock management - NA

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

### D. Animal health camps organised -NA

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

### E. Seed distribution in drought hit states - NA

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

### F. Large scale adoption of resource conservation technologies - NA

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

### G. 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
<b>Total</b>												

### 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>S.V.P.U. Agri. &amp; Tech., Meerut</b>	Capacity building of extension scientist	03	06	01
Total		03	06	01

#### 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
Training cum workshop for Soil Science & Agronomy scientist	01	02	01
Training cum workshop for Soil Science scientist	01	01	01
Training cum workshop for Horticulture scientist	01	01	01
Training cum workshop for Plant protection scientist	01	01	01
Training cum workshop for Agri. Ext. scientist	01	01	01
Review meeting of various programmes implemented by KVKs of U.P	01	02	01
Total	06	08	01

### XIV. CASE STUDIES (CASE STUDIES MAY BE GIVEN IN DETAIL AS PER THE FOLLOWING FORMAT)

*Each Zone should propose a minimum of three case studies with good action photographs (with captions on the backside of the hard copy of the photos) on the following topics*

- a) *Effective popularization on a larger scale of any one FLD technology and its role in transformation of district agriculture with respect to that particular crop or enterprise*
- b) *Performance of the end results of any one technology assessed, its refinement if any and its impact in district agriculture with respect to that crop or enterprise*
- c) *Effect of production and supply of seeds and planting material / animal breed / or bio-product and its impact on district agriculture with respect to that crop/ enterprise/ bio-product*

*The general format for preparing the above case studies are furnished below*

Name of the KVK

A. TITLE

B. Introduction

KVK intervention

Output

Outcome

Impact

**1- Case Study (Bee keeping)**  
**Dr. Arvind Kumar, Dr. Hasan Tanveer & Dr. R.K. Singh**

*Apis mellifera* –(European Honey bee) with better management becoming popular in farmers for extra income generation with crop production.

**Situation analysis/problem statement-** Mr Prashant yadav village- Roja, post-Bilari, block- Bilari, district- Moradabad. a farmer who is involve in bee keeping. He was earlier involved in bee keeping without better management resulting low yield.

**Plan implement and support** – KVK Moradabad tries to make them aware regarding scientific bee keeping. That start from selecting bee race to honey and wax extraction. This KVK has encouraged the farmers to attend the RY training programe at this KVK and then advised for scientific bee keeping involving *Apis mellifera* European bees, migration, insect and disease control, and artificial diet timely after doing training at KVK.

**Output –**

After doing training at KVK. Mr Prashant yadav adopted the *Apis mellifera* rearing and migration in summer (April-June) and winter (Dec-Jan) and proper insect, disease management by the use of methyl selicylate, sulphur, thymol and artificial diet as per suggestion of KVK scientist for his 50 bee colonies. His traditional honey yield was 11.0 and scientific bee keeping yield was 17.5 qt ( yield increases by 59.09%) and wax yield in traditional method was 10 kg and scientific bee keeping wax yield was 15 kg (50% increased). The economical gain in treatment of per unit 50 bee colonies expenditure, gross income, net return and BCR are recorded Rs 92000, Rs 175000, Rs 83000 and 1.90, respectively.

**Outcome –** Bee keeping is the growing diversified field of Agriculture in the district.KVK Moradabad trained 60 farmers during last three years (2015-16, 2016-17, 2017-18) of 18 villages, most of them are doing bee keeping. Mr prashant yadav is one them and involved in scientific bee keeping as guided by KVK scientist. This scientific bee keeping has been spread in 25 village of the district and bee keepers are approximately 100. The outcome of this training and advisement and consulting to motivate the farming communities to adopt scientific bee keeping involving migration, insect disease management, artificial diet properly and timely. While in old practice farmers are not adopting migration and proper management of food and insect, disease. So now Mr Prashant yadav is very happy on improvement in their income, livelihood and set forth example for others.

**Impact -** Mr prashant yadav is becoming one of the progressive and aware farmer and bee keeper for others with regards to popularization of scientific bee keeping. The scientific bee keeping helps him for livelihood, empowerment and make him enthusiastic regards honey production. He is one of the progressive farmer after a becoming a part of KVK activities and get their effectiveness for his own development. Mr Prashant yadav is very happy with this improved production and management technology and set forth example for other farmers and bee keepers of the district.



## 2. Case Study Dr. Hasan Tanveer , Dr. Arvind Kumar & Dr. R.K. Singh

**Wheat variety - PBW-550** – Become popular in farmers for their yield and disease resistance in the District- Moradabad.

**Situation analysis/problem statement-** Sri Dharamveer singh, Vill – Ramnagar Ganngpur, Post – Mangupura, Block- Bilari, , district- Moradabad, a farmer who was selected for timely sown wheat variety and their production technology, training/demonstration. He was used older variety of wheat PBW- 343. This variety was susceptible to yellow rust and give low grain yield.

**Plan implement and support** – KVK Moradabad tried to make him aware regarding scientific cultivation of wheat and it was started from land preparation to harvesting. The KVK had encouraged the farmer for soil testing. On the basis of soil testing, advised him for balance dose of fertilizers which was used in variety PBW- 550. The variety was sown on 15-11-2012 with line sowing and half dose of N<sub>2</sub>, full dose of P<sub>2</sub> O<sub>5</sub> and full dose of K<sub>2</sub> O as basal dose application while ¼ part N<sub>2</sub> used after first irrigation (crown root stage) and ¼ part used after 3<sup>rd</sup> irrigation (tillering stage).

**Output -** Sri Dharamveer singh used the balanced dose of fertilizer N:P:K :: 150:60:40 Kg/ha in wheat crop as per suggestion of KVK scientist for his 0.1 ha land. His yield was 5.54 q/1000 sq mt for var. PBW- 550 while in PBW- 343 yield 4.25/1000 sq mt and got 28.23% more yield in demonstration. The economic gain in terms of per 1000sq mt unit expenditure, gross income, net return and BCR were recorded as Rs 2150, Rs 6630, Rs 4480 and 1:3.08, respectively.

**Outcome –** Wheat is a major staple food grain of the district. KVK Moradabad conducted 30 demonstration in 6 village during 2011-12 to 2013-14. The variety PBW- 550 had been spread more than 200 villages of the district and covered 1200 ha area approximately. The impact of this varietal demonstration was motivating farmers comminutes to replace their old varieties having low yield and disease susceptibly.

**Impact -** Sri Dharamveer singh is now become one of the progressive and aware farmer to popularize PBW-550. He is participating in KVK activities and get aware for his own development. Sri Dharamveer singh is happy with his high production and management technology and ascribe as an example for other farmers of the district.



## XIV. AGRICULTURAL TECHNOLOGY INFORMATION CENTRE

### A. Details on ATICs

S. No	Name of the ATIC	Name of the Host Institute	Name of the ATIC Manager
1	KVK Moradabad	SVPUA & T, Meerut	Dr. A.K. Mishra

### B. Details on Farmer's visit

S. No	Purpose of visit	Number of farmer's visited
01	Technology Information	550
02	Technology Products	-
03	Others if any pl. specify	-

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

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

## D. Technology information provide

### D.1. Details on technology information

S. No	Information category	Number of ATICs	Total number of farmers benefitted	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									
03	Letters received									
04	Letters replied									
05	Training to farmers / technocrats / students									
06	Other specify									
	Advisory services through mobile	01	1525	255	455	350	15	465	-	-

## D.2 . 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)			

## E. Technology Products provided

S. No	Particulars	Quantity	Unit of quantity	Value in Rs.	Number of farmers benefited
01	Seeds				
02	Planting materials				
03	Livestock				
04	Poultry birds				
05	Bio-products	-			
06	Others pl. specify				

## F. Technology services provided

S. No	Particulars	Number of farmers benefited
01	Soil and water testing	224
02	Plant diagnostics	350
03	Details about the services to line Departments	Inspection of Agri. & Horticulture Dept. farms
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

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

### C. Visits made by DE / Officials in the Directorate to KVKs

S. No.	Particulars	Number of visits
01	SAC meetings	01
02	Field days	-
03	Workshops / seminars	-
04	Technology week	-
05	Training programmes	-
06	Others pl. specify - Visit of Hon'ble VC sir	01

### D. Overseeing of KVKs activities

S. No.	Particulars	Number of fields visited	Major observations / remarks	Major suggestions given
01	On Farm Trials	01	Appreciated	-
02	Front Line Demonstration	01	Appreciated	Before conducting demonstration Soil testing must be done
03	Others pl. specify Hon'ble VC sir	01	- Standing crop - wheat crop, Elite clone nursery, KVK campus, ATIC, ITC lab, Bio-agent lab, Soil testing lab etc. - Appreciated all activities	- Crop residue should not burn - White washing of administrative building - More agricultural technology should be on display board



**E. Publication on Technology inventory**

<b>S. No.</b>	<b>Particulars</b>	<b>Number</b>
01	Directorates published the technological inventory	
02	Directorates constantly updating the technological inventory	

**F. Technological Products provided to KVKs**

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

## STATUS OF REVOLVING FUND

Year	Opening balance as on 1 <sup>st</sup> April	Income during the year	Expenditure during the year	Net balance in hand as on 31st March 2017 of each year
2004 to 2005	100000.00	-	-	100000.00
2005 to 2006	100000.00	5640.17	90000.00	15640.17
2006 to 2007	15640.17	421859.41	235655.00	201844.58
2007 to 2008	201844.58	849384.00	392750.00	658478.58
2008 to 2009	658478.58	719344.00	647175.00	730647.58
2009-2010	730647.58	707686.75	714716.00	723618.33
2010-2011	723618.33	1041445.00	1248059.00	517004.33
2011-2012	517004.33	1536614.00	1177472.00	876146.33
2012-2013	876146.33	655085.00	768039.00	763192.00
2013-2014	763192.33	1483366.00	1929540.60* (1129540.60+800000)	317017.73
2014-15	317017.73	1036802.00	1050996.50	302823.23
2015-16	302823.23	776524.00	879725.50	199621.73
2016-17	199621.73	581546.73	765570.84	15597.86
2017-18	15597.86	1693905.00	647890.36	1061612.50

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Budget Utilization Certificate for the year 2017-18 in respect of KVK, MORADABAD

SN	Particulars	Grant Sanctioned (RE) 2017-18	Grant Received for 2017-18	Actual Expenditure for 2017-18	Variation		Reason for variation
					(+) Saving	(-) Excess	
<b>A</b>	<b>Recurring Items</b>						
1	Pay & Allowances	11549000.00	11549000.00	11549000.00	0.00	0.00	
2	Travelling Allowances	120000.00	120000.00	119659.00	341.00	0.00	
3	HRD	50000.00	50000.00	16000.00	34000.00	0.00	
<b>4</b>	<b>Contingencies</b>						
a	Stationery, Telephone, postage and other expenditure on office running including printing of reports, Minor repair white washing of buildings and krishi unnati mala etc.	565000.00	565000.00	344746.00	220254.00	0.00	
b	POL, Repair of vehicles, tractor and Equipment	120000.00	120000.00	114172.00	5828.00	0.00	
c	<b>Vocational Training</b>						
	(i) Meals/Refreshment for trainees	80000.00	80000.00	69916.00	14084.00	0.00	
	(ii) Training/Demonstration Material	30000.00	30000.00	9412.00	20588.00	0.00	
d	F.L.D.(Other than oil seed & pulses)	100000.00	100000.00	69181.00	30819.00	0.00	
e	On Farm Trial	50000.00	50000.00	15436.00	34564.00	0.00	
f	Training of Extn. Functionaries	30000.00	30000.00	12280.00	17720.00	0.00	
g	Library (Purchase of Journal, News Paper & Magazines)	5000.00	5000.00	3292.00	1708.00	0.00	
h	Farmer's Fair	0.00	0.00	0.00	0.00	0.00	
i	Misc. Expenditure	0.00	0.00	0.00	0.00	0.00	
<b>B</b>	<b>Total (A)</b>	<b>12699000.00</b>	<b>12699000.00</b>	<b>12319094.00</b>	<b>379906.00</b>	<b>0.00</b>	
	<b>Non-Recurring items</b>						
a	Equipments	0.00	0.00	0.00	0.00	0.00	
b	Works	0.00	0.00	0.00	0.00	0.00	
c	Library	0.00	0.00	0.00	0.00	0.00	
d	Vehicle	0.00	0.00	0.00	0.00	0.00	
	<b>Total (B)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	
<b>C</b>	<b>Revolving Fund</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	
	<b>Total (C)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	
	<b>Grand Total (A+B+C)</b>	<b>12699000.00</b>	<b>12699000.00</b>	<b>12319094.00</b>	<b>379906.00</b>	<b>0.00</b>	

  
 Accountant  
 Sanjay Kumar Sharma  
 OS/Accountant  
 K.V.K., Bilari, Moradabad

  
 Prof/ Head  
 Dr. Ramkaran Singh  
 Professor & Head  
 Krishi Vigyan Kendra  
 Bilari, Moradabad

## Details of Training Programme

### (i) ON Campus training for Practicing Farmers and farm Women

Subject	Title	Date	Clientele	Duration in days	Venue off/on	No. of Participants			Number of SC/ST		
						M	F	Total	M	F	Total
<b>I<sup>st</sup> Quarter</b>											
Crop Production	i. Ratoon management in late planted sugarcane.	25 April 17	PF	1	On	17	-	17	3	-	3
	ii. Nursery management of paddy.	18 May 17	PF	1	On	17	-	17	3	-	3
	iii. Production tech. of direct seeded rice.	09 June 17	PF	1	On	14	-	14	6	-	6
Horticulture	i. Management of Chilli crop in summer season.	29 May 17	PF	1	On	19	-	19	1	-	1
Soil Science	i. Method of soil samples collection.	19 May 17	PF	1	On	20	-	20	-	-	-
	ii. Fertilizer management in paddy nursery.	08 June 17	PF	1	On	15	-	15	5	-	5
Plant protection	i. Integrated insect & disease management in mentha crop.	24 April 17	PF	1	On	13	-	13	7	-	7
	ii. Integrated insect and Disease management in Urd crop.	12 May 17	PF	1	On	20	-	20	-	-	-

Subject	Title	Date	Clientele	Duration in days	Venue off/on	No. of Participants			Number of SC/ST		
						M	F	Total	M	F	Total
<b>II<sup>nd</sup> Quarter</b>											
Crop Production	i. Integrated nutrient management in paddy.	4July17	PF	1	On	15	-	15	5	-	5
	ii. Weed management in paddy.	18 July 17	PF	1	On	18	-	18	2	-	2
Horticulture	Improved varieties of bottle guard & their production technique	08 Aug 17	PF	1	On	19	-	19	1	-	1
	Crop regulation in guava	05 Sept. 17	PF	1	On	19	-	19	1	-	1
	Vegetable nursery management in rainy season.	22 Sept. 17	PF	1	On	18	-	18	2	-	2
Soil Science	i. Use of fertilizers on the bases of soil test in paddy.	15 July 17	PF	1	On	17	-	17	3	-	3
	ii. Use of water soluble fertilizer in paddy.	20 Sept. 17	PF	1	On	16	-	16	4	-	4
Plant protection	i. Integrated insect management in paddy	16 Aug.17	PF	1	On	20	-	20	-	-	-
	ii. Integrated disease management in paddy	15 Sept.17	PF	1	On	16	-	16	4	-	4
Plant breeding	i. Improved varieties of basmati rice & their production technique	3 July 17	PF	1	On	20	-	20	-	-	-
	ii. Improved Varieties of rape seeds and mustard, and their production technique.	13 Sept.17	PF	1	On	20	-	20	-	-	-
Agri. Extension	i. Role of information tech. for development of social economic of rural farmers.	26Sept. 2017	PF	1	On	15	-	15	5	-	5

Subject	Title	Date	Clientele	Duration in days	Venue off/on	No. of Participants			Number of SC/ST		
						M	F	Total	M	F	Total
<b>IIIrd Quarter</b>											
Crop Production	i. Use of sulphur & thinning practice in toria & Mustard.	08Sept. 17	PF	1	On	9	-	9	11	-	11
	ii. Conserve & decompose the crop residual for enriching organic carbon in soil.	04 Oct. 17	PF	1	On	18	-	18	2	-	2
Horticulture	i. Agromin foliar application in vegetables.	25 Oct. 17	PF	1	On	19	-	19	1	-	1
Soil science	i. Use of bio-fertilizers in Rabi crops.	22 Oct. 17	PF	1	On	16	-	16	4	-	4
	ii. Foliar spray of zinc and urea in wheat.	22 Nov. 17	PF	1	On	17	-	17	3	-	3
Plant protection	i. Integrated pest management technique in mustard crop.	15 Nov.17	PF	1	On	14	-	14	6	-	6
Plant Breeding	i. Improved varieties of wheat and their production technique under timely sown condition.	10 Oct.17	PF	1	On	20	-	20	-	-	-
	ii. Improved Varieties of late sown wheat and their production technique	20 Nov.17	PF	1	On	15	-	15	5	-	5
Agri. Extension	i. Different policies of U.P. Govt. for Agriculture development.	26 Oct. 2017	PF	1	On	19	-	19	1	-	1

Subject	Title	Date	Clientele	Duration in days	Venue off/on	No. of Participants			Number of SC/ST		
						M	F	Total	M	F	Total
<b>IVth Quarter</b>											
Crop Production	i. Integrated crop management in mentha crop	21 Jan. 18	PF	1	On	18	-	18	2	-	2
	ii. Integrated crop management in sugarcane.	21 Feb. 18	PF	1	On	2	-	2	18	-	18
	iii. Conserve & decompose the crop residual for enriching organic carbon in soil.	20 March 18	PF	1	On	2	-	2	18	-	18
Soil science	i. Advantage of bio-fertilizers in S.cane.	17 Feb 18	PF	1	On	16	-	16	4	-	4
	ii. Use of micro-nutrient management in S.cane.	20 Feb. 18	PF	1	On	15	-	15	5	-	5
Plant protection	i Integrated pest management technique in <i>rabi</i> pulses.	12 Jan. 18	PF	1	On	16	-	16	4	-	4
	ii. Integrated disease management in sugarcane.	14 Mar. 18	PF	1	On	16	-	16	4	-	4
Plant breeding	i. Improved varieties of mentha and their production technique.	18 Jan.18	PF	1	On	12	-	12	8	-	8
	ii. Improved varieties of maize and their production technique.	16 Feb. 18	PF	1	On	18	-	18	2	-	2

## (ii) OFF Campus training for Practicing Farmers and Farm Women

Subject	Title	Date	Clientel e	Duration in days	Venue off/ on	No. of Participants			Number of SC/ST		
						M	F	Total	M	F	Total
<b>I<sup>st</sup> Quarter</b>											
Crop Production	i. Production technology of late planted sugarcane	17 May 17	PF	1	Khanpur	19	-	19	1	-	1
	ii. Production technology of basmati.	30 May17	PF	1	Karsara	4	-	4	16	-	16
Agro- forestry	i. Management of Agro-forestry tress in summer season.	27 May. 2017	PF	1	Fathehpur Natha	20	-	20	-	-	-
Soil Science	i. Importance of soil testing in Agri. Production.	25April 17	PF	1	Khanpur	20	-	20	-	-	-
	ii. Method of soil sample collection	23 May 17	PF	1	Sihari	20	-	20	-	-	-
	iii. Fertilizers management in paddy nursery.	6 June 17	PF	1	Ladaa	20	-	20	-	-	-
	iv. Micro nutrients management in paddy	14 June 17	PF	1	Abupura Khurd Fathehpur Natha	20	-	20	-	-	-
Plant protection	i. Precaution during the use of pesticides and selection of pesticides and technique of solution making.	26 April 2017	PF	1	Fathehpur Natha	20	-	20	-	-	-
	ii Integrated insect management in sugarcane	19 May 17	PF	1	Sihari Ladda	20	-	20	-	-	-
Agri. Ext.	i. Importance of green mannuring	27 June 2017	PF	1	Hamjapur	20	-	20	-	-	-



Subject	Title	Date	Clientele	Duration in days	Venue off/on	No. of Participants			Number of SC/ST		
						M	F	Total	M	F	Total
<b>II<sup>nd</sup> Quarter</b>											
Crop Production	i. Production technology in Urd.	27 July. 17	PF	1	Bagwantpur	15	-	15	5	-	5
	ii. Production technology of intercropping in autumn Sugarcane	16 Sept. 17	PF	1	Khanpur	15	-	15	5	-	5
	iii. Integrated crop management in potato.	4 Oct. 17	PF	1	Khanpur	18	-	18	2	-	2
	iv. Use of Sulphur & thinning practice in mustard	28 Sept. 17	PF	1	Karsara	2	-	2	18	-	18
Horticulture	i. Improved varieties of sponge guard & their production technique.	27 July. 17	PF	1	Off	20	-	20	-	-	-
Soil Science	i. Use of fertilizers on the bases of soil test in paddy.	14 July 17	PF	1	Sihali Ladaa	20	-	20	-	-	-
	ii. Advantage of bio fertilizers	31 Aug. 17	PF	1	Bagpura	20	-	20	-	-	-
	iii. Method of soil sample collection	21 Sept. 17	PF	1	Sihali Ladaa	19	-	19	1	-	1
Plant protection	i. Management of termite in <i>kharif</i> crops.	14 July. 17	PF	1	Khanpur	20	-	20	-	-	-
	ii. Disease control in urd crop.	20 July 17	PF	1	Sihari Ladda	20	-	20	-	-	-
	iii. Management of hairy caterpillar in urd .	22 Aug. 17	PF	1	Fathehpur Natha	20	-	20	-	-	-
Plant breeding	i. Sucker production technique in mentha	19 July.17	PF	1	Fattepur Nimari	17	-	17	3	-	3
	ii. Improved varieties of rape seed & mustard and their production technique	21 Aug. 17	PF	1	Saharia	20	-	20	-	-	-
	iii. New varieties of sugarcane and their production technique	23 Sept. 17	PF	1	Jaitpur	19	-	19	1	-	1

Subject	Title	Date	Clientele	Duration in days	Venue off/on	No. of Participants			Number of SC/ST		
						M	F	Total	M	F	Total
<b>IIIrd Quarter</b>											
Crop Production	i. ICM in lentil.	27 Oct. 17	PF	1	Khata	7	-	7	13	-	13
	ii. Integrated Crop management in timely sown wheat	31 Oct. 17	PF	1	Mentara	18	-	18	2	-	2
	iii. Weed management in wheat	14 Nov. 17	PF	1	Khanpur	12	-	12	8	-	8
	iv. Fertilizer & irrigation management in Late sown wheat	04 Dec. 17	PF	1	Off	18	-	18	2	-	2
Horticulture	i. Integrated crop management in potato.	17 Oct. 17	PF	1	Off	8	-	8	12	-	12
	i. Improved varieties of onion and their production technique.	26 Oct. 17	PF	1	Off	14	-	14	6	-	6
	ii. Technical management of cauliflower prod.	19 Dec. 17	PF	1	Off	6	-	6	14	-	14
Agro-forestry	i. Inter cropping technique of wheat cultivation with poplar plantation.	10 Oct. 2017	PF	1	Khanpur	17	-	17	3	-	3
Soil Science	i. Method of soil sample collection.	30 Oct. 17	PF	1	Fathehpur Natha	20	-	20	-	-	-
	ii. Use of water soluble fertilizer in wheat.	16 Nov. 17	PF	1	Khanpur	13	-	13	7	-	7
	iii. Foliar spray of zinc and urea in wheat	24 Nov. 17	PF	1	Safilpur	17	-	17	3	-	3
Plant protection	i. Integrated insect management in Rabi pulse crops.	21 Nov. 17	PF	1	Naglia Jat	15	-	15	5	-	5
	ii. Management of early and late blight disease control in potato	15 Dec.17	PF	1	Karsara	-	-	-	20	-	20
Plant breeding	i. Improved varieties of wheat and their production technique	26 Oct. 17	PF	1	Sihari ladda	20	-	20	-	-	-
	ii. Varieties of wheat under late sown condition and their production technique	21 Nov.17	PF	1	Naglia Jat	18	-	18	2	-	2

Subject	Title	Date	Clientele	Duration in days	Venue off/on	No. of Participants			Number of SC/ST		
						M	F	Total	M	F	Total
<b>IV<sup>th</sup> Quarter</b>											
Crop Production	i. Integrated nutrient management of ratoon sugarcane crop	16 Jan.18	PF	1	Khanpur	12	-	12	8	-	8
	ii. Production tech. of inter crop in spring sugar cane.	26 Feb. 18	PF	1	khata	11	-	11	9	-	9
Horticulture	i. Cultivation of tomato on <i>Staking</i> system.	30 Jan 2018	PF	1	Off	19	-	19	1	-	1
Agro-forestry	i. Inter cropping of sugar cane with poplar.	04 March. 2018	PF	1	Off	18	-	18	2	-	2
Soil Science	i. Use of water soluble fertilizers in S.cane.	24Jan.2018	PF	1	Safilpur	19	-	19	1	-	1
	ii. Foliar spray of zinc and urea in wheat	25 Jan. 18	PF	1	Gwarkhera	18	-	18	2	-	2
	iii. Use of water soluble fertilizer in standing crop of wheat.	27Jan.2018	PF	1	Sihali Ladda	20	-	20	1	-	1
	iv. Advantage of micro-nutrient management in Sugarcane.	12 March 2018	PF	1	Dharampur Kala	20	-	20	-	-	-
Plant protection	i. Integrated Pest Management technique in mentha crop.	19 Jan. 18	PF	1	Karsara	19	-	19	1	-	1
	ii. Technique and importance of Seed treatment in <i>zaid</i> crops	08 Feb. 2018	PF	1	Fathehpur Natha	20	-	20	-	-	-
Plant breeding	i. Improved varieties of mentha and their production technique	25 Jan. 2018	PF	1	Kubri manak	20	-	20	-	-	-

## ON Campus/ OFF Campus : Vocational training programme for Rural Youth (ON/OFF Campus)

Subject	Title	Date	Thrust Area	Clientele	Duration in days	Venue off/on	No. of Participants			Number of SC/ST		
							M	F	Total	M	F	Total
<b>I<sup>st</sup> Quarter</b>												
Crop production	Production tech. of Blue Green Elge & Azola.	03-08 June 17	Promotion of organic manure	RY	6	On/Off	8	-	8	2	-	2
Plant breeding	Seed production technique of paddy	22-24 27-29 June17	Promoting seed production technique	RY	6	On/Off	10	-	10	-	-	-
<b>II<sup>nd</sup> Quarter</b>												
Crop production	Production tech. of Blue Green Elge & Azola.	13-18 Aug. 17	Promotion of organic manure	RY	6	On/Off	8	-	8	2	-	2
<b>III<sup>rd</sup> Quarter</b>												
Crop production	Seed production technique of Mustard	20-26 Oct. 17	Promoting seed production technique	RY	6	On/Off	8	-	8	2	-	2
Soil Science	Vermi-compost production	12-17 Oct. 17	Promotion of organic manure	RY	6	On/Off	8	-	8	2	-	2
Plant Protection	Technique of bee keeping	25-27 & 30-31 Oct.17	Promoting honey production	RY	6	On/Off	8	1	9	1	-	1
Plant Breeding	Wheat seed production technique	1-2 & 6-9 Oct.17	Promoting Wheat seed Production	RY	6	On/Off	8	-	8	2	-	2
<b>IV<sup>th</sup> Quarter</b>												
Crop production	Seed production technique of S.cane	20-26 Feb. 18	Promoting seed production technique	RY	6	On/Off	8	-	8	2	-	2
Plant protection	Technique of bee keeping	23-28 Feb 18	Promotion of honey production	RY	6	On/Off	8	-	8	2	-	2

### (iii) Training Programme for Extension Functionaries

Subject	Title	Date	Clientele	Duration in days	Venue off/on	No. of Participants			Number of SC/ST		
						M	F	Total	M	F	Total
<b>I<sup>st</sup> Quarter</b>											
Crop production	Production technology of DSR in paddy	03 June 2017	EF	1	On/Off	8	-	8	2	-	2
Soil Science	Importance of soil testing in Agriculture Prod.	26 April 2017	EF	1	On/Off	8	-	8	2	-	2
	Importance of green manure in paddy	24 May 2017	EF	1	On/Off	8	-	8	2	-	2
	Micro- nutrient management in paddy	27 June 2017	EF	1	On/Off	9	-	9	1	-	1
Plant protection	Technique of storage of food grains.	26 May 2017	EF	1	On/Off	7	-	7	3	-	3
	Management of Top borer in S.cane	27 June 2017	EF	1	On/Off	7	-	7	3	-	3
Agri. Extension	Importance of Pradhan mantri Fasal Beema Yojna	27 June 2017	EF	1	On/Off	8	-	8	2	-	2
<b>II<sup>nd</sup> quarter</b>											
Crop Production	Role & importance of water soluble fertilizer on crop production	11 Aug 2017	EF	1	On/Off	7	-	7	3	-	3
Soil Science	Use of Vermi & Nedap compost for soil health	19 Sept. 2017	EF	1	On/Off	7	-	7	3	-	3
	Use of micro- nutrients in Paddy.	28 Sept. 2017	EF	1	On/Off	7	-	7	3	-	3
Plant protection	Integrated pest management technique in <i>khariif</i> crops	25 Sept. 2017	EF	1	On/Off	7	-	7	3	-	3
	Control of Mosaic disease in Urd crop.	27 July 2017	EF	1	On/Off	9	-	9	1	-	1

<b>III<sup>rd</sup> Quarter</b>											
Crop Production	Production tech. in late sown wheat	11 Nov. 2017	EF	1	On/Off	7	-	7	3	-	3
Soil Science	Use of water soluble fertilizers in wheat.	10 Nov. 2017	EF	1	On/Off	8	-	8	2	-	2
Plant protection	Integrated pest management in <i>rabi</i> crops and vegetables	26 Oct. 2017	EF	1	On/Off	8	-	8	2	-	2
	Technique of selection & use of pesticides.	7 Dec. 2017	EF	1	On/Off	5	-	5	5	-	5
	Insect & Disease management in rabi pulse crops	21 Dec. 2017	EF	1	On/Off	7	-	7	3	-	3
Plant breeding	Improved variety of wheat and their production technique	30 Nov. 2017	EF	1	On/Off	8	-	8	2	-	2
<b>IV<sup>th</sup> Quarter</b>											
Crop production	Production technology of Mentha with associate of wheat crop.	10 Feb 2018	EF	1	On/Off	8	-	8	2	-	2
Soil Science	Foliar spray of Zinc and Urea in Wheat.	31 Jan. 2018	EF	1	On/Off	8	-	8	2	-	2
Soil Science	Use of sulphur in Sugarcane.	26 Feb 2018	EF	1	On/Off	8	-	8	2	-	2
Soil Science	Advantage of Bio-fertilizers in S.cane and its application.	13 Marc. 2018	EF	1	On/Off	8	-	8	2	-	2
Plant Protection	Integrated pest management technique in Zaid crops.	24 Jan. 2018	EF	1	On/Off	7	-	7	3	-	3