

# **Annual Progress Report**

## **(April, 2018- March, 2019)**



Submitted by

# **MAHAYOGI GORAKHNATH KRISHI VIGYAN KENDRA**

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## PROFORMA FOR PREPARATION OF ANNUAL REPORT (April-2018-March-2019)

### 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	66	1020	417	1437
Rural youths	1	11	0	11
Extension functionaries	1	0	15	15
Sponsored Training	3	200	31	231
Vocational Training	0	0	0	0
<b>Total</b>	<b>71</b>	<b>1231</b>	<b>463</b>	<b>1694</b>

#### 2. Frontline demonstrations

Enterprise	No. of Farmers	Area (ha)	Units/Animals
Oilseeds	100	40.00	
Pulses	160	62.50	
Cereals	30	5.00	
Vegetables	20	1.00	
Other crops	60	8.00	
Hybrid crops			
<b>Total</b>			
Livestock & Fisheries			
Other enterprises			
<b>Total</b>			
<b>Grand Total</b>	<b>370</b>	<b>116.5</b>	

#### 3. Technology Assessment & Refinement

Category	No. of Technology Assessed & Refined	No. of Trials	No. of Farmers
<b>Technology Assessed</b>			
Crops	8	30	30
Livestock	2	8	8
Various enterprises (Drudgery reduction and Drumstick leaf powder)	2	12	12
<b>Total</b>	<b>12</b>	<b>50</b>	<b>50</b>
<b>Technology Refined</b>			
Crops			
Livestock			
Various enterprises			
<b>Total</b>			
<b>Grand Total</b>	<b>12</b>	<b>50</b>	<b>50</b>

#### Extension Programmes

Category	No. of Programmes	Total Participants
Extension activities	1636	24171
Other extension activities	34	-
<b>Total</b>	<b>1670</b>	<b>24171</b>

#### 4. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	
	Text only	436	74	12	5	32	341	25
	Voice only	2500	18	11	6	8	17	20
	Voice & Text both							
	<b>Total Messages</b>	2936	92	23	11	40	358	45
	<b>Total farmers Benefitted</b>							

#### 5. Seed & Planting Material Production

	Quintal/Number	Value Rs.
Seed (q)	433.25	-
Planting material (No.)	21355	2542
Bio-Products (kg)		
Livestock Production (No.)		
Fishery production (No.)		
<i>Note: Fishery production number should be given in numbers only.</i>		

#### 6. Soil, water & plant Analysis

Samples	No. of Beneficiaries	Value Rs.
Soil	348	-
Water		
Plant		
<b>Total</b>		

#### 7. HRD and Publications

Sr. No.	Category	Number
1	Workshops	05
2	Conferences	01
3	Meetings	01
4	Trainings for KVK officials	
5	Visits of KVK officials	
6	Book published	
7	Training Manual	
8	Book chapters	01
9	Research papers	05
10	Lead papers	02
11	Seminar papers	12
12	Extension folder	48
13	Proceedings	
14	Award & recognition	3
15	On going research projects	

## DETAIL REPORT OF APR-2018-19

### IX. GENERAL INFORMATION ABOUT THE KVK

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

Address	Telephone		E-mail	Website
	Office	Fax		
Mahayogi Gorakhnath Krishi Vigyan Kendra, Chauk Mafi (Peppeganj), Jangal Kaudia, Gorakhpur, (U.P.)	0551- 2255453 2255454	0551- 2255455	<a href="mailto:gorakhpurkvk2@gmail.com">gorakhpurkvk2@gmail.com</a>	<a href="http://www.mgkvk.in">www.mgkvk.in</a>

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

Address	Telephone		E-mail
	Office	FAX	
Guru Gorakshnath Sewa Santhan, Sri Gorakhnath Mandir, Gorakhpur	<b>0551-2255453, 54</b>	<b>0551-2255455</b>	<a href="mailto:gorakhpurkvk2@gmail.com">gorakhpurkvk2@gmail.com</a>

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

Name	Telephone / Contact		
	Residence	Mobile	E-mail
Dr. Rajendra Pratap Singh	-	9532460717 9648448405	<a href="mailto:gorakhpurkvk2@gmail.com">gorakhpurkvk2@gmail.com</a>

1.4. Year of sanction: 2016

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

Sl. No.	Sanctioned post	Name of the incumbent	Design-ation	Discipline	Pay Scale (Rs.)	Present basic (Rs.)	Date of joining	Permanent /Temporary	Category (SC/ST/OBC/Others)	Mobile no.	Age	Email id
1	Sr. Scientist and Head	Dr. Rajendra Pratap Singh	Sr. Scientist and Head	Plant Pathology	37400-67000	46400	26/05/2017	Temporary	Others	9648448405 9532460717	49	<a href="mailto:rpskvk.22@gmail.com">rpskvk.22@gmail.com</a>
2	Subject Matter Specialist	Dr. Vivek Pratap Singh	SMS	Animal Husbandary and Dairying	15600-39100	21630	31/07/2017	Temporary	Others	9415745095		vpslpm@gmail.com
3	Subject Matter Specialist	Vacant		Home Science								
4	Subject Matter Specialist	Dr. Ajit Kumar Srivastava	SMS	Horticulture	15600-39100	21630	01/08/2017	Temporary	Others	8787264166		<a href="mailto:ajitcar@gmail.com">ajitcar@gmail.com</a>
5	Subject Matter Specialist	Dr. Rahul Kumar Singh	SMS	Agri. Extension	15600-39100	21630	01/08/2017	Temporary	Others	9454054072		rahulrrex91@gmail.com
6	Subject Matter Specialist	Mr. Avanish Kumar Singh	SMS	Agronomy	15600-39100	21630	01/08/2017	Temporary	Others	9792099943		<a href="mailto:avanishsinghcar@gmail.com">avanishsinghcar@gmail.com</a>
7	Subject Matter Specialist	Mr. Sandeep Prakash Upadhyay	SMS	Soil Science	15600-39100	21630	01/08/2017	Temporary	Others	9690475529		sandeepupadhyay383@gmail.com
8	Programme Assistant Computer	Gaurav Kumar Singh	Programme Assistant-Computer	IT	9300-34800	4200	14/08/2017	Temporary	Others	9838674999		vishengaurav@gmail.com
9	Programme Assistant (Lab. Tech.)	Jitendra Kumar Singh	Programme Assistant	Lab. Technician	9300-34800	4200	14.08.2018	Temporary	OBC	9956912021		jitendra.s273158@gmail.com
10	Farm Manager	Ashish Kumar Singh	Programme Assistant	Farm Manager	9300-34800	4200	14.08.2018	Temporary	Others	7752941868		ashishksingh1994@gmail.com
11	Assistant	Shubham Pandey	Assistant	Assistant	9300-34800	4200	14.08.2018	Temporary	Others	7752941868		<a href="mailto:luckywatson123@gmail.com">luckywatson123@gmail.com</a>

12	Stenographer-III	Gangesh Giri	Stenographer Grade-III	Stenography	5200-20200	2400	14.08.2018	Temporary	OBC	7309018154		gangeshgiri1012@gmail.com
13	Driver-cum-Mechanic	Sanjay Kumar Yadav	Driver-cum-Mechanic	Driver	5200-20200	2000	14.08.2018	Temporary	OBC	9415853387		<a href="mailto:sanjayyadavmgkvk@gmail.com">sanjayyadavmgkvk@gmail.com</a>
14	Driver-cum-Mechanic	Dinesh Rao	Driver-cum-Mechanic	Driver	5200-20200	2000	14.08.2018	Temporary	OBC	9695713464		<a href="mailto:dineshgkp1991@gmail.com">dineshgkp1991@gmail.com</a>
15	Supporting staff Grade-I	Jai Prakash Singh	Supporting Staaf Grade-I	Skilled Supporting Staaf	5200-20200	1800	14.08.2018	Temporary	Others	8545003001		jaiprakashsingh1005@gmail.com
16	Supporting staff Grade-I	Abhimanyu Kumar Verma	Supporting Staff Grade-I	Skilled Supporting Staff	5200-20200	1800	14.08.2018	Temporary	OBC	9918989802		abhimanyuverma0808@gmail.com

1.6. Total land with KVK (in ha) :

S. No.	Item	Area (ha)
1.	Under Buildings	0.80
2.	Under Demonstration Units	-
3.	Under Crops	12
4.	Orchard/Agro-forestry	-
5.	Others (specify)	-

1.7. Infrastructural Development:

### IX. Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	2 march	-	144.09 lakh			
2.	Farmers Hostel	ICAR	Under construction	-	66.41 lakh			
3.	Staff Quarters (1-Head and 2-Supporting staff)	ICAR	Completed	-	61.52 lakh			
4.	Staff Quarters (6)							
5.	Demonstration Units (2)	-						
6.	Fencing	-						
7.	Rain Water harvesting system	-						
8.	Threshing floor	-						
9.	Farm godown	-						

#### B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Tractor (UP 53 CL 5201)	2017	9.55	600	Good Condition
Bolero (UP 53 AG1220)	2019	6.50	120	Good Condition

#### C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Groundnut Decorticator	2019	5389	Good Condition
UMMB machine	2019	11006	Good Condition
	.		

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

Sl.No.	Date	Name and Designation of Participants	Salient Recommendations	Action taken
1.				

**Note : This yellow mark may be treated as an example**

\* Attach a copy of SAC proceedings along with list of participants

## **2. DETAILS OF DISTRICT (2018-19)**

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

S. No	Farming system/enterprise
1.	Crop Production + Livestock
2.	Crop Production + Poultry
3.	Crop Production + Fisheries
4.	Crop Production + Vegetable Production
1.	Crop Production + Vegetable Production+ Orchard

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

S. No	Agro-climatic Zone	Characteristics
1.	AES-1 (Sandy loam)	Poor water holding capacity
2.	AES-2 (Silty loam, Khadar Soil)	Medium water holding capacity
3.	AES-3 (Clay Loam)	Good water holding capacity

### **2.3 Soil type/s**

S. No	Soil type	Characteristics	Area in ha
1.	AES-1	Soil Type-Sandy loam	160952
2.	AES-2	Soil Type-Silty loam, Khadar Soil	121714
3.	AES-3	Soil Type-Clay Loam	52651

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

S. No	Crop	Area (thousand ha)	Production (thousand ton)	Productivity (Qtl /ha)
<b>A</b>	<b>FIELD CROPS INCLUDING OIL SEEDS AND PULSES</b>			
1.	Paddy	152497	202895	15.26
2.	Maize	3299	4281	12.98
3.	Jowar	27	37	13.70
4.	Bajra	369	-617	16.72
5.	Arhar	8659	4978	5.75
6.	Urd	24	09	3.73
7.	Moong	02	01	2.77
8.	Ground Nut	2547	1508	5.92
9.	Til	75	12	1.62
10.	Wheat	190499	448884	23.89
11.	Barley	708	1388	19.60
12.	Gram	668	544	8.15
13.	Pea	2766	3587	12.97
14.	Lentil	2275	2067	9.08



15.	Mustard	3492	2373	6.80
16.	Linseed	47	02	4.20
17.	Sugarcane	3955	209034	528.53
<b>B</b>	<b>FRUITS</b>			
1.	Banana	6600	264000	40.00
2.	Mango	5500	38500	07.00
3.	Guava	1550	15500	10.00
4.	Litchi	200	13000	06.50
5.	Jamun	100	500	05.00
6.	Papaya	50	500	10.00
7.	Jackfruit	40	360	09.00
8.	Citrus	20	160	08.00
<b>C</b>	<b>VEGETABLES</b>			
1.	Potato	5000	125490	250.90

## 2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)
		Maximum	Minimum	

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

Category	Population (2012)	Production (2016-17) 000mt	Productivity
<b>Cattle</b>			
<i>Crossbred+ Indigenous</i>	<b>288765</b>	<b>366.21</b>	-
<b>Buffalo</b>	<b>279122</b>		
<b>Sheep</b>	<b>7894</b>	<b>Wool 7.22 (000Kg)</b>	
<i>Crossbred</i>			
<i>Indigenous</i>			
<b>Goats</b>	<b>196224</b>	<b>62.45 lakh Kg</b>	
<b>Pigs</b>	<b>18032</b>		
<i>Crossbred</i>			
<i>Indigenous</i>			
<b>Rabbits</b>			
<b>Poultry</b>	<b>682246</b>	<b>Eggs 538.3 (lakh)</b>	
<i>Hens</i>			
<i>Desi</i>			
<i>Improved</i>			
<i>Ducks</i>			
<i>Turkey and others</i>			
<b>Category</b>	<b>Area</b>	<b>Production</b>	<b>Productivity</b>
<i>Fish</i>			
<i>Marine</i>			
<i>Inland</i>			
<i>Prawn</i>			
<i>Scampi</i>			
<i>Shrimp</i>			

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

Sl.No.	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1.	Campier ganj	Jungle Kaudia	Chauk Mafi, Badhya chouk, Madaha , Rajabari, Ranana diha, Majhau na Sakhi,	Rice, Wheat, Arhar, Mustard, Gram, Potato, Tomato, Bitter Gourd, Cucumber, Pumpkin, Ridge Gourd & Cattle	Low Yield, Anestrus and malnutrition in animal, weed infestation, pod-borer in pea, chick pea, Pigeon pea, soil erosion, less use of organic manure, Lack of awareness on post-harvest technology, value addition and drudgery reduction, Lack of timely information and technical guidance, Lack of knowledge about identification of insect-pest and different symptoms of diseases and pest attack	To improve productivity per unit area through Introduction of HYV, Integrated Nutrient Management, Integrated Disease Management, Integrated Weed Management, Seed production technology Maintenance of Old Orchard, Integrated pest management, Resource Conservation Technology, Kitchen gardening for production of nutritional food by women farmers, Raising productivity of livestock by upgrading the genetic potential by artificial insemination and use of mineral mixture, proper feeding and management, Post-Harvest management of food grain seed, fruits, vegetables, milk and milk products, less use of organic manure
2.	Campier ganj	Campier ganj	Bhaghi bhari, Atkawa , Mithouri, Kalyan pur, Ramchaura, Bhagwanpu	Rice, Wheat, Arhar, Mustard, Gram, Potato, Tomato, Cucumber, Pumpkin, Banana, Mango	Incidence of insect-pest and diseases in cereals, pulses, oilseeds, fiber, sugarcane, forage, vegetable, fruit and ornamental crops, Lack of awareness about production and management of livestock's, vaccination and important disease problem in livestock	do

3.	Sadar	Bhathat	Sarhare, Tikariya, Jungle dumri Chakjalal Aurangabad	Gram, Potato, Tomato, Bottle Gourd, Cucumber, Pumpkin	Lesser adoption of Good Agronomical Practices (GAP) like summer ploughing and destruction of stubbles, line sowing and raised bed planting method, intercropping, crop rotation, green manuring and application of neem cake, ground nut cake for pest management, Lack of knowledge about HYV of horticultural crops and latest production technology	do
4.	Sahjanwala	Pali	Usri, Madar, Bharpahi, Bhaksa, Musthafabad,	Rice, Wheat, Arhar, Mustard, Gram, Potato, Tomato, Ridge Gourd, Banana, Mango, Cattle	Lesser adoption of seed treatment technique and use of higher doses of pesticides in vegetables and cereals. Low consumption and injudicious use of pesticides in rice, wheat, pulses, fiber and fruit plants. Higher doses and frequently usage of chemical pesticides in vegetable crops.	Do
5.	Sadar	Chargawan	Bisunpur, Jangal aurahi, Lakshmipur, Parmeshapur, Jungle Dhushan, Siktora, Maniram, Sonbarsha	Wheat, Arhar, Mustard, Gram, Potato, Tomato, Bottle Gourd, Cucumber, Pumpkin, Ridge Gourd, Banana, Mango	do	do

6.	Sadar	Pipraich	Mohanpur, Baraipur, Bela, Bhaisaha, Gaura, Gopalpur, Kushmi	Arhar, Mustard, Gram, Potato, Tomato, Bottle Gourd, Cucumber, Pumpkin, Ridge Gourd, Banana, Mango, Buffalo	do	do
7.	Chauri Chaura	Sadar Nagar	Bardi, Bhagwanpur, Chaura, Devipur, Sariyaiya, Bhauapar	Rice, Wheat, Arhar, Mustard, Gram, Potato, Tomato, Bottle Gourd, Cucumber, Pumpkin, Ridge Gourd, Banana, Mango, Cow	do	do
8.	Sadar	Khorabar	Bhumihari, Amhiya, Bhaisaha	Rice, Wheat, Arhar, Mustard, Gram, Potato, Tomato, tree plantation, Mango, goat	do	do

9	Sahjanw a	Sahjanw a	Keshok urha, Bhimap ar, Keshav pur, Gahash ad, basia bhagaur a	Rice, Wheat, Arhar, Mustard, Gram, Potato, Tomato, Pumpkin, Ridge Gourd, Banana, Mango, Buffalo, cow	do	do
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## 2.8 Priority/thrust areas

SN	Crop/Enterprise	Thrust area
1	Crop Production	Production Technology for kharif, rabi and zaid crop. Improved Production Technology through mechanization
2	RCT	Promotion of resource conservation technology
3	Entrepreneurship	Entrepreneurship development in rural youth
4	Drudgery reduction	Drudgery reduction technology and Drudgery reducing farm implements among farm women
5	Horticultural crops	Promotion of high value horticultural crop, Quality seed/planting material production
6	Live stock	Raising productivity of livestock, upgrading genetic potential through artificial insemination, use of mineral mixture, disease and parasitic control, proper feeding and management
7	Organic inputs production	NADEP and Vermi-composting
8	IPM	Promotion of Integrated Pest Management strategies for safe food production and environment protection
9	INM	Promotion of site specific nutrient management through INM for sustainable soil health

11	Kitchen Gardening	Nutritional security through kitchen gardening
12	Cucurbitaceous (bottle gourd, pumpkin, sponge gourd, bitter gourd etc.), groundnut, potato	Introduction of HYV, integrated disease/pest management, integrated nutrient management
13	Rice, Wheat, Pulses (Pigeon pea, chick pea, lentil, field pea, urd and moong)	Introduction of HYV, Integrated Nutrient Management, Integrated Disease Management, Resource Conservation Technology, Integrated Weed Management, Seed production technology
14	Cole crop(cauliflower, cabbage), Tomato, Okra, Chilli	Introduction of HYV, integrated pest and disease management, integrated nutrient management

**2.9 Intervention/ Programmes for the doubling the farmers income – during 2018-19****Demonstrations**

<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(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>
Intercropping 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>
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.

## IX. TECHNICAL ACHIEVEMENTS

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

OFT (Technology Assessment and Refinement)				FLD (Oilseeds, Pulses, Cotton, Other Crops/Enterprises)			
1				2			
Number of OFTs		Total no. of Trials		Area in ha		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
12	12	51	48	124.8	124.8	395	395

Training (including sponsored, vocational and other trainings carried under Rainwater Harvesting Unit)					Extension Activities			
3					4			
Number of Courses			Number of Participants		Number of activities		Number of participants	
Clientele	Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
Farmers	83	69	1645	1668	1024	1636	6945	22322
Rural youth	11	1	150	15				
Extn. Functionaries	20	1	300	15	333	1313	220	24171

Seed Production (Qtl.)			Planting material (Nos.)		
5			6		
Target	Achievement	Distributed to no. of farmers	Target	Achievement	Distributed to no. of farmers
403	433.25	-	20000	21355	31

## I.A TECHNOLOGY ASSESSMENT

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

Thematic areas	Crop	Name of the technology assessed	No. of trials	No. of farmers
Integrated Nutrient Management	Paddy	Assessment of Zinc with biofertilizer for enhancing nutrient use efficiency in paddy for yield maximization.	3	3
	Cauliflower	Assessment of efficient use of Nutrient with HYV for higher income	4	4
Varietal Evaluation	Pigeon pea	Assessment of high yielding variety of pigeon pea	3	3
	Mustard	Assessment of yield performance of mustard through HYV	3	3
	Tomato	Assessment of efficient use of Ferrous Amonium Sulphate with HYV for yield Maximization	4	4
	Wheat	Assessment of high yielding variety of wheat	3	3
Integrated Pest Management	chickpea	Assessment of pod borer management in chickpea	4	4
Integrated Crop Management				
Integrated Disease Management	Paddy	Assessment of false smut management in paddy	4	4
Small Scale Income Generation Enterprises				
Weed Management				
Resource Conservation Technology				
Farm Machineries				
Integrated Farming System				
Seed / Plant production				
Post Harvest Technology / Value addition				
Drudgery Reduction	groundnut	Assessment of drudgery reducing equipments (groundnut decordicator) for dehusking of groundnut shell	03	03
Storage Technique				
Others (Pl. specify)				
<b>Total</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	Cow	Assessment of UMMB animal feed supplementation to control the infertility	05	05
Production and Management	Buffalo	Assessment of conventional and bypass animal feed to enhancing	03	03

		milk yield		
Others (Pl. specify)				
<b>Total</b>				

**Summary of technologies assessed under various enterprises by KVKs**

Thematic areas	Enterprise	Name of the technology assessed	No. of trials	No. of farmers
Health management		Assessment of drumstick leaf powder as remedy of low hemoglobin level among adolescent girls	10	10

**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

### 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>				

### 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>				

### 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

### PEST AND DISEASE MANAGEMENT (Paddy) OFT-1

**Problem definition:** False smuts have recently become an important disease in paddy and causes both quantitative and qualitative losses.

**Technology Assessed or Refined (as the case may be):** False smut management in paddy.

The disease can occur in areas with high relative humidity (>90%) and temperature ranging from 25–35 °C. Rain and high humidity and soils with high nitrogen content also favor disease development. The pathogen also survives through alternate host viz., barnyard grass (*Echinochloa crusgalli*) and common rice weed *Digitaria marginata*. Wind can spread the fungal spores from plant to plant. False smut symptoms produced are visible after flowering only. The integrated approaches i.e. recommended dose of nitrogen (120kg/ha), weed management with Bispyribac-sodium 10% EC @ 250 ml/ha at 20 days after transplanting and Propiconazole 25% BC @ 1 ml/liter water at panicle initiation were comprised under on farm trial. The incidence of false smut in paddy was recorded 6.0% in demonstration plot while it was 10.50% in farmers practice. The average yield of 49.50 q/ha was obtained from the demonstration plot whereas 41.20 q/ha from farmer practices and yield was increased by 20.15 per cent. Percent disease reduction was recorded 42.86% with application of IDM strategies. Farmers accepted and appreciated the technology.

**Table:- Performance of integrated approach**

Technology Option	No. of Trials	Avg. infected panicle/hill	Avg. infected panicle/m <sup>2</sup>	Yield (q/ha)	%increase in yield over farmers practice	Disease incidence (%)
1	2	3	4	5	6	
Farmers practice (No control measure adopted/improper use of fungicides) (FP)	04	2.75	3.0	41.20	-	10.50
Use of integrated approach		1.50	2.0	49.50	20.15	6.0

Technology Option	Gross Cost (Rs/ha)	Gross Return (Rs/ha)	Net Return (Rs/ha)	B:C Ratio
	7	8	9	10
Farmers practice	26950	65920	38970	2.45
Use of integrated approach	29250	79200	49950	2.71



(Chick Pea) *OFT-2*

**Problem definition:** Low yield of Chickpea due to severe infestation of pod borer and it accounting for 75% pod damage in crop.

**Technology Assessed:** Assessment of IPM strategies for pod borer management in chick pea

Chick Pea is a major pulse crop of Rabi season. The low yield of chick pea was recorded due to severe infestation of pod borer (*Helicoverpa armigera* Hubner). The problem was identified with concerned village persons during survey and KVK conducted on farm trial to assess the control measures. The different IPM strategies i.e. proper tillage, line sowing and inter cropping with coriander/linseed, HYV GNG 1581, seed treatment with Carbendazim @ 2gm/kg of seed for management of collar rot and spray of Emaxectin Benzoate 5% SG @ 0.4 gm/liter water at 50% flowering and at 50% pod filling stage were comprised under on farm trial. There was less infestation of plants/m<sup>2</sup> and pod/plant with application of IPM strategies. The average yield of 15.83 q/ha was obtained from the demonstration plot whereas 11.75 q/ha from farmers practice and yield was increased by 34.72 per cent.

**Table:- Performance of management strategies of Pod borer in Chick Pea**

<i>Technology Option</i>	<i>No. of Trials</i>	<i>% of Affected plants/m<sup>2</sup></i>	<i>% of damaged pod/plant</i>	<i>Yield ( q/ha)</i>	<i>%increase in yield over farmers practice</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
<i>Indiscriminate use of pesticide</i>	04	18.00	14.50	11.75	-
<i>Use of IPM strategies</i>		10.00	8.00	15.83	34.72

<i>Gross Cost (Rs/ha)</i>	<i>Gross Return (Rs/ha)</i>	<i>Net Return (Rs/ha)</i>	<i>B:C Ratio</i>
<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>
16895	47000	30105	2.78
20195	63320	43125	3.14

## INTEGRATED NUTRIENT MANAGEMENT

(Paddy) *OFT-3*

**Problem Definition:** Low yield in Paddy due to use of imbalanced dose of fertilizer and no use of biofertilizer.

**Technology Assessed:** Assessment of zinc sulphate and biofertilizer with application of 20% less fertilizer in paddy for yield maximization.

Paddy (*Oryza sativa*) is one of the most common cereals crops grown in *Kharif* season under irrigated condition. The yield of paddy is being lowered down due to use of imbalanced dose of chemical fertilizer and no use

of zinc sulphate and *Azotobacter*. MGKVK Gorakhpur has designed On Farm Trial in paddy crop for yield maximization. The assessed technology of 20% less chemical fertilizer (100:40:40::N:P:K kg/ha) + zinc sulphate 33% @ 2% (three foliar application i.e. 15, 30 and 45 DAT) and *Azotobacter*-  $1 \times 10^8$  cfu @200 ml/acre (as soil application @200 mL/acre + 50 kg FYM before 24 hours of transplanting) were comprised in paddy variety Sambha Sab 1. The demonstrated technology yielded 52.83 q/ha yield which was 24.80% higher over farmer's practice (42.33 q/ha). The other traits like number of effective tillers/plant, plant height and number of grains/spike were recorded more i.e. 18, 94 and 258, respectively in demonstrated technology as compared to farmers practices. Farmers accepted and appreciated the demonstrated technology.

**Table: Effect of balanced dose of chemical fertilizer with *Azotobacter* in paddy**

<b>Technology Option</b>	<b>No.of trials</b>	<b>No of tillers/plants</b>	<b>No of grains/spike</b>	<b>Plant height(cm)</b>	<b>Yield (q/ha)</b>	<b>%increase in yield</b>
T-1: Farmers Practice (170:40:0::N:P:K)kg/ha and no use of zinc sulphate & <i>Azotobacter</i>	<b>03</b>	<b>14</b>	<b>212</b>	<b>85</b>	<b>42.33</b>	<b>-</b>
T-2: Sambha sab 1 + 20% less dose of chemical Fertilizer(100:40:40::N:P:K)kg/ha+zinc sulphate33% @2% foliar spra, <i>Azotobacter</i> @200ml/acre.		<b>18</b>	<b>258</b>	<b>94</b>	<b>52.83</b>	<b>24.80</b>

<b>Gross Cost (Rs/ha)</b>	<b>Gross Return (Rs/ha)</b>	<b>Net Return (Rs/ha)</b>	<b>B:C Ratio</b>
<b>26550</b>	<b>65616</b>	<b>39066</b>	<b>2.47</b>
<b>29750</b>	<b>81891</b>	<b>52141</b>	<b>2.75</b>

## VARIETAL EVALUATION

(Pigeon pea) *OFT-4*

**Problem definition:** Lower Productivity and profitability in Pigeon pea cultivation due to use of old and mixed varieties.

**Technology Assessed:** Assessment of high yielding variety of Pigeon pea

Pigeon pea is the most important Kharif pulse crop of Uttar Pradesh. The productivity of pigeon pea crop of Uttar Pradesh and in district Gorakhpur is quite low as compare to production potential. Among various constraints like lack of knowledge about suitable location specific variety, unavailability of quality seeds in time, use of old and mix variety, poor crop management and protection technologies assume primary position for considering the facts of low yield of pigeon pea. To replace this anomaly, the MGKVK, Gorakhpur conducted on farm trial on assessment of HYV of pigeon pea i.e. IPA 203 with recommended practices. The grain yield i.e. 14.66q/ha was recorded in demonstrated technology which was 57.63 % more over farmers practice (9.30 q/ha) and net return Rs. 52015/ha was recorded in IPA 203 as compared to the farmers practice (Rs. 27450/ha). Farmers accepted and appreciated the demonstrated technology.

**Table:-Performance of HYV Wheat Varieties IPA 203 under Timely Sown Irrigated Condition**

<i>Technology Option</i>	<i>No. of Trials</i>	<i>Plant height (cm)</i>	<i>No of Grain /spike</i>	<i>Grain Yield q/ha</i>	<i>% Increase in Yield</i>	<i>Gross Cost Rs/ha</i>	<i>Gross Returns Rs/ha</i>	<i>Net Returns Rs/ha</i>	<i>B:C Ratio</i>
<i>Pigeon pea old and mixed variety (Farmers Practice)</i>	<b>03</b>	<b>315</b>	<b>03</b>	<b>9.30</b>	<b>-</b>	<b>19050</b>	<b>46500</b> @50.00/kg	<b>27450</b>	<b>2.44</b>
IPA 203		<b>205</b>	<b>04</b>	<b>14.66</b>	<b>57.63</b>	<b>21255</b>	<b>73300</b> @50.00/kg	<b>52015</b>	<b>3.44</b>

## VARIETAL EVALUATION

(Mustard) *OFT-5*

**Problem definition:** Lower Productivity and profitability in Mustard cultivation due to use of old and mixed varieties.

**Technology Assessed:** Assessment of yield performance of Mustard through HYV

Mustard is one of the most important rabi oilseed crops, widely cultivated throughout the country. The yield of Mustard is being lowered down due to lack of knowledge about suitable location specific variety and unavailability of quality seed among farming community. Farmers are used old and mix variety so that they are not getting higher yield. The MGKVK, Gorakhpur conducted on farm trial on assessment of HYV of Mustard RH 749 with proper management practices. Higher grain yield 18.66q/ha and net return Rs. 61578/ha was recorded in demonstrated technology as compared to the farmers practice with average yield 12.5 q/ha and net return of Rs. 19845/ha. Farmers accepted and appreciated the demonstrated technology.

**Table:-Performance of HYV Wheat Varieties RH 749 under Timely Sown Irrigated Condition**

<i>Technology Option</i>	<i>No. of Trials</i>	<i>No of siliquae /plant</i>	<i>Grain Yield q/ha</i>	<i>% Increase in Yield</i>	<i>Gross Cost Rs/ha</i>	<i>Gross Returns Rs/ha</i>	<i>Net Returns Rs/ha</i>	<i>B:C Ratio</i>
<i>old and mixed variety (Farmers Practice)</i>	<b>03</b>	<b>180</b>	<b>12.5</b>	<b>-</b>	<b>21405</b>	<b>41250</b> @33.00/kg	<b>19845</b>	<b>1.92</b>
<b>RH 749</b>		<b>310</b>	<b>18.66</b>	<b>49.28</b>	<b>23160</b>	<b>61578</b> @33.00/kg	<b>38418</b>	<b>2.67</b>

## ***NUTRIENT MANAGEMENT OFT-6***

**Problem definition:** Low yield of tomato due imbalanced use of nutrient.

**Technology Assessed:** Assessment of efficient use of Ferrous Ammonium Sulphate with HYV of tomato for yield maximization.

Tomato cultivation comprises a major area in Gorakhpur district. During the field survey the most recognizable symptom of Iron deficiency in tomato is characterized by an intense yellowing at the base of young leaves, with the midrib and leaf veins remaining green. At later stages, the chlorosis extends to the whole leaf and leaves gradually take bleached aspects. Iron deficiency can be a serious problem in Gorakhpur district because the floody area found in the district. In soil the iron has a low mobility so the deficiency system appears first in lower leaves. The application of foliar fertilizer containing iron can still rescue the leaves and the plants. The re-greening of the veins after the application of iron is Intense chlorosis at the base of young leaves, with the leaf veins remaining green. The most common and inexpensive strategy is to control the iron deficiency by use of FAS as foliar spray. MGKVK, Gorakhpur took up on-farm trial on nutrient management in Tomato with spray of FAS (Ferrous Ammonium Sulphate) @ 200ppm at 30, 45 & 75 DAT to maintain the crop health. The study shows that the crop yielded 301.2 q/ha by the spray of ferrous ammonium sulphate over without spray yielded 245.7 q/ha. The net return from the demo field is Rs.231250/ha with 4.30 B:c ratio in comparison to Rs.180750/ha with B:C ratio of 3.78 of farmers practice. The results indicated that the use of Ferrous Ammonium Sulphate gave 22.5 per cent increase in yield over without spray of FAS. Farmers accepted and appreciated the demonstrated technology.

**Table: Effect of Tomato HYV (T6) + spray of FAS (Ferrous Ammonium Sulphate) @ 200ppm**

<i>Technology Option</i>	<i>No.of trials</i>	<i>Yield (qt./ha)</i>	<i>Increase in yield (%)</i>	<i>Gross cost</i>	<i>Gross return</i>	<i>Net Return (Rs./ha)</i>	<i>B:C Ratio</i>
T1:- Farmers practice (Without spray)	4	245.7	-	65000	245750	180750	3.78
T2:- HYV (T6) + spray of FAS (Ferrous Ammonium Sulphate) @ 200ppm at 30, 45 & 75 DAT		301.2	22.5	70000	301250	231250	4.30

## ***NUTRIENT MANAGEMENT OFT-7***

**Problem definition:** Low yield of Cauliflower due to imbalance uses of nutrient.

**Technology Assessed:** Assessment of efficient use of nutrient management in Cauliflower.

Cauliflower is one of the most important cole crop in the Gorakhpur district but the productivity of cauliflower is low due to imbalance use of chemical fertilizer. Cauliflower is a heavy feeder of nutrients. Application of nitrogen increased the curd yield and quality. The major nutrients viz., N, P and K are supplied to the crop through soil application. The efficiency of fertilizers applied in soil is low due to various losses and fixation in soil. Foliar application of nutrients eliminates the problems like fixation and immobilization. Foliar application of nitrogen had affected on diameter and fresh weight of curd. Phosphorus is a constituent of nucleic acid, phytin and phosphorus. It is also an essential constituent of majority of enzymes which are of great important in the transformation of energy in carbohydrate and fat metabolism and also in respiration in plants. Potassium imparts increased vigour and disease resistance to plant. It also regulates water conduction within the plant cell and water loss from the plant by maintaining the balance between anabolism, respiration and transpiration. Keeping in view, the present OFT conduct at MGKVK, Gorakhpur took up on-farm trial on nutrient management in Cauliflower with spray of soluble fertilizer 18:18:18 NPK @ 0.5% at 20, 30 DAT. The study revealed that the yield 188.7 q/ha by the foliar spray of 18:18:18 NPK over without spray yielded 153.5 q/ha. The net return from the demo field is Rs.164500/ha with 3.65 B:C ratio in comparison to Rs. 130200/ha with B:C ratio of 3.41 of farmers practice. The results indicated that the use of spray of soluble fertilizer 18:18:18 NPK @ 0.5% at 20, 30 DAT gave 22.93 per cent increase in yield over without spray of NPK as foliar spray.

**Table: Effect of Cauliflower HYV (Pant Shubhra) + spray of soluble fertilizer 18:18:18NPK @ 0.5% at 20, 30 DAT**

<i>Technology Option</i>	<i>No.of trials</i>	<i>Yield (qt./ha)</i>	<i>Increase in yield (%)</i>	<i>Gross cost</i>	<i>Gross return</i>	<i>Net Return (Rs./ha)</i>	<i>B:C Ratio</i>
T1:- Farmers practice (Without spray)	4	153.5		54000	184200	130200	3.41
T2:- HYV (Pant Shubhra) + spray of soluble fertilizer 18:18:18NPK @ 0.5% at 20, 30 DAT		188.7	22.93	62000	226500	164500	3.65

**LIVE STOCK ENTERPRISES**  
**(Cows) OFT-8**

**Problem definition:** High incidence of infertility in cows.

**Technology Assessed or Refined (as the case may be):** Assessment of urea molasses mineral bricks animal feed supplementation to control the infertility.

MGKVK Gorakhpur conducted PRA to identify high incidence of infertility in cow and on farm trial were formulated and conducted. However, the successful treatment and control of mineral deficiencies in effective and practical method of supplementation of UMMB for the effect of general health condition and reproductive performance of cows.

**Table Effect of UMMB in the control of infertility in cows**

<i>Technology Option</i>	<i>No. of trials</i>	<i>Per cent incidence of mastitis</i>
<i>Use of common salt (Farmers practice)</i>	<i>5</i>	<i>Awaited</i>
<i>Use of UMMB @ 1 Bricks for 7 days/ animal (recommended practice)</i>		

**LIVE STOCK ENTERPRISES**  
**(Buffalo) OFT-9**

**Problem definition:** Low milk and income due to conventional ration feeding

**Technology assessed:** Assessment of conventional and Bye-Pass animal feed to enhancing milk yield.

Low milk production in buffaloes due to no use of balance ration found during PRA.

MGKVK conducted OFT to find out suitable measure for enhance milk production in buffaloes. The technology recommended was fine tune by introducing Bye-Pass animal feed to enhance yield.

**Table:** Effect of Bye-Pass feed to enhance milk yield

S.No.	Technology Option	No. of trials	Result
1.	Use of choker and cakes (Farmers Practice)	03	Awaited
2.	Use of Bye-Pass animal feed @ 4kg/day/animal		

### (Drumstick Leaf Powder)

#### OFT-10

**Problem definition:** Low Hemoglobin level among adolescent girl.

**Technology assessed:** Assessment of drumstick leaf powder as remedy of low haemoglobin level among adolescent girls.

Adolescent girls were suffering from low hemoglobin level therefore this OFT was conducted considering the lower income of farmers/rural people as well as availability of drumstick leaf throughout the year rather than availability of fruits for the season (only once in the year). Here we are using drumstick leaf powder (twigs) as remedy to reduce hemoglobin problem among adolescent girls.

Table:

S.No.	Technology Option	No. of trials	Hb level (g/dl)		% increase after treatment applied
			Pre blood test (Prevailing Practice) (Av.)	Post blood test	
1.	T <sub>1</sub> – Iron supplant as aonla powder (10g/day)	10	8.1	9.2	13.58
2.	T <sub>2</sub> – Drumstick leaf powder (10g/day)		8.1	9.9	22.22

### (Drudgery Reduction)

#### OFT-11

**Problem definition:** high consumption of time and labour cost in de-husking of groundnut.

**Technology assessed:** Assessment of drudgery reducing equipment (groundnut decorticator) for de-husking of groundnut shell.

Farmers were using traditional practice of de-husking by manual simply they were using a small piece of stick by forcing single on heap which cause great pain in their hand specially in thumb or finger. MGKVK, Gorakhpur designed on farm trial on groundnut decorticator for reducing drudgery reduction during de-husking of groundnut shells. The demonstrated technology reduces drudgery in the form of time, labour cost and rate of loss of seeds.

**Table: Use of Groundnut Decorticator for Drudgery reduction.**

Technology option	No. of Trial	Economic parameter				
		Pods decorticated kg/person/hr	% increase in drudgery reduction	Man days (hr.) /50 kg. Groundnut	Labour saving	B:C ratio
Decortication through Hand	3	2.9	90.06	15 hr	5	1:5
Trough Groundnut Decorticator		31.2		3 hr 15 min.	1	



## VARIETAL EVALUATION

(Wheat)  
(Trial No-12)

**Problem definition:** Low yield of wheat as compared to newly released wheat variety DBW 187.

**Technology Assessed:** Assessment of high yielding wheat variety DBW 187 under timely sown irrigated condition.

Wheat (*Triticum aestivum* L.) is one of the most common cereals crops grown in rabi season under irrigated condition. Wheat variety HD 2967 is most popular among the farmers of district Gorakhpur but lower productivity has been identified due to continuous use of this variety and also as compared to newly released wheat variety DBW 187. The MGKVK Gorakhpur conducted on farm trial to assess the HYV of wheat DBW 187 to enhance the productivity and profitability of farmers. Higher grain yield 59.71 q/ha was recorded in demonstrated plots which was 25.70 per cent more over farmers practice (47.50 q/ha) and net return Rs.56065.50/ha received under assessed trial while under existing practices was Rs. 37750.00/ha.

**Table:-Performance of HYV Wheat Varieties HD-2967 under Timely Sown Irrigated Condition**

Technology Option	No. of Trials	No. of tillers/hill	Plant height (cm)	No. of Grain /spike	Grain Yield q/ha	% Increase in Yield	Gross Cost Rs/ha	Gross Returns Rs/ha	Net Returns Rs/ha	B:C Ratio
Wheat Variety HD-2967 (Farmers Practice)	05	12	98.00	79	47.50	-	33500	71250 @15.00/kg	37750	2.12
DBW 187		21	100.00	88	59.71	25.70	33500	89565 @15.00/kg	56065	2.67

## II. FRONTLINE DEMONSTRATION

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

List of technologies demonstrated during previous year and popularized during 2016-17 and recommended for large scale adoption in the district

S. No	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	INM	Paddy + Balanced dose of fertilizer and use of ZnSO <sub>4</sub> (N:P:K:::120:60:40 farmers share) + 25	Demonstration, Trainings, Field Day, Advisory Services, News Paper Coverage	03	20	2.0

			kg ZnSo4 kg/ha- Wheat-Mung bean				
2.	Wheat	INM	Paddy-Wheat Var. HD 2967+120:60:40::N:P:K + VAM @ 10kg+500kg FYM/ha-Mung bean	Demonstration, Trainings, Field Day, Advisory Services	02	10	3.0
3.	Chickpea	INM	Paddy-Chickpea var. GNG-1581+Balance dose of fertilizer (12:40:30:30:10::N:P:K:S:B) Kg/ha + intercropping with coriander-Mung bean	Demonstration, Trainings, Field Day, Advisory Services	03	10	2.5
4.	Bitter guard	ICM	HYV (narendra Baramasi) with machan system	Demonstration, Trainings, Advisory Services	03	10	0.50
5.	Cauliflower	ICM	Intercropping of cauliflower with banana crop (3:1)	Demonstration, Trainings, Advisory Services	02	10	0.50
6.	Sorghum	VE	Sorghum seed var. CSH-24 MF	Demonstration, Trainings, Advisory Services	8	30	4
7.	Berseem	VE	Berseem var. BB-2	Demonstration, Trainings, Advisory Services	7	30	4
8	Mustard	ICM	Seed (RG-749) + imidacloprid 17.5 SL@ 1 ml / 2 Ltr water + sulphur 80 % WDG 2 gm / Ltr of water	Demonstration, Trainings, Field Day, Literature Distributed, Advisory Services	10	100	40
9	Chickpea	ICM	Seed (GNG-1581) + imamactinbezoate5% SG @ 0.4 gm / ltr of	Demonstration, Trainings, Field Day, Literature Distributed, Advisory Services	5	25	10
10	Pigeonpea	ICM	Seed (NA-2) + imamactinbezoate5% SG @ 0.4 gm / ltr of water	Demonstration, Trainings, Field Day, Literature Distributed, Advisory Services	10	125	50
					53	370	116.5

\* Thematic areas as given in Table 3.1 (A1 and A2)

b. Details of FLDs implemented during **2018-19** (Information is to be furnished in the following **three tables** for each category i.e. **cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops.**)

Sl. No.	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	Zn	Kharif, 2018	2.0	2.0		20	20	
2.	Chickpea	INM	Boron	Rabi,	2.5	2.5		10	10	

				2018						
3.	Wheat	INM	VAM	Rabi 2018	3.0	3.0		10	10	
4	Bitter guard	ICM	Machan system	Kharif, 2018	0.5	0.5		10	10	
5	Cauliflower	ICM	Intercropping	Rabi, 2018	0.5	0.5		10	10	
6	Sorghum	ICM	Feed and Fodder management	Kharif, 2018	4	4		30	30	
7	Berseem	ICM	Feed and Fodder management	Rabi, 2018	4	4		30	30	
8	Mustard	ICM	VE	Rabi, 2018	40	40		100	100	
9	Chickpea	ICM	VE	Rabi, 2018	10	10		25	25	
10	Pigeonpea	ICM	VE	Kharif, 2018	50	50		125	125	
					116.5	116.5		370	370	

#### 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					
Pigeonpea	Kharif 2018	irrigated	Sandy loam	L	L	M	Wheat	26 June-10 July 2018	8-17 April, 2018		
Mustard	Rabi 2018-19	irrigated	Sandy loam	L	L	M	Paddy	25 Oct -8 Nov 2018	12-28 March 2018		
Chickpea	Rabi 2018-19	Rabi 2018	Sandy loam	L	L	M	Paddy	12-20 Nov. 2018	8-15 April, 2018		
Paddy	Kharif 2018	irrigated	Sandy loam	L	L	M	Wheat	2-14 July 2018	15-27 NOV, 2017		
Barsam	Rabi 2018-19	irrigated	Sandy loam	L	L	M	Paady	25-30 NOV, 2018	10-20 April, 2018		
Sorghum	Kharif 2018	irrigated	Sandy loam	L	L	M	Wheat	26 June-10 July 2018	22-28 October 2018		
Bitter Guard	Kharif 2018	irrigated	Sandy loam	L	L	M	Wheat	26 June-10 July 2018	20-28 Nov 2018		
Cauliflower	Rabi 2018-19	irrigated	Sandy loam	L	L	M	Wheat	12-25 NOV, 2018	3-10 March, 2019		

#### Technical Feedback on the demonstrated technologies

S. No	Feed Back
<b>Mustard</b>	
1	It is suitable for 35kg/ha sowing, 2.5-3.5 kg/ha seed is sufficient
2	It is suitable for irrigated conditions
3	It is of long maturity (140-150 days)
<b>Pigeon pea</b>	

1	Variety NA-2 has been found better than non-identified local variety
2	Variety NA-2 with fertilizer response appreciated by the farmers
<b>Chickpea</b>	
1	Chick Pea Variety GNG 1581 is resistant to water logging condition and tolerant against wilt, Ascochyta blight, stunt and root rot, medium height and semi erect plant
2	Use of carbendazim as a seed treatment resulted to control collar rot/wilt
3	Application of balanced dose of fertilizer found effective in higher production
4	There is a need to develop a method to know the effectiveness and activeness of microbes in bio-agents at local level
5	No use of balanced dose of fertilizer is a major constraint for production of chick pea
6	Lack of awareness about IPM strategies
<b>Paddy</b>	
1	Use of balanced dose of fertilizer (120:60:40kg/ha N:P:K::+ZnSO <sub>4</sub> 25kg/ha) found an important role in higher sustainable production
2	Application of ZnSO <sub>4</sub> is useful to control of Khaira disease and also it enhances the photosynthetic rate of plant resultantly enhance the production of paddy
<b>Berseem</b>	
1	Variety BB-2 is highly productive and multi-cut variety
2	Dark green leaves and tolerant to acidic condition
3	This variety flowers in 150-160 days and matures in 180-190 days.
<b>Bitterguard</b>	Bitter guard var. Narendra baramasi is HYV, Length of Fruit av.-26cm, av. Yield 250Q/ha

**Note:- Yield affected due to attack of blue bulls at different growth stages of crop**

Farmers' reactions on specific technologies

S. No	Feed Back
<b>Mustard</b>	
1.	Farmers were happy with HYV RH 749
2.	RH 749 may be sown with in 15 <sup>th</sup> October that reduces the aphid infestation and resultantly increase the production
3.	Farmers appreciated the demonstration
<b>Pigeon Pea</b>	
1.	NA-2 seed is not available in market but this variety is better than others
2.	No of pods are higher in comparison to other varieties
3.	Yield received less due to attack of blue bulls at different growth stages of crop
<b>Chickpea</b>	
1	Variety GNG 1581 appreciated by farmers because seed size is slightly bold
2	Farmers accepted fertilizer dose as recommended by scientists
3	Attack of Neelgai during the maturity of crops is a constraint for chick pea production
<b>Paddy</b>	
1.	Farmers are not aware about improved production technology of paddy
2.	Recommended dose of fertilizer along with Zinc Sulphate is appreciated by the farmers
3.	Imbalanced use of fertilizer is a major constraint for production of paddy
<b>Berseem</b>	
1	Farmers were happy to grow this variety, they received higher quantity of forage
2	Farmers' appreciated the demonstration due to more cutting of this variety (5-6 cuts)
<b>Bitter guard</b>	Farmers appreciated Bitter guard var. Narendra baramasi due to their fruit size; less prone to insect/pest.,
	Yield received less due to attack of blue bulls at different growth stages of crop

**Extension and Training activities under FLD**

<b>Sl.No.</b>	<b>Activity</b>	<b>No. of activities organised</b>	<b>Date</b>	<b>Number of participants</b>	<b>Remarks</b>
<b>1</b>	Field days	03	22.10.2018; 12.3.2019;1.4.2019	68	
<b>2</b>	Farmers Training	13	25.6.18, 23.6.18,27.6.18;22.05.18; 28.05.18; 27.4.18;13.4.18;25.7.18; 27.10.18;17.10.18; 29.10.18; 30.12.18; 16.11.2018	459	
<b>3</b>	Media coverage	15	26.6.2018, 24.6.18, 28.6.2018, 28.4.2018, 14.4.2018	mass	
<b>4</b>	Training for extension functionaries				

## Performance of Frontline demonstrations

### Frontline demonstrations on oilseed crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Groundnut																		
Sesamum																		
Mustard (CFLD)	ICM	Seed (RG-749) + imidacloprid 17.5 + sulphur 80 % WDG@2gm/lit of water	RH 749	100	40	16.2	21.5	18.72	12.62	48.83	23160	61776	38616	2.67	21405	41646	20195	1.94
Toria																		
Linseed																		
Sunflower																		
Soybean																		
Grand total				100	40	16.2	21.5	18.72	12.62	48.83	23160	61776	38616	2.67	21405	41646	20195	1.94

\* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

\*\* BCR= GROSS RETURN/GROSS COST







Cereals																			
Maize																			
Amaranth																			
Total Cereals																			
Millets																			
Jowar																			
Bajra																			
Barnyard millet																			
Finger millet																			
Total Millets																			
Vegetables																			
Bottlegourd																			
Bittergourd	INM	HYV Narendra Baramasi with machan system	10	0.50	332.0	295.0	320.00	256.00	25.00	fruit length:- 22-28 cm: no.of ruits per plant:- 35-40	fruit length:- 15-18 cm: no.of ruits per plant:- 25-30	180000.00	512000	332000.00	2.84	170000.00	409600.00	239600.00	2.41
Cowpea																			
Spongegourd																			
Petha																			
Tomato																			
Frenchbean																			

Capsicum																			
Chilli																			
Brinjal																			
Vegetable pea																			
Softgourd																			
Okra																			
Colocasia (Arvi)																			
Broccoli																			
Cucumber																			
Onion																			
Coriender																			
Lettuce																			
Cabbage																			
Cauliflower	ICM	Intercrop ping of cauliflowe r with banana crop	10	0.50	95.2 6	92.88	82	-	-	62000	130032	68032	2.10	-	-	-	-	-	-



Turmeric																			
Total Spices																			
Commercial Crops																			
Sugarcane																			
Potato																			
Total Commercial																			
Medicinal & aromatic plants																			
Mentholment																			
Kalmegh																			
Ashwagandha																			
Total Medicinal																			
Fodder Crops																			
Sorghum (F)	VE	Seed (CSH 24MF)	30	4	885	835	860	675	27.41	multicut variety4 cutting	no. of cutting-3 cutting	5995	48000	42005.00	8.01	6130	36000	29870.00	5.87
Cowpea (F)																			
Maize (F)																			
Lucern																			
Berseem	VE	Seed(BB2)	30	4	945	770	848.5	562	50.98	Av. Green fodder 1.7 Kg per SQM/c utting	Av. Green fodder 1.12 Kg per SQM/cutt ing	40800	152730	111930.00	3.74	35950	101160	65210.00	2.81

\*\* BCR= GROSS RETURN/GROSS COST

[illegible]

\* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

\*\*  $BCR = \text{GROSS RETURN} / \text{GROSS COST}$

## FLD on Fisheries

[illegible]

\* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.

\*\* BCR= GROSS RETURN/GROSS COST

### FLD on Other enterprises

[illegible]

Category	Name of technology	No. of demonstrations	Name of observations	Demonstration	Check

[illegible][illegible]



**FLD on Demonstration details on crop hybrids** *(Details of Hybrid FLDs implemented during 2018-19)*

Crop	technology demonstrated	Hybrid Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)			
					Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)
					High	Low	Average						
Oilseed crop													
Total													
Pulse crop													
Total													
Cereal crop													
Total													
Vegetable crop													
Total													
Fruit crop													
Total													
Other (specify)													
Total													
Grand Total													

**Note :** Remove the Enterprises/crops which have not been shown



Others (pl specify)										
<b>Total (f)</b>										
<b>g) Medicinal and Aromatic Plants</b>										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl specify)										
<b>Total (g)</b>										
<b>GT (a-g)</b>										
<b>III Soil Health and Fertility Management</b>										
Soil fertility management										
Integrated water management										
Integrated Nutrient Management	2	33	3	36	11	0	11	44	3	47
Production and use of organic inputs	1	21	0	21	1	0	1	22	0	22
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing										
Others (pl specify)										
<b>Total</b>	<b>3</b>	<b>54</b>	<b>3</b>	<b>57</b>	<b>12</b>	<b>0</b>	<b>12</b>	<b>66</b>	<b>3</b>	<b>69</b>
<b>IV Livestock Production and Management</b>										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Disease Management	2	40	4	44	1	6	7	41	10	51
Feed & fodder technology	2	38	7	45	0	3	3	38	10	48
Production of quality animal products										
Others (pl specify)										
<b>Total</b>	<b>4</b>	<b>78</b>	<b>11</b>	<b>89</b>	<b>1</b>	<b>9</b>	<b>10</b>	<b>79</b>	<b>20</b>	<b>99</b>
<b>V Home Science/Women empowerment</b>										
Household food security by kitchen gardening and nutrition gardening										
Design and development of low/minimum cost diet	1	0	14	14	0	2	2	0	16	16
Designing and development for high nutrient efficiency diet				0			0	0	0	0
Minimization of nutrient loss in processing				0			0	0	0	0
Processing and cooking	1	7	11	18	0	2	2	7	13	20
Gender mainstreaming through SHGs	1	2	9	11	0	9	9	2	18	20
Storage loss minimization techniques	2	18	15	33	3	4	7	21	19	40
Value addition	1	0	13	13	0	3	3	0	16	16
Women empowerment				0			0	0	0	0
Location specific drudgery reduction technologies	1	0	19	19	0	1	1	0	20	20
Rural Crafts	1	0	24	24	0	1	1	0	25	25
Women and child care				0			0	0	0	0
Others (pl specify)	1	0	11	11	0	12	12	0	23	23
<b>Total</b>	<b>9</b>	<b>27</b>	<b>116</b>	<b>143</b>	<b>3</b>	<b>34</b>	<b>37</b>	<b>30</b>	<b>150</b>	<b>180</b>
<b>VI Agril. Engineering</b>										
Farm Machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl specify)										
<b>Total</b>										
<b>VII Plant Protection</b>										
Integrated Pest Management	3	53	10	63	3	0	3	56	10	66
Integrated Disease Management	1	14	3	17	0	5	5	14	8	22

Bio-control of pests and diseases				0			0	0	0	0
Production of bio control agents and bio pesticides				0			0	0	0	0
Others (pl specify)				0			0	0	0	0
<b>Total</b>	<b>4</b>	<b>67</b>	<b>13</b>	<b>80</b>	<b>3</b>	<b>5</b>	<b>8</b>	<b>70</b>	<b>18</b>	<b>88</b>
<b>VIII Fisheries</b>										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl specify)										
<b>Total</b>										
<b>IX Production of Inputs at site</b>										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom Production										
Apiculture										
Others (pl specify)										
<b>Total</b>										
<b>X Capacity Building and Group Dynamics</b>										
Leadership development										
Group dynamics										
Formation and Management of SHGs	1	20	0	20	0	0	0	20	0	20
Mobilization of social capital	1	17	1	18	2	0	2	19	1	20
Entrepreneurial development of farmers/youths				0			0	0	0	0
WTO and IPR issues	1	21	0	21	2	0	2	23	0	23
Others (pl specify)	1	11	9	20	1	6	7	12	15	27
<b>Total</b>	<b>4</b>	<b>69</b>	<b>10</b>	<b>79</b>	<b>5</b>	<b>6</b>	<b>11</b>	<b>74</b>	<b>16</b>	<b>90</b>
<b>XI Agro-forestry</b>										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
<b>Total</b>										
<b>GRAND TOTAL</b>	<b>34</b>	<b>501</b>	<b>183</b>	<b>684</b>	<b>30</b>	<b>60</b>	<b>90</b>	<b>531</b>	<b>243</b>	<b>774</b>

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

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>I Crop Production</b>										
Weed Management	0	0	0	0		0	0	0	0	0
Resource Conservation Technologies				0			0	0	0	0
Cropping Systems				0			0	0	0	0
Crop Diversification				0			0	0	0	0
Integrated Farming				0			0	0	0	0

Micro Irrigation/irrigation				0			0	0	0	0
Seed production				0			0	0	0	0
Nursery management				0			0	0	0	0
Integrated Crop Management				0			0	0	0	0
Soil & water conservatioin	1	18	2	20			0	18	2	20
Integrated nutrient management	1	15	0	15	0	0	0	15	0	15
Production of organic inputs				0			0	0	0	0
Others (pl specify)	2	37	6	43	0	0	0	37	6	43
<b>Total</b>	<b>4</b>	<b>70</b>	<b>8</b>	<b>78</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>70</b>	<b>8</b>	<b>78</b>
<b>II Horticulture</b>										
<b>a) Vegetable Crops</b>										
Production of low value and high valume crops	1	19	0	19	2	0	2	21	0	21
Off-season vegetables	1	17	5	22	0	0	0	17	5	22
Nursery raising	1	14	6	20	0	0	0	14	6	20
Exotic vegetables				0			0	0	0	0
Export potential vegetables				0			0	0	0	0
Grading and standardization				0			0	0	0	0
Protective cultivation				0			0	0	0	0
Others (pl specify)				0			0	0	0	0
<b>Total (a)</b>	<b>3</b>	<b>50</b>	<b>11</b>	<b>61</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>52</b>	<b>11</b>	<b>63</b>
<b>b) Fruits</b>										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit	3	41	10	51	5	8	13	46	18	64
Management of young plants/orchards				0			0	0	0	0
Rejuvenation of old orchards				0			0	0	0	0
Export potential fruits				0			0	0	0	0
Micro irrigation systems of orchards				0			0	0	0	0
Plant propagation techniques				0			0	0	0	0
Others (pl specify)				0			0	0	0	0
<b>Total (b)</b>	<b>3</b>	<b>41</b>	<b>10</b>	<b>51</b>	<b>5</b>	<b>8</b>	<b>13</b>	<b>46</b>	<b>18</b>	<b>64</b>
<b>c) Ornamental Plants</b>										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl specify)										
<b>Total (c)</b>										
<b>d) Plantation crops</b>										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
<b>Total (d)</b>										
<b>e) Tuber crops</b>										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
<b>Total e</b>										
<b>f) Spices</b>										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
<b>Total (f)</b>										
<b>g) Medicinal and Aromatic Plants</b>										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl specify)										
<b>Total (g)</b>										
<b>GT (a-g)</b>	<b>6</b>	<b>91</b>	<b>21</b>	<b>112</b>	<b>7</b>	<b>8</b>	<b>15</b>	<b>98</b>	<b>29</b>	<b>127</b>
<b>III Soil Health and Fertility Management</b>										
Soil fertility management										
Integrated water management										
Integrated Nutrient Management	3	58	5	63	2	1	3	60	6	66
Production and use of organic inputs	1	19	3	22	0	0	0	19	3	22

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Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl specify)										
<b>Total</b>										
<b>IX Production of Inputs at site</b>										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom Production										
Apiculture										
Others (pl specify)										
<b>Total</b>										
<b>X Capacity Building and Group Dynamics</b>										
Leadership development	1	20	1	21	0	0	0	20	1	21
Group dynamics	1	10	3	13	0	0	0	10	3	13
Formation and Management of SHGs	1	0	0	0	4	17	21	4	17	21
Mobilization of social capital	3	50	2	52	10	1	11	60	3	63
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others (pl specify)	1	0	0	0	14	8	22	14	8	22
<b>Total</b>	<b>7</b>	<b>80</b>	<b>6</b>	<b>86</b>	<b>28</b>	<b>26</b>	<b>54</b>	<b>108</b>	<b>32</b>	<b>140</b>
<b>XI Agro-forestry</b>										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
<b>Total</b>										
<b>GRAND TOTAL</b>	<b>32</b>	<b>450</b>	<b>130</b>	<b>580</b>	<b>39</b>	<b>44</b>	<b>83</b>	<b>489</b>	<b>174</b>	<b>663</b>

#### Farmers' Training including sponsored training programmes – CONSOLIDATED (On + Off campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>I Crop Production</b>										
Weed Management	0	0	0	0	0	0	0	0	0	0
Resource Conservation Technologies	0	0	0	0	0	0	0	0	0	0
Cropping Systems	1	28	3	31	1	0	1	29	3	32
Crop Diversification	1	21	6	27	0	0	0	21	6	27
Integrated Farming	0	0	0	0	0	0	0	0	0	0
Micro Irrigation/irrigation	0	0	0	0	0	0	0	0	0	0
Seed production	0	0	0	0	0	0	0	0	0	0
Nursery management	0	0	0	0	0	0	0	0	0	0
Integrated Crop Management	0	0	0	0	0	0	0	0	0	0
Soil & water conservatioin	1	18	2	20	0	0	0	18	2	20
Integrated nutrient management	4	95	1	96	0	0	0	95	1	96
Production of organic inputs	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	2	37	6	43	0	0	0	37	6	43
<b>Total</b>	<b>9</b>	<b>199</b>	<b>18</b>	<b>217</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>200</b>	<b>18</b>	<b>218</b>
<b>II Horticulture</b>										
<b>a) Vegetable Crops</b>										
Production of low value and high valume crops	5	79	18	97	6	6	12	85	24	109
Off-season vegetables	1	17	5	22	0	0	0	17	5	22





[illegible]

[illegible]

Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
<b>TOTAL</b>	<b>1</b>	<b>10</b>	<b>0</b>		<b>1</b>	<b>0</b>	<b>1</b>	<b>11</b>	<b>0</b>	<b>11</b>

**Training for Rural Youths including sponsored training programmes – CONSOLIDATED (On + Off campus)**[illegible]

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security	1	0	15	15	0	0	0	0	15	15
Any other (pl.specify)	0			0			0	0	0	0
<b>TOTAL</b>	<b>1</b>	<b>0</b>	<b>15</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>15</b>

[illegible]

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security	1	0	15	15	0	0	0	0	15	15
Any other (pl.specify)	0			0			0	0	0	0
<b>TOTAL</b>	<b>1</b>	<b>0</b>	<b>15</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>15</b>

[illegible]

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

[illegible]

## IX. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	1042	2580	1070	3650
Diagnostic visits	68	256	132	388
Field Day	4	104	6	110
Group discussions	3	45	7	52
Kisan Ghosthi	21	5600	125	5725
Film Show	5	135	4	139
Self –help groups	15	173	23	196
Kisan Mela	3	8070	75	8145
Exhibition	3	2500	12	2512
Scientists' visit to farmers field	432	1764	225	1989
Plant/animal health camps	2	175	13	188
Farm Science Club				0
Ex-trainees Sammelan				0
Farmers' seminar/workshop				0
Method Demonstrations	23	457	49	506
Celebration of important days	6	125	33	158
Special day celebration	5	236	41	277
Exposure visits	4	102	34	136
Others (pl. specify)				0
<b>Total</b>	<b>1636</b>	<b>22322</b>	<b>1849</b>	<b>24171</b>

### Details of other extension programmes

Particulars	Number
Electronic Media (CD./DVD)	
Extension Literature	9
News paper coverage	96
Popular articles	34
Radio Talks	12
TV Talks	30
Animal health camps (Number of animals treated)	2
Others (pl. specify)	
<b>Total</b>	<b>34</b>

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marke-ting	Aware-ness	Other enterprise	
	Text only	436	74	12	5	32	341	25
	Voice only	2500	18	11	6	8	17	20
	Voice & Text both							
	<b>Total Messages</b>	2936	92	23	11	40	358	45
	<b>Total farmers Benefitted</b>							



## V. DETAILS OF TECHNOLOGY WEEK CELEBRATIONS

Number of KVKs 65rganized Technology Week	Types of Activities	No. of Activities	Number of Participants	Related crop/livestock technology
	Gosthies			
	Lectures organised			
	Exhibition			
	Film show			
	Fair			
	Farm Visit			
	Diagnostic Practicals			
	Distribution of Literature (No.)			
	Distribution of Seed (q)			
	Distribution of Planting materials (No.)			
	Bio Product distribution (Kg)			
	Bio Fertilizers (q)			
	Distribution of fingerlings			
	Distribution of Livestock specimen (No.)			
	Total number of farmers visited the technology week			

## 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	Wheat	HD 2967, DBW 187, 107		205		
	Paddy	NDR 2065, Sambha Sub 1		218		
	Barley			2.7		
<b>Total</b>						
Oilseeds	Mustard	RH 749, Giriraj, pitambari		6.5		
<b>Total</b>						
Pulses	chickpea	GNG 1581		1.05		
<b>Total</b>						
Commercial crops						
<b>Total</b>						
Vegetables						
<b>Total</b>						
Flower crops						
<b>Total</b>						
Spices						
<b>Total</b>						
Fodder crop seeds						
<b>Total</b>						
Fiber crops						
<b>Total</b>						

Forest Species						
<b>Total</b>						
Others						
<b>Total</b>						
<b>Grand Total</b>				433.25		

#### 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						
<b>Total</b>						
Vegetable seedlings	Brinjal	pant rituraj		1700	680	7
	Chilli	Azad Mirch 1		1000	400	6
<b>Total</b>	Tomato	T6		1250	500	5
Fruits	Onion	Agrifound Light Red		16000	400	7
	Cauliflower	Pant subra		1405	562	6
<b>Total</b>						
Ornamental plants						
<b>Total</b>						
Medicinal and Aromatic						
<b>Total</b>						
Plantation						
<b>Total</b>						
Spices						
<b>Total</b>						
Tuber						
<b>Total</b>						
Fodder crop saplings						
<b>Total</b>						
Forest Species						
<b>Total</b>						
Others						
<b>Total</b>						
<b>Grand Total</b>				<b>21355</b>	<b>2542</b>	<b>31</b>

## Production of Bio-Products

Bio Products	Name of the bio-product	Quantity	Value (Rs.)	No. of Farmers
		Kg		
Bio Fertilisers				
<b>Total</b>				
Bio-pesticide				
<b>Total</b>				
Bio-fungicide				
<b>Total</b>				
Bio Agents				
<b>Total</b>				
Others				
<b>Total</b>				
<b>Grand Total</b>				

Table: 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>Total</b>				
<b>Poultry</b>				
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
<b>Total</b>				
<b>Piggery</b>				
Piglet				
Others (Pl. specify)				
<b>Total</b>				
<b>Fisheries</b>				
Indian carp				
Exotic carp				
Others (Pl. specify)				
<b>Total</b>				
<b>Grand Total</b>				

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

Samples	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
Soil	29	348	16	
Water				
Plant	215	450	20	
Manure				
Others (pl.specify)				
<b>Total</b>				

## VIII. SCIENTIFIC ADVISORY COMMITTEE

Name of KVK	Number of SACs conducted	Date of SAC

## IX. NEWSLETTER/MAGAZINE

Name of News letter/Magazine	No. of Copies printed for distribution
Mahayogi gorakhnath krishi darpan (Magzine)	1000
Arhar Utpadan Praudyogiki	1000
Sarson Utpadan Praudyogiki	1000
Channa Utpadan Praudyogiki	1000
KVK ek najar men	200

## X. PUBLICATIONS

Category	Number
Research Paper	05
Technical bulletins	04
Technical reports	20
Popular Articles	32
News letters	1
Books	0
Others (pl. specify)	39
<b>Total</b>	<b>101</b>

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

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

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

Major area coverage under different crops/ varieties		
Crops	Area (ha)	Number of beneficiaries
Oilseeds		
Pulses		
Cereals		
Vegetable crops		
Tuber crops		
<b>Total</b>		

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

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

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

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

[illegible]

<b>Total</b>												

### **XIII. DETAILS ON HRD ACTIVITIES**

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

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

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

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

### **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*

- 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*
- 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*
- 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**

**TITLE**

**Introduction**

**KVK intervention**

**Output**

**Outcome**

**Impact**

## Case Study

**Name of the KVK:** Mahayogi Gorakhnath Krishi Vigyan Kendra (MGKVK), Chaukmafi, Peppeganj, Gorakhpur, UP

**Title:** Enhancing chickpea production for livelihood security through varietal replacement of HYV GNG 1581

**Situation analysis/ Problem statements:-** Gorakhpur district is a part of the North Eastern Plain Zone of Uttar Pradesh. The soils of district are alluvial, calcareous and salt affected. The district has a large number of streams, ponds and rivers, which brings tremendous flood during the rainy season and miseries to the human and animal population. The average annual rainfall is about 132.09 mm but it varies in various part of the district. The maximum and minimum temperature varies from 48 to 04 °C. This makes agriculture the most important profession of people. One day a progressive farmer Shri Baburam Yadav S/O shri Ramdhani Yadav, village Baijnathpur, Post: Netwalbazar block: campierganj, came in contact with the scientists of the KVK. He said that “we grow 1 to 1.15 acre of Chickpea crop but getting yield of chickpea approximately 10-12 q/ha”. Thereafter KVK’s Scientists have analyzed the main cause of low production of chickpea viz. use of non-descriptive old mixed variety and undescriptive variety, continuously use imbalanced use of fertilizer, improper weed management technique, late sowing, broadcasting method, no seed treatment, higher seed rate, indiscriminate use of insecticide. To combat the causes of yield erosion in chickpea, MGKVK Gorakhpur selected to Mr. Baburam Yadav for Cluster frontline demonstration (FLD) programmes under technology demonstration for harnessing pulse productivity of chickpea through varietal replacement of HYV GNG 1581 with other crop management practices i.e. fertilizer (N:P:K:S::20:40:20:20 kg/ha) + boron @ 10 kg/ha + pod borer management by application of Enamectin Benzoate 5% SG @ 0.4 g/liter of water at 50% flowering and at 50% pod filling stage under real farming conditions.

**Plan, Implement and Support:-** MGKVK Gorakhpur tries to make them aware regarding scientific cultivation of Chickpea. That starts from land preparation to harvesting. This KVK has encouraged the farmer for soil testing and on the basis of that farmer was advised for balanced dose of chemical fertilizer with high yielding varieties GNG 1581. That was sown on 03-11-2018 with seed cum ferti-drill and fertilizer application was done with basal application as recommended. Regular field visits were also made by the Subject Matter Specialists-Agronomy under the leadership of Senior Scientist and Head of KVK. Field days and Kisan gosthi were also organized at his field.

**Output:-** Mr. Baburam Yadav adopted the balanced dose of fertilizer (N:P:K:S:B::20:40:20:20:10) kg/ha in Chickpea crop as per suggestion of scientist for his one acre land. His local yield was 4.5 qt per acre with recommended technology. His yield increased by 102.66% with yield 9.12 qt per acre. The economic gain in terms of per unit expenditure gross income, net return and BCR are recorded. Rs 9624, Rs. 36480, Rs. 26856 and 3.79 correspondingly.

**Outcome:-** Chickpea crop is the major pulse crop of the district. This variety has been disseminated in 20 villages of the district in area of approximately 80 ha. The outcome of this demonstration motivated the farming communities to replace their old & mixed variety varieties, non-descriptive varieties. Mr. Baburam Ram is very happy on improvement in their income, livelihood and set forth example for others.

**Impact:-** Mr. Baburam Ram is becoming one of the progressive and learned farmers for others with regards to popularization of GNG 1581. This technology helps him for livelihood, empowerment and make him

enthusiastic regards pulse 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. Baburam is very happy with this improved production and management technology and set forth example for other farmers of the district.



**A farmers with KVK's scientist**



**Field Day of Chickpea GNG 1581**



**Chickpea Crop GNG 1581**

#### **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

##### **B. Details on Farmer's visit**

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



02	Technology Products	
03	Others if any pl. specify	

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

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

### D. Technology information provided

#### 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	Others pl. specify									

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

S. No	Particulars	Number sold	Revenue generated in Rs.	Number of farmers benefitted
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		Quintal		
02	Planting materials		Numbers		
03	Livestock		Numbers		
04	Poultry birds		Numbers		
05	Bio-products		Quintals		
06	Others pl. specify				

**F. Technology services provided**

S. No	Particulars	Number of farmers benefited
01	Soil and water testing	
02	Plant diagnostics	
03	Details about the services to line Departments	
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	
02	Field days	
03	Workshops / seminars	
04	Technology week	
05	Training programmes	
06	Others pl. specify	

### D. Overseeing of KVKs activities

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

### E. Publication on Technology inventory

S. No.	Particulars	Number
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	

**XVI. Awards and recognition**

1. Global extension excellence award by GBS Saharanpur in International conference at Kuala Lumpur, Malaysia.
2. Recognition co-chaired in the technical session-I in International conference at Kuala Lumpur, Malaysia.
3. Recognition as “Technical Advisor” for Krishak Chetana Patrika- Ek Sampurnn Krishi Patrika, Jabalpur, M.P.

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