

# **Annual Action Plan (April 2016 - March 2017)**

**Krishi Vigyan Kendra Manpur, Gaya**



**Directorate of Extension Education**



**Bihar Agricultural University, Sabour  
Bhagalpur**

1. Name of the KVK: **KRISHI VIGYAN KENDRA, MANPUR, GAYA**
2. Name of the host organization: **BAU, SABOUR, BHAGALPUR, BIHAR**
3. **Training Programme to be organized (April 2016 - March 2017)**

**(a) Practising farmer /Farm women**

Thematic Area	Title	Duration	No. of participants			
			SC	ST	Others	Total
<b>Crop Production</b>						
Integrated Crop Management	Nutrient & weed management in summer moong/Urdbean	2	4	-	21	25
Resource conservation	Importance of green manure crops for sustainable production	2	4	-	21	25
Resource management	Packages of practices for direct seeded rice	2	5	-	20	25
Nursery management	Techniques of MAT – type nursery raising for transplanting through machine	2	5	-	20	25
INM	INM in paddy	2	3	-	22	25
Crop Diversification	Contingent crop plan to mitigate adverse weather conditions	2	2	-	23	25
Integrated Crop Management	Irrigation and fertilizer management in kharif maize	2	4	-	21	25
Low cost input management	Use of bio-fertilizers for sustainable crop production	2	3	-	22	25
Weed management	Integrated weed management in Rabi pulses	2	2	-	23	25
Productivity Enhancement	Production techniques for late sown wheat	2	4	-	21	25
Integrated Crop Management	Fertilizer and irrigation management in wheat	2	2	-	23	25
Resource conservation	Micro-irrigation and its benefit in crop production	2	5	-	20	25
Integrated farming	IFS models for profitable farming	2	3	-	22	25
	<b>Total</b>	<b>26</b>	<b>46</b>		<b>279</b>	<b>325</b>
<b>Plant protection</b>						
Integrated pest management	Safe storage of grains	1	1	-	25	25
Integrated disease management	Techniques of seed treatment in SRI Paddy	2	3	-	22	25
Integrated pest management	IPM in kharif okra	2	3	-	22	25
Integrated disease management	Management of sheath blight and false smut in paddy	2	5	-	20	25
Integrated disease management	Management of root rot and wilt complex in lentil.	2	1	-	24	25
Integrated disease management	Seed treatment in wheat	2	4	-	21	25
Integrated disease management	Management of late blight of potato	2	3	-	22	25
Integrated pest management	I P M in oilseed crops	2	4	-	21	25
Integrated pest management	Pest management in moong	2	4	-	21	25
	<b>Total</b>	<b>17</b>	<b>28</b>		<b>198</b>	<b>225</b>

<b>Home Science</b>						
Storage loss minimization	Home scale method of Safe grain storage	2	4	-	21	25
Women & Child care	Supplementary nutrition – when, why and how	2	4	-	21	25
Income generation	Different avenues of farm women enterprises	2	4	-	21	25
Household food security by kitchen gardening and nutrition gardening	Kitchen Gardening and Human health	2	5	-	20	25
Minimization of nutrients loss in processing	Prevention of nutrition loss during cooking process	2	4	-	21	25
Gender main streaming through SHGs	Women SHG Formation and Function	2	3	-	22	25
Design and development of low/minimum cost diet	Low cost nutritive food available in rural areas	2	5	-	20	25
Income generation activities for empowerment of rural Women	Mushroom Production	2	1	-	24	25
Value addition	Value addition of potato	2	5	-	20	25
Value addition	Different preparation from Aonla	2	4	-	21	25
Value addition	Processing of seasonal fruits and vegetables	2	4	-	21	25
Value addition	Value addition of tomato	2	3	-	22	25
Women and child care	Importance of nutrients and their deficiency symptom	2	3	-	22	25
Women and child care	Adulteration in common food materials	2	1	-	24	25
	<b>Total</b>	<b>28</b>	<b>50</b>		<b>300</b>	<b>350</b>
<b>Veterinary Science</b>						
Dairy Management	Scientific management for improvement of milk production	2	4	-	21	25
Feed Management	Feeding of dairy animals in different stage of life	2	1	-	24	25
Disease Management	Management and prevention of HS & BQ in dairy animals	2	3	-	22	25
Feed Management	Treatment of straw with urea	2	4	-	21	25
Disease Management	Vaccination in Poultry and dairy animals	2	1	-	24	25
Poultry production	Income generation through backyard poultry production	2	3	-	22	25
Goat farming	Small scale goat farming	2	1	-	24	25
Disease management	Management of common disease in dairy animals	2	5	-	20	25
Dairy Management	Management of cattle in different season	2	5	-	20	25
Disease Management	Regular deworming and its importance in milk production	2	5	-	20	25
Dairy Management	Clean milk production	2	5	-	20	25
Dairy Management	Technique of productive enhancement of dairy animals	2	5	-	20	25
Disease Management	Management of common disease in goats	2	5	-	20	25
Fodder Management	Fodder production round the year	2	5	-	20	25
	<b>Total</b>	<b>28</b>	<b>52</b>		<b>298</b>	<b>350</b>

<b>Extension Education</b>						
Group dynamics	Utility and need of farmers group	2	2	-	18	20
	Importance and need of farmers field school	2	2	-	18	20
	Importance of Kisan Club for income generation	2	2	-	18	20
Mobilization of social resources	Best utilization of available resources among farmers	2	2	-	18	20
	Exploitation of available resources for income generation	2	2	-	18	20
Capacity building	Capacity building among farmers for seed production	2	2	-	18	20
Formation and management of SHGs	Need & importance of SHG for income generation	2	2	-	18	20
	SHGs as the means for self employment to the farmers & farm women	2	2	-	18	20
Gender mainstreaming	Gender mainstreaming through SHGs	2	2	-	18	20
Information networking	Awareness of farmers for availability of markets	2	2	-	18	20
	Awareness among farmers for daily updates	2	2	-	18	20
Entrepreneurial development	Development of entrepreneurial skill among farmers	2	2	-	18	20
	<b>Total</b>	<b>24</b>	<b>24</b>		<b>216</b>	<b>240</b>

**(b) Rural Youth**

Thematic Area	Title	Duration	No. of participants			
			SC	ST	Others	Total
<b>Crop Production</b>						
Seed production	Seed production techniques of paddy/ wheat	6	4	-	21	25
Seed production	Seed production techniques of lentil	6	4	-	21	25
	<b>Total</b>	<b>12</b>	<b>8</b>		<b>42</b>	<b>50</b>
<b>Extension Education</b>						
Vermi composting	Vermi composting	6	2	-	18	20
	<b>Total</b>	<b>6</b>	<b>2</b>	-	<b>18</b>	<b>20</b>
<b>Home Science</b>						
Rural Craft	Hand embroidery	6	5	-	15	20
Mushroom Production	Mushroom Production	6	3	-	17	20
Employment generation	Detergent making	3	2		18	20
Employment generation	Candle making	3	4		16	20
	<b>Total</b>	<b>18</b>	<b>14</b>		<b>66</b>	<b>80</b>
<b>Veterinary Science</b>						
Dairy Management	Entrepreneurship development in dairy farming	6	4	-	16	20
Goat farming	Entrepreneurship development in goat farming	5	5	-	15	20
	<b>Total</b>	<b>11</b>	<b>9</b>		<b>31</b>	<b>40</b>

**(c) Extension Functionaries**

Thematic Area	Title	Duration	No. of participants			
			SC	ST	Others	Total
<b>Crop Production</b>						
Productivity enhancement	Improved practices for kharif crops production	2	4	-	21	25
Productivity enhancement	Improved practices for rabi crops production	2	3	-	22	25
<b>Plant Protection</b>						
Integrated pest management	Integrated pest management in rabi crops	2	4	-	21	25
<b>Home Science</b>						
Women and child care	Importance of Balance Diet	2	5	-	20	25
<b>Veterinary Science</b>						
Dairy Management	New trends in dairy farming	2	5	-	20	25
<b>Extension Education</b>						
Entrepreneurship development	Income generation through vermicomposting	2	3	-	17	20

## Extension Activities 2016-17

Nature of Extension Activity	No. of activities	Farmers			Extension Officials			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Field Day	10	300	50	350	10	-	10	310	50	360
Kisan Mela	3									Mass
Kisan Ghosthi /Kisan chaupal	40	700	100	800	25	10	35	725	110	835
Exhibition	1									mass
Method Demonstrations	6	60	10	70	3	2	5	63	12	75
Workshop	1									Mass
Lectures delivered as resource persons	25	600	20	620	25	15	40	625	35	660
Newspaper coverage	30									Mass
Radio talks	04									Mass
TV talks	05									Mass
Popular articles	03									Mass
Extension Literature	05									
Advisory Services	500	400	100	500						500
Scientific visit to farmers field	100	60	30	90	10	-	10	70	30	110
Farmers visit to KVK	500									500
Diagnostic visits	10	40	15	15				40	15	55
Exposure visits	1									35
Soil health Camp	5									mass
Animal Health Camp	4	160		160						160
Soil test campaigns	-									
Celebration of important days (specify)	3	-	-	-	-	-	-	-	-	mass
Any Other (Specify)										
Krishi Vikas Utsav										
Technical bulletin	1									1
<b>Total</b>	<b>1257</b>	<b>2320</b>	<b>325</b>	<b>2605</b>	<b>73</b>	<b>27</b>	<b>100</b>	<b>1833</b>	<b>252</b>	

## Action plan of FLD for the year 2016-17

### (A) FRONT LINE (Cluster) DEMONSTRATION OILSEEDS AND PULSES (2016-2017)

S.N.	Crop	Previous crop and cropping system			Farming situation		Area (ha)	Variety	Sowing time	Technology Demonstrated	Input of demonstration cost.
		Summer	Kharif	Rabi	Rainfed	Irrigated					
<b>Kharif Pulse</b>											
1.	Pigeon pea						15	NA-1/Malvi 16	Jun-July	Bio fungicide+ seed+insecticide	110000/-
<b>Oilseed</b>											
1.	Mustard	Moong	Paddy	Rai	-	-	10	Pusa Mahak/R.Suflam	October - December	Seed+ Sulphur+ insecticide	60000/-
<b>Pulses</b>											
1.	Lentil	Moong	Paddy	Lentil	Rainfed	-	50	Arun/HUL 57	Nov.	Seed+ Rhizobium /Trichoderma	175000/-
2.	Chickpea						20		Oct.	Seed+ Rhizobium /Trichoderma	200000/-
3.	Moong	Moong	Paddy	Wheat		Irrigated	50	PDM-139	March	Seed+treatment material+sulphur	15000/-
<b>Total</b>											<b>390000/-</b>

**(B)FRONT LINE DEMONSTRATION OTHER THAN OILSEED & PULSES (2016-17)**

1.	Paddy	Vegetable	Paddy	Wheat	-	Rainfed/Irrigated	10	Sahbhagi/R. Sweta	June-August	Seed+ ZnSo4	25000/-
2.	Wheat	Moong	Paddy	Wheat	-	Irrigated	20	HD 2985/ HI1563	Nov.	Late sown variety + Herbicide	150000/-
3.	Kitchen garden	Veg.	Veg.	Veg.		Irrigated	50nos.	Veg. seeds	July-Feb.	Seeds+ seedlings	20000/-
4.	Mushroom Production	-	-	-	-	-	50 nos.	Oyster	Oct./Nov.	Seed/spawn+chemicals	20000/-
5.	Zero tillage	Machine +seed	-	-	-	-	2	--	-	Machine + seed + technology	10000/-
6.	Animals	Dual purpose Chicks					50	Gram priya/vanraj a		Chicks 10 each	25000/-
7.	Paddy	insecticides					5 ha	Insecticide	Jul - Sep		12000/-
<b>Total</b>											<b>262000/-</b>



## **ACTION PLAN FOR ON FARM TRIAL 2016-17**

### **OFT-1**

**Title of on farm trial:** Performance of drought tolerant varieties of paddy in Gaya district.

**Problem diagnosed:** Erratic monsoon, low water table during May to August in kharif season causing delay in transplanting which ultimately reduces yield.

- Less availability of water and abundance of upland in Gaya district

**Technical option:** (Varieties)

I. Farmers Variety

II. Sahbhagi

III. Shushk Samrat

IV. Sabour Ardhjal

**Plot size:** 0.30ha each farmer

**No. of Replication:** 10 (Farmers)

**Source:** IRRI & BAU, Sabour

**Performance Indicator:**

1. No. of tiller/ sq. meter
2. Grains/ earhead
3. 1000 grain wt (gm)
4. Cost of cultivation (Rs. /ha)
5. Yield (q/ha)
6. B: C ratio

## **OFT-2**

**Title of on farm trial:** Assessment of yield advantage in rice through different management practices

**Problem diagnosed:** Farmers generally used fertilizers and other resources injudiciously causing yield reduction in rice

### **Technical option:**

I. Farmers Practice: (Injudicious use of fertilizer and other resources)

II. Recommended practice: (N:P:K:: 80:40:20)

III. Site specific nutrient management (SSNM) using crop manager

**Plot size:** 0.30ha each farmer

**No. of Replication:** 10 (Farmers)

**Source:** IRRI & BAU, Sabour

### **Performance Indicator:**

1. No. of tiller/ sq. meter
2. Grains/ earhead
3. 1000 grain wt (gm)
4. Cost of cultivation (Rs. /ha)
5. Yield (q/ha)
6. B: C ratio

### **OFT-3**

**Title:** Assessment of different herbicide for controlling Cuscutta in Lentil

**Problem Diagnosed:** Cuscutta (Amarlatti) is a major weed in some part of the Gaya district causing yield reduction up to 80% in affected crops particularly in lentil/Chickpea.

#### **Details of technologies selected for assessment/ refinement**

##### **Technical Option:**

- I. Farmers practice (Handweeding)
- II. Pendimethalin 30% EC @ 1000 g ai/ha PE (0-3 DAS)  
(Formulation 3.3 lit/ha)
- III. Imazethapyr 10% SL @ 30g ai/ha post emergence (15-20 DAS)  
(Formulation 200 ml/ha)
- IV. TO-I followed by TO-II

**Source:** BAU, Sabour, Bhagalpur

**No. of Replication – 10**

**Plot size – 0.40 ha each farmer**

##### **Performance Indicator**

1. Weed count/Sq. m
2. Weeds flora count/Sq. m
3. Yield (q/ha)
4. B: C ratio.

## **OFT-4**

**Title of on farm trial:** Bio- efficacy of some insecticides against brown plant hopper (*Nilaparvata lugens*) in paddy.

**Problem diagnosed:**

- About 25-30% yield loses due to infestation of brown plant hopper
- Farmers are using synthetic pyrethroids for the management of BPH

**Source:** G.B.P.U.A.T., Pantnagar, Uttarakhand

**Details of technology**

**Technical option:**

- I. Farmers practice
- II. Ethiprole 40% + Imidachloprid 40%(80 g) @ 100g a.i/ha, 100g/ha
- III. Buprofezine 20 EC @1000ml/ha

**Plot size:** - 0.30ha each farmer

**Replication:** 10

**Performance Indicator:**

1. Percent hill burning by hopper
2. Yield estimation
3. Benefit cost ratio

## OFT-5

**Title of on farm trial:** Efficacy of some bio pesticides against root rot and wilt complex in lentil

**Problem diagnosed:**

- About 30-35% yield loses due to root rot and wilt complex in lentil
- Farmers are using only fungicide as seed treatment

**Source:** IARI, New Delhi

**Details of technology**

**Technical option:**

- I. Farmers practice seed treatment with carbendazime@2g/Kg seed
- II. Seed treatment with *Tricoderma* species @10g/ Kg + soil application @5kg/ha with FYM before sowing
- III. Seed treatment with *Aspergillus niger* @10g/ Kg + soil application @5kg/ha with FYM before sowing

**Plot size:** - 0.30ha each farmer

**Replication:** 10

**Performance Indicator:**

1. Percentage of plant died
2. Yield estimation
3. Benefit cost ratio

## **OFT- 6**

**Title of on farm trial:** - Assessment of different substrate supplement used in Oyster Mushroom production

**Problem diagnosed:** - Low yield and less net return from cultivation of Oyster Mushroom

**Source:** Directorate of Mushroom Research, Solan, H.P.

**Details of technology:**

**Technical option:**

- I. Farmers practices (use of wheat straw as base material).
- II. Use of wheat straw + wheat bran @ 10% on dry weight of base material.
- III. Use of wheat straw + rice bran @ 10% on dry weight of base material
- IV. Use of wheat straw + pulse husk @ 10% on dry weight of base material

**Replication:** 10

**Performance Indicator:**

1. Quantity of Produced
2. B: C ratio

## **OFT- 7**

**Title of on farm trial:** Assessment of different pulse for preparation of nugget (Badi)

**Problem diagnosed:** Less durability and poor appearance of Badi

**Source:** CFTRI

**Details of technology:**

**Technological option**

- I. Farm women practices (Urad Badi)
- II. Preparation of Badi of Chana Dal
- III. Preparation of Badi of Moong Dal

**Replication:** 10

**Performance Indicator:**

1. Colour
2. Taste
3. Storability
4. B: C ratio.

## **OFT- 8**

**Title of on farm trial:** Effect of probiotics on milk production of dairy animals

**Thematic Area:** Disease management

**Problem diagnosed:** Low digestibility and low productivity in dairy animals

**Source of technology:** BVC, Patna

### **Details of technology**

#### **Technological Option:-**

1. Farmers Practice: No probiotic supplementation
2. TO-I: Probiotic supplementation @ 10g per day (*Saccharomyces cerevisiae*)
3. TO-II: Probiotic supplementation @ 25g per day

**No. of Replication:** 10

#### **Performance Indicator:**

1. Milk production
2. Cost of milk production
3. Gross benefit
4. Net benefit
5. B:C ratio



## **OFT- 9**

**Title of on farm trial:** Efficacy of area specific mineral mixture for Bihar and other mineral mixture

**Problem diagnosed:** Deficiency of some minerals in cattle feed results in low milk production

**Source:** BVC Patna

### **Details of technology**

#### **Technological Option:-**

1. Farmers practice : Use of simple mineral mixture @ 50 g / day for 2 months
2. TO-I : Use of Area specific mineral mixture @ 50 g / day for 2 months
3. TO-II: Use of chelated mineral mixture @ 50 g / day for 2 months

**Replication:** 10

#### **Performance Indicator:**

1. Milk production
2. Cost of milk production
3. Gross return
4. Net return
5. BCR

## **OFT- 10**

**Title of on farm trial:** Assessment of effect of different extension teaching methods used for enhancing yield of paddy

**Problem diagnosed:** Low yield of paddy due to improper use of extension teaching method.

**Source:** BAU, Sabour

### **Details of technology**

#### **Technological Option:-**

1. Farmers practice: No extension teaching methods used
2. TO-I : Lecture + group discussion + literature
3. TO-II: Lecture + success story + literature
4. TO-III: Lecture + literature + demonstration

**Replication:** 40

#### **Performance Indicator:**

1. No. of tillers/m<sup>2</sup>
2. No. of grain/panicle
3. 1000 grain weight (g)
4. Yield (qt/ha)
5. B:C Ratio

## **OFT- 11**

**Title of on farm trial:** Performance of different wheat varieties under late sown irrigated condition

**Problem diagnosed:** unavailability of suitable variety of wheat for situation like late sown irrigated condition

**Source:** BAU, Sabour

**Details of technology**

**Technological Option:-**

1. Farmers practice: existing variety
2. TO-I : BRW-934 (Sabour Shreshth)
3. TO-II: DBW-14
4. TO-III: HD-2985/HI-1563

**Replication:** 10

**Performance Indicator:**

1. No. of tillers/m<sup>2</sup>
2. No. of ear head/ m<sup>2</sup>
3. 1000 grain weight (g)
4. Yield (qt/ha)
5. Gross return (Rs/ha)
6. Net return (Rs/ha)
7. B:C Ratio

## **OFT- 12**

**Title of on farm trial:** Assessment of yield in short duration paddy at different dose of fertilizer recommendation.

**Problem diagnosed:** injudicious use of fertilisers

**Source:** BAU, Sabour

**Details of technology**

**Technological Option:-**

1. Farmers practice
2. TO-I: Current recommended dose of fertilizer (80:40:20Kg, N: P<sub>2</sub>O<sub>5</sub>: K<sub>2</sub>O per ha)
3. TO-II: Proposed dose of fertilizer (100:45:30Kg, N: P<sub>2</sub>O<sub>5</sub>: K<sub>2</sub>O per ha)
4. TO-III: farmers practice

**Replication:** 10

**Performance Indicator:**

1. No. of tillers/m<sup>2</sup>
2. Grains per ear head
3. 1000 grain weight (gm)
4. Cost of cultivation (Rs/ha)
5. Yield (qt/ha)
6. B:C Ratio

## **OFT- 13**

**Title of on farm trial:** Assessment of yield in Paddy through “App” based fertiliser recommendation

**Problem diagnosed:** injudicious use of fertilisers

**Source:** BAU, Sabour

**Details of technology**

**Technological Option:-**

1. TO-I : Rice crop manager based nutrient recommendation
2. TO-II: Nutrient Expert based nutrient recommendation
3. TO-III: State recommendation (RDF)
4. Farmers practice

**Replication:** 10

**Performance Indicator:**

1. No. of tillers/m<sup>2</sup>
2. Grains per ear head
3. 1000 grain weight (gm)
4. Cost of cultivation (Rs/ha)
5. Yield (qt/ha)
6. B:C Ratio