

# KRISHI VIGYAN KENDRA PURNEA



## ACTION PLAN (January to December, 2023)



**BIHAR AGRICULTURAL UNIVERSITY**  
**SABOUR, BHAGALPUR, (BIHAR)**

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# **Krishi Vigyan Kendra, Purnea**

## **INTRODUCTION**

Krishi Vigyan Kendra, Purnea is an innovative centre of Indian Council of Agricultural Research (ICAR), Pusa, New Delhi sanctioned vide RAU, Pusa O.O. No. 136/RAU (Extn.) dated 29<sup>th</sup> October 2003 under the administrative control of RAU Pusa, Bihar. Since the establishment of BAU Sabour in 2010, now this is administrative control of BAU Sabour, Bhagalpur. This KVK was established in Feb. 2004 at the premises of Regional Research Sub-Station Jalalgarh, of Purnea district. It is an unique scheme of ICAR oriented to serve the farming community being the fountain head of agricultural technologies at the district level. KVKs are the Agricultural Knowledge and Resource Centre for farmers, farmwomen, rural youth and extension functionaries. The KVK has the mandated activities of conducting on farm testing/trials (OFTs) with emerging advances in agricultural research for assessing and demonstration of recently released technology to develop location specific sustainable land use production system and dedicated to organize vocational training in agriculture and allied fields for practicing farmers, farm women and rural youth. The Purnea district is quite suitable for cultivation of maize, Jute, vegetables crops & Horticultural crops in different seasons of the year. The soil is also favorable for growing makhana, mango, guava, banana and bamboos with 180 to 210 days length of growing period. The productivity enhancement of the field and horticultural crops and livestock with the concept of integrated farming system module is the major arena of thrust for development of agriculture in the district. KVK Purnea is working with following specific mandates and activities as per guidelines of ICAR:

## **MANDATE**

### ***Technology Assessment and Demonstration for its Application and Capacity Development*** **ACTIVITIES**

- a) On-farm testing to assess the location specificity of agricultural technologies under various farming systems.
- b) Frontline demonstrations to establish production potential of various crops and enterprises on the farmers' fields.
- c) Capacity development of farmers and extension personnel to update their knowledge and skills on modern agricultural technologies.
- d) To work as Knowledge and Resource Centre of agricultural technology for supporting the initiative of public, private and voluntary sectors in improving the agricultural economy of the district.
- e) Providing farm advisory using ICT and other media means on various subjects of interest to farmers.
- f) Data documentation, characterization and strategic planning of farming practices.
- g) Production of quality seeds, planting materials, livestock breeds, animal product bio-product etc as per the demand and supply the same to different clientele.

## THRUST AREA

- Improving the productivity of cereals, pulses, oilseeds & horticultural crops
- Adoption of Natural farming, INM and IPM for sustainable Agriculture
- Income generation through development of Agri-based entrepreneurship
- Farm women empowerment
- Increasing Makhana & banana Productivity
- Introduction of protected cultivation in vegetables
- Improving the productivity of dairy animals
- Promotion of millets

## TOTAL LAND WITH KVK

S. No.	Item	Area (ha)
1	Under Buildings	2.0 (ha)
2.	Under Demonstration Units	0.1 (ha)
3.	Under Crops	12.0 (ha)
4.	Orchard/Agro-forestry	4.0 (ha)
5.	Others with details	2.01 (ha)
	<b>Total</b>	<b>20.11 (ha)</b>

## LOCATION

Krishi Vigyan Kendra, Purnea is situated at premises of Regional Research Sub-Station Jalalgarh under Jalalgarh Block of district Purnea. KVK is 25 K.M. away from Purnea district headquarter and 100 meter east from Purnea-Araria NH, near N D Rungta High School, Jalalgarh. Purnea district occupies an area 3229 square kilometres. Purnea district comprises of 14 blocks, 4 Sub-Divisions, 272 Panchayats and 1226 villages.

## AGRO-CLIMATIC CONDITION

KVK Purnea falls in Agro-climatic Zone-II North East alluvial plain zone situated in middle gangetic plain. Purnea district is located between Latitude; 25° 34' N - 24° 45' N; Longitud; 84° 32' E - 84° 25' with an altitude of 36 meter from MSL. The climate is sub-tropical and sub-humid (moist) eco-region with hot-wet summer and cool-dry winter having mean maximum and minimum temperature between 33.8°C and 16°C respectively. The average annual rainfall of the district is about 1478 mm The maximum rainfall occurs during monsoon period. The soil of the districts generally sandy loam properties.

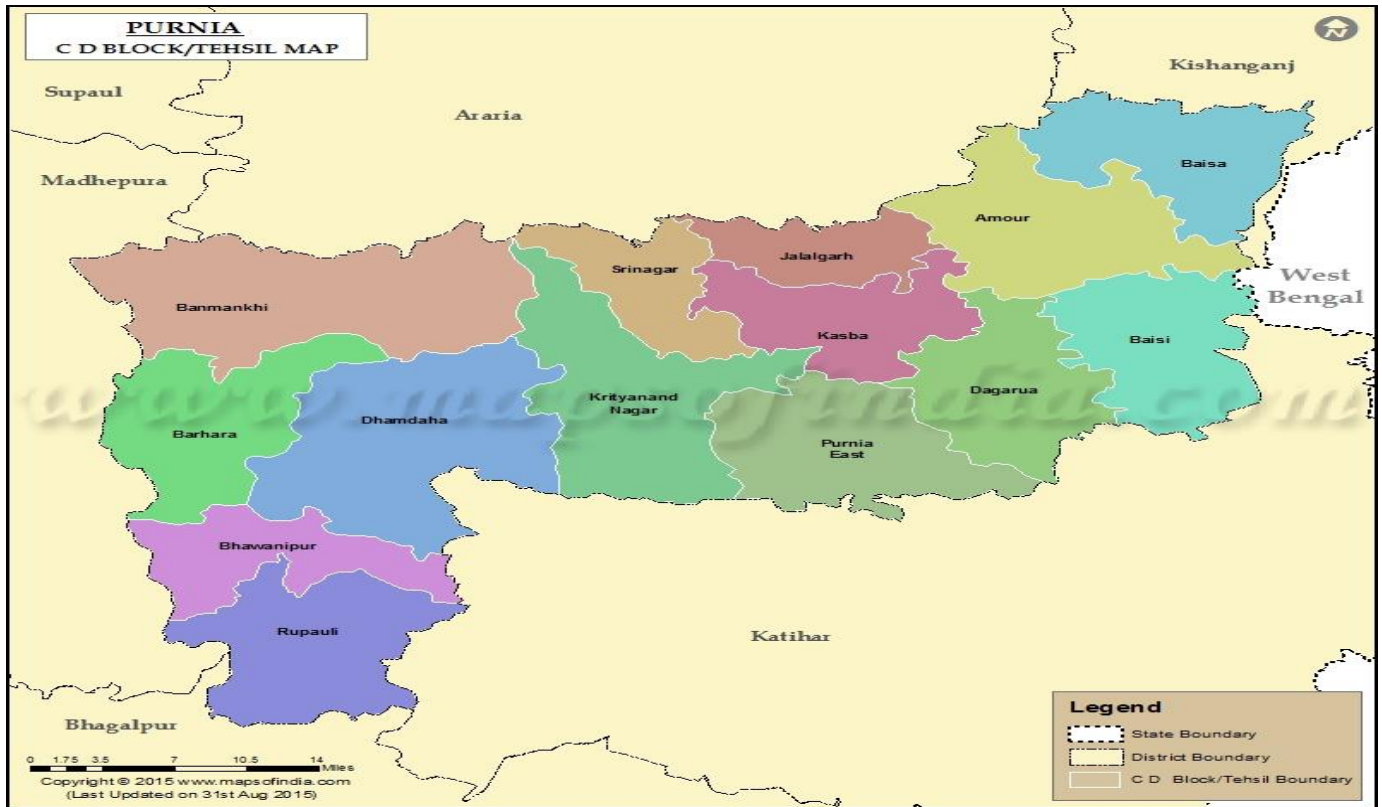
The soil is recognized with pH 6.5 to 8, low in organic carbon, available N, P<sub>2</sub>O<sub>5</sub> and medium in available K<sub>2</sub>O. Soil is deficient in Zinc, Sulphur & Boron. The cropping system varies depending on rainfall, land situation and water accumulation in the locality. There are four distinct farming situations viz. Upland, Medium land, low land and deep low land having specific characteristic which determine crop and cropping sequence/cropping patterns in the district.

### **Area production and yield of major crops in Purnea district**

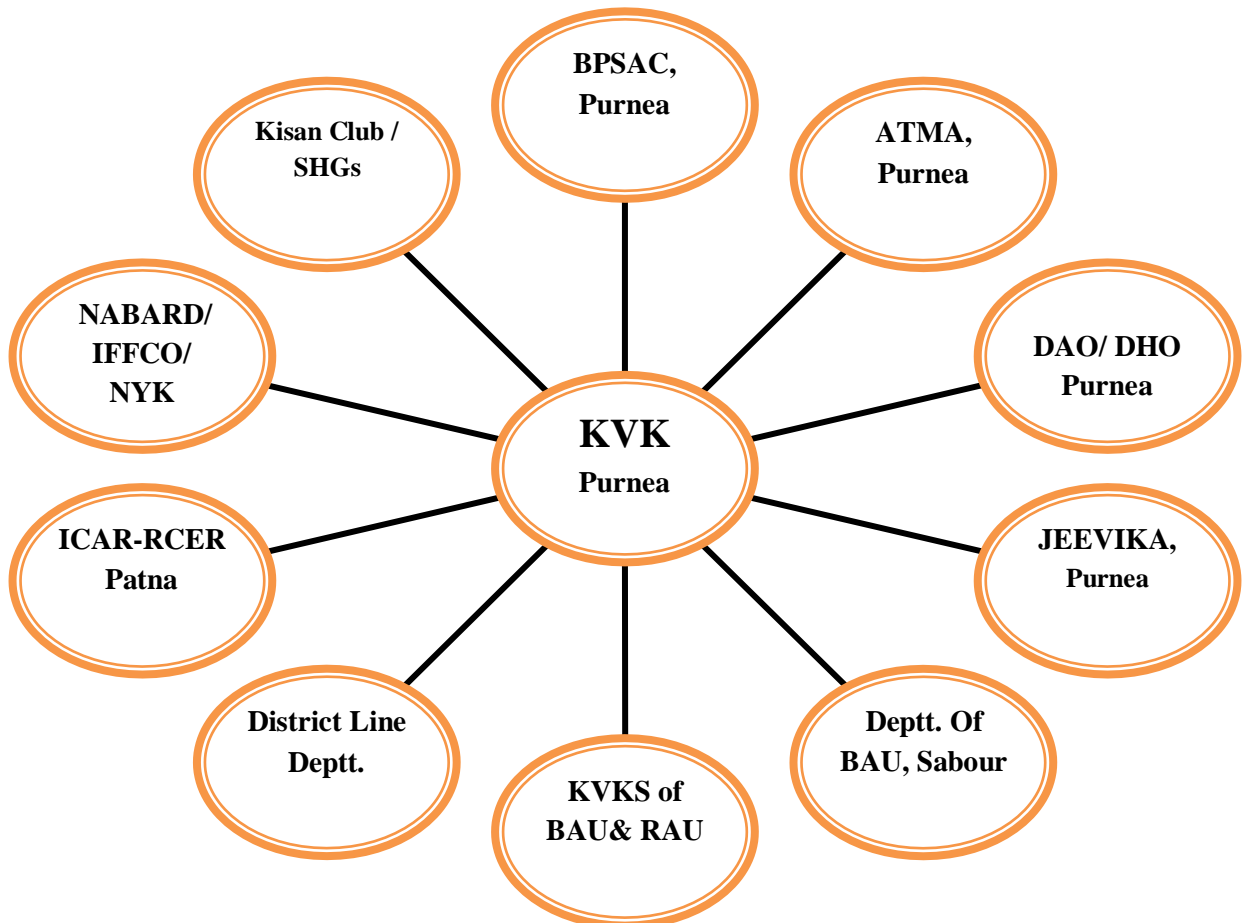
<b>Sl No.</b>	<b>Crop</b>	<b>Area (ha)</b>	<b>Production (MT)</b>	<b>Productivity (Kg/ha)</b>
1.	Rice	49198	79403	1614
2.	Wheat	11953	38907	3255
3.	Rabi maize	47464	439944	9269
4.	Kharif Maize	1054	2029	1925
5.	Mustard	380	308	811
6.	Linseed	17	14	847
7.	Sunflower	13	19	1462
8.	Lentil	443	191	431
9.	Pea	10	10	1032
10.	Summer green gram	443	250	5065

**Source: Directorate of statistics and economics, Bihar 2019-20**

# MAP OF PURNEA DISTRICT



## LINKAGES



**Staff Positions:**

<b>Sl. No.</b>	<b>Name of Post</b>	<b>Sanction Strength</b>	<b>Present Position</b>	<b>Date of Joining</b>
1.	Senior Scientist & Head	1	Dr. K.M. Singh	09.05.2023
2.	SMS (Agronomy)	1	Dr. Govind Kumar	13.09.2018
3.	SMS (Agricultural. Engineering.)	1	Vacant	
4.	SMS (Plant Pathology)	1	Vacant	
5.	SMS (Soil Science/ Ag. Ext.)	1	Vacant	
6.	SMS (Home Science)	1	Vacant	
7.	SMS (Horticulture)	1	Dr. Sangita Mehta	14.06.2023
8.	SMS (Agro met)	-	Mr. Dayanidhi Chaubey	21.06.2019
9.	Farm Manager	1	Vacant	
10.	Assistant	1	Sri Sanjay Kumar	25.04.2013
11.	Prog. Asstt. (Lab Tech.)	1	Vacant	
12.	Prog. Asstt. (Computer)	1	Sri Ajit Choudhary	22.05.2013
13.	Stenographer	1	Vacant	
14.	Driver	1	Sri Satish Kumar	09.05.2015
15.	Driver	1	Sri Sushil Kumar Yadav	11.05.2015
16.	Supporting staff	2	Vacant	

**REVISED PROFORMA FOR ACTION PLAN 2023-24**

**1. Name of the KVK: Purnea**

Address	Telephone		E mail
	Office	FAX	
Dr. K.M. Singh, Krishi Vigyan Kendra, Jalalgarh, Purnea, 854327	9430613389	-	<a href="mailto:kvkpurnea@gmail.com">kvkpurnea@gmail.com</a> , <a href="mailto:purneakvk@gmail.com">purneakvk@gmail.com</a>

**2. Name of host organization : BAU Sabour, Bhagalpur**

Address	Telephone		E mail
	Office	FAX	
Bihar Agricultural University Sabour, Bhagalpur	0641-2452611	-	<a href="mailto:deebausabour@gmail.com">deebausabour@gmail.com</a>



### 3.Training programme to be organized (Jan 2023 to Dec 2023)

#### (a) Farmers and farmwomen

Thematic area	Title of Training	No. of Courses	Duration	Venue On/ Off	Tentative Date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
<b>Discipline : Crop Production</b>														
Productivity Enhancement	Production techniques and benefits from green manuring	1	2	Off/On	06-07 Jan. 2023	2	4	4	2	16	2	22	8	30
Productivity Enhancement	Improved package & practice for Mungbean production	1	2	Off/On	14-15 Feb. 2023	2	4	4	2	16	2	22	8	30
Productivity Enhancement	Techniques for Jute cultivation	1	2	Off/On	02-03 March 2023	2	4	4	2	16	2	22	8	30
Soil health and fertility management	Soil health and fertility management	1	2	Off/On	05-06 April 2023	2	4	4	2	16	2	22	8	30
INM	Integrated Nutrient Management in Kharif paddy	1	4	Off/On	12-13 April 2023	2	4	4	2	16	2	22	8	30
Nursery raising	Techniques for growing paddy nursery	1	2	Off/On	26-27 April 2023	2	4	4	2	16	2	22	8	30
Weed management	Weed management in DSR	1	2	On/ Off	03-04 May 2023	2	4	4	2	16	2	22	8	30
Productivity Enhancement	DSR production technique	1	2	On/ Off	01-02 June 2023	2	4	4	2	16	2	22	8	30
Productivity Enhancement	Package & practices for Millets cultivation	1	2	On/ Off	01-03 July 2023	2	4	4	2	16	2	22	8	30
Productivity Enhancement	Package & practice for Sesamum cultivation	1	3	On/ Off	04-05 Aug. 2023	2	4	4	2	16	2	22	8	30
Weed management	Weed management in paddy crop	1	2	On/ Off	01-02 Sept. 2023	2	4	4	2	16	2	22	8	30
INM	INM in Jute crop	1	2	On/ Off	01-02 Sept. 2023	2	4	4	2	16	2	22	8	30
Soil health and fertility management	Importance & use of Bio-fertilizers in crop production	1	2	On/ Off	01-02 Sept. 2023	2	4	4	2	16	2	22	8	30
Productivity Enhancement	Production techniques of Rabi oilseeds	1	2	On/ Off	01-02 Sept. 2023	2	4	4	2	16	2	22	8	30

Thematic area	Title of Training	No. of Courses	Duration	Venue On/ Off	Tentative Date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Productivity Enhancement	Package of practices for Sunflower cultivation	1	2	On/ Off	01-02 Sept. 2023	2	4	4	2	16	2	22	8	30
Productivity Enhancement	Package & practices for late sown wheat cultivation	1	2	On/ Off	01-02 Sept. 2023	2	4	4	2	16	2	22	8	30
Weed management	Integrated Weed Management (IWM) in Rabi pulses	1	2	On/ Off	01-02 Sept. 2023	2	4	4	2	16	2	22	8	30
Productivity Enhancement	Production techniques for Rabi Maize	1	2	On/ Off	06-07 Oct. 2023	2	4	4	2	16	2	22	8	30
<b>Sub Total</b>		<b>18</b>	<b>39</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>72</b>	<b>72</b>	<b>36</b>	<b>288</b>	<b>36</b>	<b>396</b>	<b>144</b>	<b>540</b>
<b>Discipline : Horticulture</b>														
IPM	Pest and disease management in horticultural crop	1	2	On/ Off	11-12 Jan. 2023	2	4	4	2	16	2	22	8	30
Off-season vegetables	Production of off-seasonal vegetable to fetch good income	1	2	On/ Off	20-21 Jan. 2023	2	4	4	2	16	2	22	8	30
Integrated nutrient management	Method of application of fertilizer in fruit trees	1	2	On/ Off	09-10 Feb. 2023	2	4	4	2	16	2	22	8	30
Nursery raising	Quality nursery raising of vegetable for better income	1	2	On/ Off	27-328 March 2023	2	4	4	2	16	2	22	8	30
Nursery raising	Quality nursery raising of vegetable for better income	1	2	On/ Off	19-20 April 2023	2	4	4	2	16	2	22	8	30
Nursery raising	Quality nursery raising of vegetable for better income	1	2	On/ Off	30-31 May 2023	2	4	4	2	16	2	22	8	30
Exotic vegetables like Broccoli	Production of exotic vegetable like broccoli, of good income	1	2	On/ Off	15-16 June 2023	2	4	4	2	16	2	22	8	30
Export potential vegetables	Production of organic and quality vegetable for export	1	2	On/ Off	7-8 July 2023	2	4	4	2	16	2	22	8	30

Thematic area	Title of Training	No. of Courses	Duration	Venue On/ Off	Tentative Date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Protective cultivation	Promotion of gladiolus and Gerbera in polyhouse	1	2	On/ Off	15-16 Sept. 2023	2	4	4	2	16	2	22	8	30
Others, if any (Cultivation of Vegetable)	Scientific cultivation of Rabi season vegetable	1	2	On/ Off	09-10 Nov. 2023	2	4	4	2	16	2	22	8	30
Training and Pruning	Training and pruning of guava orchard	1	2	On/ Off	09-10 Nov. 2023	2	4	4	2	16	2	22	8	30
Layout and Management of Orchards	Maximum land use efficiency through high density in fruit trees	1	2	On/ Off	09-10 Nov. 2023	2	4	4	2	16	2	22	8	30
Cultivation of Fruit	Scientific cultivation of papaya	1	2	On/ Off	09-10 Nov. 2023	2	4	4	2	16	2	22	8	30
Management of young plants/orchards	Care and management of young plant in orchard	1	2	On/ Off	09-10 Nov. 2023	2	4	4	2	16	2	22	8	30
Micro irrigation systems of orchards	Use of micro irrigation system of orchard	1	2	On/ Off	09-10 Nov. 2023	2	4	4	2	16	2	22	8	30
Management of potted plants	Care and management of potted plants	1	2	On/ Off	09-10 Nov. 2023	2	4	4	2	16	2	22	8	30
Propagation techniques of Ornamental Plants	Plant propagation of ornamental plants	1	2	On/ Off	09-10 Nov. 2023	2	4	4	2	16	2	22	8	30
Production and Management technology	Production and management technology of spices crop	1	2	On/ Off	18-19 Dec. 2023	2	4	4	2	16	2	22	8	30
<b>Sub Total</b>		<b>18</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>72</b>	<b>72</b>	<b>36</b>	<b>288</b>	<b>36</b>	<b>396</b>	<b>144</b>	<b>540</b>

Thematic area	Title of Training	No. of Courses	Duration	Venue On/ Off	Tentative Date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
<b>Discipline : Agromet</b>														
Awarness	Awarness programme on Natural Farming	1	2	On	16-17 Jan. 2023	2	4	4	2	16	2	22	8	30
INM	Preparation of Veejamrit, Jeevamrit, Ghan jeevamrit etc. & their uses on different crops	1	2	Off	24-25 Jan. 2023	2	4	4	2	16	2	22	8	30
Production and Management technology	Mushroom production technique	1	2	Off	03-04 Feb. 2023	2	4	4	2	16	2	22	8	30
FAP	Weather forecast information	1	2	Off	23-24 March 2023	2	4	4	2	16	2	22	8	30
	Awarness programme on Natural Farming	1	2	On	6-8 April 2023	2	4	4	2	16	2	22	8	30
Plant Protection	Integrated Pest- disease management of Rabi Crops	1	2	Off	4-6 May 2023	2	4	4	2	16	2	22	8	30
FAP	Weather forecast & Farmers meet	1	2	On	22-23 June 2023	2	4	4	2	16	2	22	8	30
Productivity Enhancement	Management of kharif Crops	1	2	Off	27-28 July 2023	2	4	4	2	16	2	22	8	30
Plant Protection	Integrated Pest & Disease management in Paddy	1	2	Off	17-18 Aug. 2023	2	4	4	2	16	2	22	8	30
FAP	Weather forecast & Farmers meet	1	3	On	21-22 Sept. 2023	2	4	4	2	16	2	22	8	30
Productivity Enhancement	Protected cultivation of vegetables	1	2	Off	3-4 Nov. 2023	2	4	4	2	16	2	22	8	30
FAP	Weather forecast information	1	2	Off	14-15 Dec. 2023	2	4	4	2	16	2	22	8	30
Productivity Enhancement	Makhana Production technique	1	2	Off/On	12-13 Jan. 2023	2	4	4	2	16	2	22	8	30
Productivity Enhancement	Production techniques of Rabi Crops	1	2	Off/On	19-20 Jan. 2023	2	4	4	2	16	2	22	8	30

Thematic area	Title of Training	No. of Courses	Duration	Venue On/ Off	Tentative Date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
FAP	Weather forecast information	1	2	Off/On	14-15 Feb. 2023	2	4	4	2	16	2	22	8	30
FAP	Weather forecast information	1	2	Off/On	27-28 Feb. 2023	2	4	4	2	16	2	22	8	30
Productivity Enhancement	Preparation & application of different products under Natural farming	1	2	Off/On	27-28 March 2023	2	4	4	2	16	2	22	8	30
FAP	Weather forecast information	1	2	Off/On	18-19 April 2023	2	4	4	2	16	2	22	8	30
<b>Sub Total</b>		<b>18</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>72</b>	<b>72</b>	<b>36</b>	<b>288</b>	<b>36</b>	<b>396</b>	<b>144</b>	<b>540</b>
<b>Grand Total</b>		<b>54</b>	<b>112</b>	<b>0</b>	<b>0</b>	<b>108</b>	<b>216</b>	<b>216</b>	<b>108</b>	<b>864</b>	<b>108</b>	<b>1188</b>	<b>432</b>	<b>1620</b>

**(b) Rural youths**

Thematic area	Title of Training	No.	Duration	Venue On/ Off	Tentative Date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
<b>Discipline : Crop Production</b>														
	Production of organic inputs	1	3	On	16-18 Jan 2023	2	4	4	2	16	2	22	8	30
	Bio-Fertilizer techniques	1	3	On	20-24 Feb 2023	2	4	4	2	16	2	22	8	30
	Seed production techniques of paddy	1	3	On	15-17 March 2023	2	4	4	2	16	2	22	8	30
	Seed production techniques of wheat	1	3	On	18-20 April 2023	2	4	4	2	16	2	22	8	30
		1	3	On	28-30 Nov 2023	2	4	4	2	16	2	22	8	30
		1		On	28-30 Nov 2023	2	4	4	2	16	2	22	8	30

Thematic area	Title of Training	No.	Duration	Venue	Tentative	No. of Participants								
				On/	Date	SC		ST		Other		Total		
				Off		M	F	M	F	M	F	M	F	T
<b>Sub Total</b>		<b>6</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>24</b>	<b>24</b>	<b>12</b>	<b>96</b>	<b>12</b>	<b>132</b>	<b>48</b>	<b>180</b>
<b>Discipline : Horticulture</b>														
Planting material production	Methods of different planting materials	1	3	On	16-18 Jan 2023	2	4	4	2	16	2	22	8	30
Value addition	Value addition of seasonal vegetable	1	3	On	20-24 Feb 2023	2	4	4	2	16	2	22	8	30
Nursery Management of Horticulture crops	Nursery management of vegetable and flower seedling	1	3	On	15-17 March 2023	2	4	4	2	16	2	22	8	30
Training and pruning of orchards	Training and pruning of different fruit trees	1	3	On	18-20 April 2023	2	4	4	2	16	2	22	8	30
Protected cultivation of vegetable crops	Raising of different vegetables crops under protected cultivation	1	3	On	28-30 Nov 2023	2	4	4	2	16	2	22	8	30
Post-Harvest Technology	Processing and preservation of seasonal fruits & vegetables	1		On	28-30 Nov 2023	2	4	4	2	16	2	22	8	30
<b>Sub Total</b>		<b>6</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>24</b>	<b>24</b>	<b>12</b>	<b>96</b>	<b>12</b>	<b>132</b>	<b>48</b>	<b>180</b>
<b>Grand Total</b>		<b>12</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>48</b>	<b>48</b>	<b>24</b>	<b>192</b>	<b>24</b>	<b>264</b>	<b>96</b>	<b>360</b>

(c) Extension functionaries

Thrust area/ Thematic area	Title of Training	No.	Duration	Venue	Tentative	No. of Participants								
				On/Off	Date	SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
<b>Discipline : Crop Production</b>														
	Principle & practice of INM	1	2	On	18-19 July 2023	2	4	4	2	16	2	22	8	30
	Techniques for raising MAT type nursery	1		On/off	28-31 July 2023	2	4	4	2	16	2	22	8	30
	Vermicomposting techniques	1		On/off	27-29 Sept. 2023	2	4	4	2	16	2	22	8	30
	Improved package of practices for Rabi pulse production	1	2	On	14-16 Oct. 2023	2	4	4	2	16	2	22	8	30
<b>Sub Total</b>		<b>4</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>16</b>	<b>16</b>	<b>8</b>	<b>64</b>	<b>8</b>	<b>88</b>	<b>32</b>	<b>120</b>
<b>Discipline : Horticulture</b>														
INM	INM in horticultural crops	1	2	On/off	02-03 June 2023	2	4	4	2	16	2	22	8	30
Rejuvenation of old orchards	Rejuvenation of old orchards	1	2	On/off	28-31 July 2023	2	4	4	2	16	2	22	8	30
Value addition	Processing and preservation of seasonal fruits and vegetables	1	2	On/off	27-29 Sept. 2023	2	4	4	2	16	2	22	8	30
Protected cultivation technology	Protected cultivation of off-seasonal crops	1	2	On/off	01-02 Dec. 2023	2	4	4	2	16	2	22	8	30
<b>Sub Total</b>		<b>4</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>16</b>	<b>16</b>	<b>8</b>	<b>64</b>	<b>8</b>	<b>88</b>	<b>32</b>	<b>120</b>
<b>Grand Total</b>		<b>8</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>32</b>	<b>32</b>	<b>16</b>	<b>128</b>	<b>16</b>	<b>176</b>	<b>64</b>	<b>240</b>

**Abstract of Training: Consolidated table (ON and OFF Campus)**

**Farmers and Farm women**

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
<b>I. Crop Production</b>													
Weed Management	3	48	6	54	6	12	18	12	6	18	66	24	90
Resource Conservation Technologies	1	16	2	18	2	4	6	4	2	6	22	8	30
Cropping Systems	7	112	14	126	14	28	42	28	14	42	154	56	210
Crop Diversification	1	16	2	18	2	4	6	4	2	6	22	8	30
Integrated Farming	0	0	0	0	0	0	0	0	0	0	0	0	0
Water management				0			0			0	0	0	0
Seed production	2	32	4	36	4	8	12	8	4	12	44	16	60
Nursery management	1	16	2	18	2	4	6	4	2	6	22	8	30
Integrated Crop Management	3	48	6	54	6	12	18	12	6	18	66	24	90
Fodder production	0	0	0	0	0	0	0	0	0	0	0	0	0
Production of organic inputs	0	0	0	0	0	0	0	0	0	0	0	0	0
Others, (cultivation of crops )	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>18</b>	<b>288</b>	<b>36</b>	<b>324</b>	<b>36</b>	<b>72</b>	<b>108</b>	<b>72</b>	<b>36</b>	<b>108</b>	<b>396</b>	<b>144</b>	<b>540</b>
<b>II. Horticulture</b>													
<b>a) Vegetable Crops</b>													
Integrated nutrient management	1	16	2	18	4	2	6	2	4	6	22	8	30



Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Water management	0	0	0	0	0	0	0	0	0	0	0	0	0
Enterprise development	0	0	0	0	0	0	0	0	0	0	0	0	0
Skill development	0	0	0	0	0	0	0	0	0	0	0	0	0
Yield increment	0	0	0	0	0	0	0	0	0	0	0	0	0
Production of low volume and high value crops	0	0	0	0	0	0	0	0	0	0	0	0	0
Off-season vegetables	1	16	2	18	4	2	6	2	4	6	22	8	30
Nursery raising	3	48	6	54	12	6	18	6	12	18	66	24	90
Exotic vegetables like Broccoli	1	16	2	18	4	2	6	2	4	6	22	8	30
Export potential vegetables	1	16	2	18	4	2	6	2	4	6	22	8	30
Grading and standardization	0	0	0	0	0	0	0	0	0	0	0	0	0
Protective cultivation (Green Houses, Shade Net etc.)	1	16	2	18	4	2	6	2	4	6	22	8	30
Others, if any (Cultivation of Vegetable)	2	32	4	36	8	4	12	4	8	12	44	16	60
<b>SUB TOTAL</b>	<b>10</b>	<b>160</b>	<b>20</b>	<b>180</b>	<b>40</b>	<b>20</b>	<b>60</b>	<b>20</b>	<b>40</b>	<b>60</b>	<b>220</b>	<b>80</b>	<b>300</b>
<b>b) Fruits</b>													
Training and Pruning	1	16	2	18	4	2	6	2	4	6	22	8	30
Layout and Management of Orchards	1	16	2	18	4	2	6	2	4	6	22	8	30
Cultivation of	1	16	2	18	4	2	6	2	4	6	22	8	30

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Fruit													
Management of young plants/orchards	1	16	2	18	4	2	6	2	4	6	22	8	30
Rejuvenation of old orchards	0	0	0	0	0	0	0	0	0	0	0	0	0
Export potential fruits	0	0	0	0	0	0	0	0	0	0	0	0	0
Micro irrigation systems of orchards	1	16	2	18	4	2	6	2	4	6	22	8	30
Plant propagation techniques	1	16	2	18	4	2	6	2	4	6	22	8	30
Others, if any(INM)	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>SUB TOTAL</b>	<b>6</b>	<b>96</b>	<b>12</b>	<b>108</b>	<b>24</b>	<b>12</b>	<b>36</b>	<b>12</b>	<b>24</b>	<b>36</b>	<b>132</b>	<b>48</b>	<b>180</b>
<b>c) Ornamental Plants</b>													
Nursery Management	0	0	0	0	0	0	0	0	0	0	0	0	0
Management of potted plants	0	0	0	0	0	0	0	0	0	0	0	0	0
Export potential of ornamental plants	0	0	0	0	0	0	0	0	0	0	0	0	0
Propagation techniques of Ornamental Plants	0	0	0	0	0	0	0	0	0	0	0	0	0
Others, if any	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>SUB TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>d) Plantation crops</b>													

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Production and Management technology	1	16	2	18	2	4	6	4	2	6	22	8	30
Processing and value addition	0	0	0	0	0	0	0	0	0	0	0	0	0
Others, if any	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>SUB TOTAL</b>	<b>1</b>	<b>16</b>	<b>2</b>	<b>18</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>6</b>	<b>22</b>	<b>8</b>	<b>30</b>
<b>e) Tuber crops</b>													
Production and Management technology	0	0	0	0	0	0	0	0	0	0	0	0	0
Processing and value addition	0	0	0	0	0	0	0	0	0	0	0	0	0
Others, if any	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>SUB TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>f) Spices</b>													
Production and Management technology	1	16	2	18	2	4	6	4	2	6	22	8	30
Processing and value addition	0	0	0	0	0	0	0	0	0	0	0	0	0
Others, if any	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>SUB TOTAL</b>	<b>1</b>	<b>16</b>	<b>2</b>	<b>18</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>6</b>	<b>22</b>	<b>8</b>	<b>30</b>
<b>g) Medicinal and Aromatic Plants</b>													
Nursery management	0	0	0	0	0	0	0	0	0	0	0	0	0
Production and management technology	0	0	0	0	0	0	0	0	0	0	0	0	0
Post harvest technology and value addition	0	0	0	0	0	0	0	0	0	0	0	0	0

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Others, if any	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>SUB TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL</b>	<b>18</b>	<b>288</b>	<b>36</b>	<b>324</b>	<b>68</b>	<b>40</b>	<b>108</b>	<b>40</b>	<b>68</b>	<b>108</b>	<b>396</b>	<b>144</b>	<b>540</b>
<b>III. Soil Health and Fertility Management</b>													
Soil fertility management	0	0	0	0	0	0	0	0	0	0	0	0	0
Soil and Water Conservation	0	0	0	0	0	0	0	0	0	0	0	0	0
Integrated Nutrient Management	0	0	0	0	0	0	0	0	0	0	0	0	0
Production and use of organic inputs	0	0	0	0	0	0	0	0	0	0	0	0	0
Management of Problematic soils	0	0	0	0	0	0	0	0	0	0	0	0	0
Micro nutrient deficiency in crops	0	0	0	0	0	0	0	0	0	0	0	0	0
Nutrient Use Efficiency	0	0	0	0	0	0	0	0	0	0	0	0	0
Soil and Water Testing	0	0	0	0	0	0	0	0	0	0	0	0	0
Others, if any	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>IV. Livestock Production and Management</b>													
Dairy Management	0	0	0	0	0	0	0	0	0	0	0	0	0
Poultry Management													
Piggery Management	0	0	0	0	0	0	0	0	0	0	0	0	0
Rabbit	0	0	0	0	0	0	0	0	0	0	0	0	0

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Management													
Disease Management	0	0	0	0	0	0	0	0	0	0	0	0	0
Feed management	0	0	0	0	0	0	0	0	0	0	0	0	0
Production of quality animal products	0	0	0	0	0	0	0	0	0	0	0	0	0
Others, if any (Goat farming)	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>V. Home Science/Women empowerment</b>													
Household food security by kitchen gardening and nutrition gardening	0	0	0	0	0	0	0	0	0	0	0	0	0
Design and development of low/minimum cost diet	0	0	0	0	0	0	0	0	0	0	0	0	0
Designing and development for high nutrient efficiency diet	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimization of nutrient loss in processing													
Gender mainstreaming through SHGs	0	0	0	0	0	0	0	0	0	0	0	0	0
Storage loss minimization techniques	0	0	0	0	0	0	0	0	0	0	0	0	0

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Enterprise development	0	0	0	0	0	0	0	0	0	0	0	0	0
Value addition	0	0	0	0	0	0	0	0	0	0	0	0	0
Income generation activities for empowerment of rural Women	0	0	0	0	0	0	0	0	0	0	0	0	0
Location specific drudgery reduction technologies	0	0	0	0	0	0	0	0	0	0	0	0	0
Rural Crafts	0	0	0	0	0	0	0	0	0	0	0	0	0
Capacity building	0	0	0	0	0	0	0	0	0	0	0	0	0
Women and child care	0	0	0	0	0	0	0	0	0	0	0	0	0
Others, if any (Source of Energy)	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>VI. Agril. Engineering</b>													
Installation and maintenance of micro irrigation systems	0	0	0	0	0	0	0	0	0	0	0	0	0
Use of Plastics in farming practices	0	0	0	0	0	0	0	0	0	0	0	0	0
Production of small tools and implements	0	0	0	0	0	0	0	0	0	0	0	0	0
Repair and maintenance of farm machinery and implements	0	0	0	0	0	0	0	0	0	0	0	0	0

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Resource Conservation technique	0	0	0	0	0	0	0	0	0	0	0	0	0
Application of Liquid fertilizers	0	0	0	0	0	0	0	0	0	0	0	0	0
Small scale processing and value addition	0	0	0	0	0	0	0	0	0	0	0	0	0
Post Harvest Technology	0	0	0	0	0	0	0	0	0	0	0	0	0
Others, if any (Use of small tolls)	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>VII. Plant Protection</b>													
Integrated Pest Management	0	0	0	0	0	0	0	0	0	0	0	0	0
Integrated Disease Management	0	0	0	0	0	0	0	0	0	0	0	0	0
Bio-control of pests and diseases	0	0	0	0	0	0	0	0	0	0	0	0	0
Production of bio control agents and bio pesticides	0	0	0	0	0	0	0	0	0	0	0	0	0
Others, if any	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>VIII. Fisheries</b>													
Integrated fish farming	0	0	0	0	0	0	0	0	0	0	0	0	0
Carp breeding and hatchery management	0	0	0	0	0	0	0	0	0	0	0	0	0

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Carp fry and fingerling rearing	0	0	0	0	0	0	0	0	0	0	0	0	0
Composite fish culture & fish disease	0	0	0	0	0	0	0	0	0	0	0	0	0
Fish feed preparation & its application to fish pond, like nursery, rearing & stocking pond	0	0	0	0	0	0	0	0	0	0	0	0	0
Hatchery management and culture of freshwater prawn	0	0	0	0	0	0	0	0	0	0	0	0	0
Breeding and culture of ornamental fishes	0	0	0	0	0	0	0	0	0	0	0	0	0
Portable plastic carp hatchery	0	0	0	0	0	0	0	0	0	0	0	0	0
Pen culture of fish and prawn	0	0	0	0	0	0	0	0	0	0	0	0	0
Shrimp farming	0	0	0	0	0	0	0	0	0	0	0	0	0
Edible oyster farming	0	0	0	0	0	0	0	0	0	0	0	0	0
Pearl culture	0	0	0	0	0	0	0	0	0	0	0	0	0
Fish processing and value addition	0	0	0	0	0	0	0	0	0	0	0	0	0
Others, if any	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>IX. Production of Inputs at site</b>													
Seed Production	0	0	0	0	0	0	0	0	0	0	0	0	0



Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Planting material production	0	0	0	0	0	0	0	0	0	0	0	0	0
Bio-agents production	0	0	0	0	0	0	0	0	0	0	0	0	0
Bio-pesticides production	0	0	0	0	0	0	0	0	0	0	0	0	0
Bio-fertilizer production	0	0	0	0	0	0	0	0	0	0	0	0	0
Vermi-compost production	0	0	0	0	0	0	0	0	0	0	0	0	0
Organic manures production	0	0	0	0	0	0	0	0	0	0	0	0	0
Production of fry and fingerlings	0	0	0	0	0	0	0	0	0	0	0	0	0
Production of Bee-colonies and wax sheets	0	0	0	0	0	0	0	0	0	0	0	0	0
Small tools and implements	0	0	0	0	0	0	0	0	0	0	0	0	0
Production of livestock feed and fodder	0	0	0	0	0	0	0	0	0	0	0	0	0
Production of Fish feed	0	0	0	0	0	0	0	0	0	0	0	0	0
Others, if any	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>X. Capacity Building and Group Dynamics</b>													
Leadership development	0	0	0	0	0	0	0	0	0	0	0	0	0
Group dynamics													
Formation and Management of SHGs	0	0	0	0	0	0	0	0	0	0	0	0	0

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Mobilization of social capital	0	0	0	0	0	0	0	0	0	0	0	0	0
Entrepreneurial development of farmers/youths	0	0	0	0	0	0	0	0	0	0	0	0	0
WTO and IPR issues	0	0	0	0	0	0	0	0	0	0	0	0	0
Others, if any	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>XI Agro-forestry</b>													
Production technologies	0	0	0	0	0	0	0	0	0	0	0	0	0
Nursery management													
Integrated Farming Systems	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>XII. Others (Pl. Specify)</b>													
<b>GKMS</b>	<b>18</b>	<b>288</b>	<b>36</b>	<b>324</b>	<b>36</b>	<b>72</b>	<b>108</b>	<b>72</b>	<b>36</b>	<b>108</b>	<b>396</b>	<b>144</b>	<b>540</b>
<b>SUB TOTAL</b>	<b>18</b>	<b>288</b>	<b>36</b>	<b>324</b>	<b>36</b>	<b>72</b>	<b>108</b>	<b>72</b>	<b>36</b>	<b>108</b>	<b>396</b>	<b>144</b>	<b>540</b>
<b>TOTAL</b>	<b>54</b>	<b>864</b>	<b>108</b>	<b>972</b>	<b>140</b>	<b>184</b>	<b>324</b>	<b>184</b>	<b>140</b>	<b>324</b>	<b>1188</b>	<b>432</b>	<b>1620</b>
<b>Rural youth</b>													
Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Mushroom Production	0	0	0	0	0	0	0	0	0	0	0	0	0
Bee-keeping			0			0			0		0	0	0
Integrated farming	0	0	0	0	0	0	0	0	0	0	0	0	0

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Seed production	2	32	4	36	4	8	12	8	4	12	44	16	60
Production of organic inputs	2	32	4	36	4	8	12	8	4	12	44	16	60
Planting material production	1	16	2	18	2	4	6	4	2	6	22	8	30
Vermi-culture	0	0	0	0	0	0	0	0	0	0	0	0	0
Sericulture				0			0			0	0	0	0
Protected cultivation of vegetable crops	1	16	2	18	2	4	6	4	2	6	22	8	30
Commercial fruit production	0	0	0	0	0	0	0	0	0	0	0	0	0
Repair and maintenance of farm machinery and implements	0	0	0	0	0	0	0	0	0	0	0	0	0
Nursery Management of Horticulture crops	1	16	2	18	2	4	6	4	2	6	22	8	30
Training and pruning of orchards	1	16	2	18	2	4	6	4	2	6	22	8	30
Value addition	1	16	2	18	2	4	6	4	2	6	22	8	30

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Production of quality animal products	0	0	0	0	0	0	0	0	0	0	0	0	0
Dairying	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheep and goat rearing	0	0	0	0	0	0	0	0	0	0	0	0	0
Quail farming	0	0	0	0	0	0	0	0	0	0	0	0	0
Piggery	0	0	0	0	0	0	0	0	0	0	0	0	0
Rabbit farming	0	0	0	0	0	0	0	0	0	0	0	0	0
Poultry production	0	0	0	0	0	0	0	0	0	0	0	0	0
Ornamental fisheries	0	0	0	0	0	0	0	0	0	0	0	0	0
Para vets	0	0	0	0	0	0	0	0	0	0	0	0	0
Para extension workers	0	0	0	0	0	0	0	0	0	0	0	0	0
Composite fish culture	0	0	0	0	0	0	0	0	0	0	0	0	0
Freshwater prawn culture	0	0	0	0	0	0	0	0	0	0	0	0	0
Shrimp farming	0	0	0	0	0	0	0	0	0	0	0	0	0
Pearl culture	0	0	0	0	0	0	0	0	0	0	0	0	0
Cold water fisheries	0	0	0	0	0	0	0	0	0	0	0	0	0
Fish harvest and processing technology	0	0	0	0	0	0	0	0	0	0	0	0	0

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Fry and fingerling rearing	0	0	0	0	0	0	0	0	0	0	0	0	0
Small scale processing	0	0	0	0	0	0	0	0	0	0	0	0	0
Post Harvest Technology	1	16	2	18	2	4	6	4	2	6	22	8	30
Tailoring and Stitching	0	0	0	0	0	0	0	0	0	0	0	0	0
Rural Crafts	0	0	0	0	0	0	0	0	0	0	0	0	0
Enterprise development	0	0	0	0	0	0	0	0	0	0	0	0	0
Others if any (ICT application in agriculture)	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>10</b>	<b>160</b>	<b>20</b>	<b>180</b>	<b>20</b>	<b>40</b>	<b>60</b>	<b>40</b>	<b>20</b>	<b>60</b>	<b>220</b>	<b>80</b>	<b>300</b>

#### Extension functionalities

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST					
		M	F	T	M	F	T	M	F	T	M	F	T
Productivity enhancement in field crops	3	48	6	54	6	12	18	12	6	18	66	24	90
Integrated Pest Management	0	0	0	0	0	0	0	0	0	0	0	0	0
Integrated Nutrient management	2	32	4	36	4	8	12	8	4	12	44	16	60

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST			M	F	T
		M	F	T	M	F	T	M	F	T			
Rejuvenation of old orchards	1	16	2	18	2	4	6	4	2	6	22	8	30
Value addition	1	16	2	18	2	4	6	4	2	6	22	8	30
Protected cultivation technology	1	16	2	18	2	4	6	4	2	6	22	8	30
Formation and Management of SHGs	0	0	0	0	0	0	0	0	0	0	0	0	0
Group Dynamics and farmers organization	0	0	0	0	0	0	0	0	0	0	0	0	0
Information networking among farmers	0	0	0	0	0	0	0	0	0	0	0	0	0
Capacity building for ICT application	0	0	0	0	0	0	0	0	0	0	0	0	0
Care and maintenance of farm machinery and implements	0	0	0	0	0	0	0	0	0	0	0	0	0
WTO and IPR issues	0	0	0	0	0	0	0	0	0	0	0	0	0
Management in farm animals	0	0	0	0	0	0	0	0	0	0	0	0	0
Livestock feed and fodder production	0	0	0	0	0	0	0	0	0	0	0	0	0
Household food security	0	0	0	0	0	0	0	0	0	0	0	0	0
Women and Child care	0	0	0	0	0	0	0	0	0	0	0	0	0

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST			M	F	T
		M	F	T	M	F	T	M	F	T			
Low cost and nutrient efficient diet designing	0	0	0	0	0	0	0	0	0	0	0	0	0
Production and use of organic inputs	0	0	0	0	0	0	0	0	0	0	0	0	0
Gender mainstreaming through SHGs	0	0	0	0	0	0	0	0	0	0	0	0	0
Crop intensification	0	0	0	0	0	0	0	0	0	0	0	0	0
Others if any	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>8</b>	<b>128</b>	<b>16</b>	<b>144</b>	<b>16</b>	<b>32</b>	<b>48</b>	<b>32</b>	<b>16</b>	<b>48</b>	<b>176</b>	<b>64</b>	<b>240</b>

#### 4. Frontline demonstration to be conducted\*

Sl. No.	Crop	Variety	Thrust Area	Thematic Area	Season:	Farming Situation:
1.	Jute	Jute (Var.-JRO-524, JBO 2003 H)	Promotion of HYV jute	ICM	Pre Kharif /Kharif 2023	Irrigated
2.	Paddy	Paddy (Var.-Sabour Sampan)	Promotion of HYV paddy	ICM	Kharif 2023	Irrigated
3.	Paddy	BGA Culture	Soil health management	INM	Kharif 2023	Irrigated
4.	Foxtail millet	RAU 5	Millet production	ICM	Kharif 2023	Rainfed
5.	Wheat	Wheat (Variety-bio fortified wheat)	Promotion of bio fortified wheat	ICM	Rabi 2023-24	Irrigated
6.	Vegetable seed	Vegetable seeds	Malnutrition	Household food security	Kharif/ Rabi/ Summer	Irrigated
7.	Makhana	Sabour Makhana-1	Promotion of HYV	Varietal evaluation	Rabi 2023-24	Irrigated
8.	Mushroom	Button Mushroom	Mushroom production	Mushroom Production	Rabi 2023-24	-



**FLD (Front Line Demonstration) 1:-**

**Crop:** Jute

**Thrust Area:** Promotion of HYV jute

**Thematic Area:** ICM

**Season:** Pre Kharif /Kharif 2023-24

**Farming Situation:** Upland /Medium land/ Low land

Sl. No.	Crop & variety / Enterprises	Proposed Area (ha)/ Unit (No.)	Technology package for demonstration	Parameter (Data) in relation to technology demonstrated	Cost of Cultivation (Rs.)/ha			No. of farmers / demonstration								
					Name of Inputs	Demo	Local	SC		ST		Other		Total		
								M	F	M	F	M	F	M	F	T
1	Jute (Var.- JRO-524, JBO 2003 H)	10.00	Seed + Seed Treatment	Yield & Economics	Seed + Seed Treatment	10000	8000	0	0	17	8	0	0	17	8	25

**FLD (Front Line Demonstration) 2:-**

**Crop:** Paddy

**Thrust Area:** Promotion of HYV paddy

**Thematic Area:** ICM

**Season:** Kharif 23-24

**Farming Situation:** Low land

Sl. No.	Crop & variety / Enterprises	Proposed Area (ha)/ Unit (No.)	Technology package for demonstration	Parameter (Data) in relation to technology demonstrated	Cost of Cultivation (Rs.)/ ha			No. of farmers / demonstration								
					Name of Inputs	Demo	Local	SC		ST		Other		Total		
								M	F	M	F	M	F	M	F	T
2	Paddy (Var.- Sabour Sampan)	5.00	Seed + Seed Treatment	Yield & Economics	Seed + Seed Treatment	10000	8000	0	0	15	10	0	0	15	10	25

**FLD (Front Line Demonstration) 3:-**

**Crop:** Paddy

**Thrust Area:** Soil health management

**Thematic Area:** INM

**Season:** Kharif 23- 24

**Farming Situation:** Medium /Low land

Sl. No.	Crop & variety / Enterprises	Proposed Area (ha)/ Unit (No.)	Technology package for demonstration	Parameter (Data) in relation to technology demonstrated	Cost of Cultivation (Rs.) / ha			No. of farmers / demonstration								
					Name of Inputs	Demo	Local	SC		ST		Other		Total		
								M	F	M	F	M	F	M	F	T
3	Paddy (BGA) if available	10.00	BGA Culture	Yield & Economics	BGA Culture	10000	-	0	0	20	5	0	0	20	5	25

**FLD (Front Line Demonstration) 4:-**

**Crop:** Wheat

**Thrust Area:** Promotion of Biofortified Wheat

**Thematic Area:** ICM

**Season:** Rabi 23-24

**Farming Situation:** Medium /Low land

Sl. No.	Crop & variety / Enterprises	Proposed Area (ha)/ Unit (No.)	Technology package for demonstration	Parameter (Data) in relation to technology demonstrated	Cost of Cultivation (Rs.)			No. of farmers / demonstration								
					Name of Inputs	Demo	Local	SC		ST		Other		Total		
								M	F	M	F	M	F	M	F	T
4	Wheat (Variety- BHU 25, BHU 31 )	5.00	Seed & Seed treatment	Yield & Economics	Seed + Seed Treatment	37000	28000	0	0	15	10	0	0	15	10	25

**FLD (Front Line Demonstration) 5:-**

**Crop:** Vegetable seed

**Thrust Area:** Malnutrition

**Thematic Area:** Household food security

**Season:** Rabi 23-24

**Farming Situation:** Medium /Low land

Sl. No.	Crop & variety / Enterprises	Proposed Area (ha)/ Unit (No.)	Technology package for demonstration	Parameter (Data) in relation to technology demonstrated	Cost of Cultivation (Rs.)			No. of farmers / demonstration								
					Name of Inputs	Demo	Local	SC		ST		Other		Total		
								M	F	M	F	M	F	M	F	T
5	Vegetable seed	1.0	Seed & Seed treatment	Yield & Economics	Seed + Seed Treatment	37000	28000	0	0	15	10	0	0	15	10	25

**FLD (Front Line Demonstration) 6:-**

**Crop:** Makhana

**Thrust Area:** Makhana production

**Thematic Area:** Varietal evaluation

**Season:** Rabi 23-24

**Farming Situation:** Low land

Sl. No.	Crop & variety / Enterprises	Proposed Area (ha)/ Unit (No.)	Technology package for demonstration	Parameter (Data) in relation to technology demonstrated	Cost of Cultivation (Rs.)			No. of farmers / demonstration								
					Name of Inputs	Demo	Local	SC		ST		Other		Total		
								M	F	M	F	M	F	M	F	T
6	Makhana	3.00	Sabour Makhana-1	Yield & Economics	Makhana Seed	-	-	0	0	15	10	0	0	15	10	25

**FLD (Front Line Demonstration) 7:-**

**Crop:** Foxtail Millet

**Thrust Area:** Millet promotion

**Thematic Area:** ICM

**Season:** Rabi 23-24

**Farming Situation:** Upland / medium land

Sl. No.	Crop & variety / Enterprises	Proposed Area (ha)/ Unit (No.)	Technology package for demonstration	Parameter (Data) in relation to technology demonstrated	Cost of Cultivation (Rs.)			No. of farmers / demonstration								
					Name of Inputs	Demo	Local	SC		ST		Other		Total		
								M	F	M	F	M	F	M	F	T
7	Foxtail Millet	3.00	RAU 5	Yield & Economics	Seed	-	-	0	0	15	0	0	0	15	0	15

**FLD (Front Line Demonstration) 8:-**

**Crop:** Mushroom production

**Thrust Area:** Mushroom production

**Thematic Area:** Mushroom production

**Season:** Rabi 23-24

**Farming Situation:** -

Sl. No.	Crop & variety / Enterprises	Proposed Area (ha)/ Unit (No.)	Technology package for demonstration	Parameter (Data) in relation to technology demonstrated	Cost of Cultivation (Rs.)			No. of farmers / demonstration								
					Name of Inputs	Demo	Local	SC		ST		Other		Total		
								M	F	M	F	M	F	M	F	T
8	Button Mushroom	15 Unit	Mushroom Spawn	Yield & Economics	Mushroom Spawn	-	-	0	0		15	0	0	0	15	15

**Extension and Training activities under FLD:**

Activity	Title of Activity	No.	Clientele	Duration	Venue On/Off	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Training	Jute (JBO 2003H)	1	PF	1	On	2	4	4	2	16	2	22	8	30
Training	Paddy (Sabour Sampann)	1	PF	1	On	2	4	4	2	16	2	22	8	30
Training	Paddy (BGA)	1	PF	1	On	2	4	4	2	16	2	22	8	30
Training	Wheat	1	PF	1	On	2	4	4	2	16	2	22	8	30
Training	Oyster Mushroom	1	PF	1	On	2	4	4	2	16	2	22	8	30
Training	Vegetable seedling	1	PF	1	On	2	4	4	2	16	2	22	8	30
Field Day	Jute (JBO 2003H)	1	PF	1	On	2	4	4	2	16	2	22	8	30
Field Day	Paddy (Sabour Sampann)	1	PF	1	On	2	4	4	2	16	2	22	8	30
Field Day	Paddy (BGA)	1	PF	1	On	2	4	4	2	16	2	22	8	30
Field Day	Wheat	1	PF	1	On	2	4	4	2	16	2	22	8	30
Field Day	Oyster Mushroom	1	PF	1	On	2	4	4	2	16	2	22	8	30
Field Day	Vegetable seedling	1	PF	1	On	2	4	4	2	16	2	22	8	30
Field Day	Cauliflower	1	RY	5	On	2	4	4	2	16	2	22	8	30
Field Day	Oysters Mushroom	1	RY	5	On	2	4	4	2	16	2	22	8	30

\* Repeat the above tables and information in Point no. 4 for EACH FLD being proposed.

**5. a) Seed and planting material production by utilization of instructional farm (Crops / Enterprises)**

Name of the Crop / Enterprise	Variety / Type	Period From Jan 2023 to Dec 2023	Area (ha.) / Quantity	Details of Production				
				Type of Produce	Expected Production (quintals)	Cost of inputs (Rs.)	Expected Gross income (Rs.)	Expected Net Income (Rs.)
Sesamum	Krishna/ Tillotama	-	03.00	-	-	-	-	-
R & M	Uttara / R. Sufalam	-	03.00	-	-	-	-	-
Planting Material	Veg. seedling & Fruit	-	4000					

**b) Village Seed Production Programme:- NA**

Name of the Crop / Enterprise	Variety / Type	Period From... to .....	Area (ha.)	No. of farmers	Details of Production				
					Type of Produce	Expected Production(q)	Cost of inputs (Rs.)	Expected Gross income (Rs.)	Expected Net Income (Rs.)

**Extension Activities**

Sl. No	Activities/ Sub-activities	No. of activities proposed	Farmers				Extension Officials			Total		
			M	F	T	SC/ ST (% of total)	Male	Female	Total	Male	Female	Total
1.	Field Day	05	170	30	200	10	10	02	12	180	32	212
2.	KisanMela	02	450	50	500	10	90	10	100	540	60	600
3.	Kisan Ghosthi	05	200	50	250	10	40	10	50	240	60	300
4.	Exhibition	02	200	50	250	10	40	10	50	240	60	300
5.	Film Show	05	200	50	250	10	40	10	50	240	60	300
6.	Method Demonstrations	08	45	36	81	30	16	03	19	61	39	100
7.	Farmers Seminar	03	250	50	300	20	90	10	100	340	60	400
8.	Workshop	02	50	10	60	10	07	03	10	57	13	70
9.	Group meetings	05	200	50	250	10	40	10	50	240	60	300
10.	Lectures delivered as resource persons	10	200	50	250	10	40	10	50	240	60	300

11.	Advisory Services	500	400	100	500	20	90	10	100	490	110	600
12.	Scientific visit to farmers field	60	45	15	60	10	05	05	10	50	20	70
13.	Farmers visit to KVK	500	400	100	500	20	90	10	100	490	110	600
14.	Diagnostic visits	40	35	05	40	10	15	05	20	50	10	60
15.	Exposure visits	01	45	05	50	10	02	01	03	47	06	53
16.	Ex-trainees Sammelan	01	45	05	50	10	02	01	03	47	06	53
17.	Soil health Camp	01	250	50	300	10	40	10	50	290	60	350
18.	Animal Health Camp	0	0	0	0	0	0	0	0	0	0	0
19.	Agri mobile clinic	0	0	0	0	0	0	0	0	0	0	0
20.	Soil test campaigns	02	250	50	300	10	40	10	50	290	60	350
21.	Farm Science Club Conveners meet	01	25	05	30	10	08	02	10	33	07	40
22.	Self Help Group Conveners meetings	02	50	10	60	10	16	04	20	66	14	80
23.	Mahila Mandals Conveners meetings	02	0	100	100	20	05	15	20	05	115	120
24.	Celebration of important days ( World food day, Yoga Diwas)	02	70	10	80	10	15	05	20	85	15	100
25.	Sankalp Se Siddhi****	01	60	20	80	10	16	04	20	76	24	100
26.	Swatchta Hi Sewa?Pakhwara	02	200	50	250	10	40	10	50	240	60	300
27.	Mahila Kisan Diwas	01	0	100	100	20	0	10	10	0	110	110
	Total	1163	3840	1051	4891	320	797	180	977	4637	1231	5868

#### 6. Revolving Fund (in Rs.)

Opening balance of 2023-2024 (As on 01.04.2023)	Amount proposed to be invested during 2022-2024	Expected Return
6086448		

#### 7. Expected fund from other sources and its proposed utilization

Project	Source	Amount to be received (Rs. in lakh)

## 8. On-farm trials to be conducted\*

### OFT (On Farm Trial) 1, Agronomy

- I. **Season** : Rabi 2023- 24
- II. **Title of the OFT** : Improvement of Nitrogen use efficiency in wheat through Nano Urea.
- III. **Thematic Area** : Integrated Nutrient Management
- IV. **Problem diagnosed** : Excessive use of chemical fertilizers and spiraling price in urea leads to increase in cost of cultivation.
- V. **Important Cause** : High price & Shortage of N fertilizers in market
- VI. **Production system** : Rice-Wheat.
- VII. **Micro farming system:** Medium / Low land
- VIII. **Technology for Testing:** Application of Nano urea at two growth stages in wheat.
- IX. **Existing Practice** : No application of Nano urea in crops by the farmers.
- X. **Hypothesis** : Application of Nano urea can reduce the use of urea and improve the soil status.
- XI. **Objective(s)** :To reduce cost of cultivation, dependency on urea and improvement in soil health.
- XII. **Technology Options:**

**Farmers' Practice :-**RDF (150:60:40 kg N:P<sub>2</sub>O<sub>5</sub>:K<sub>2</sub>O/ha)

**Technical Option I:-**50 % RDN and 100 % P & K + Nano urea @ 4 ml per lit. water (Single Spray at 35 DAS)

**Technical Option II:-** 50 % RDN and 100 % P & K + Nano urea @ 4 ml per lit. water (Two Spray at 35 and 60- 65 DAS)

In timely Sown Variety of Wheat

- XXIII. **Critical Inputs:** Seed, Fertilizer, Nano urea
- XXIV. **Unit Size** : 10 m x 20 m = 200 sq m in each technical option
- XXV. **No of Replications:** 10
- XXVI. **Unit Cost** : Rs. 800/-
- XXVII. **Total Cost** : Rs. 8000/-
- XXVIII. **Monitoring Indicator:**  
Initial and final soil nutrient status (pH, OC, NPK)  
**Yield data**  
No. of effective tillers / sq m  
1000 grain wt (g)  
Yield (Q/ha)  
Economics
- XIX. **Source of Technology:** In House, OFT Finalization workshop on Agronomy & Soil Science (1- 3, Sept. 2022) at BAU Sabour, Bhagalpur.



## **FT (On Farm Trial) 2, Agronomy,**

- I. Season** : Rabi 2023- 24
- II. Title of the OFT** : Improvement of Nitrogen use efficiency in paddy through Nano urea.
- III. Thematic Area** : Integrated Nutrient Management
- IV. Problem diagnosed** : Excessive use of chemical fertilizers and spiraling price in urea leads to increase in cost of cultivation.
- V. Important Cause** : High price & Shortage of N fertilizers in market
- VI. Production system** : Rice-Wheat.
- VII. Micro farming system:** Medium / Low land
- VIII. Technology for Testing:** Application of Nano urea at two growth stages in paddy
- IX. Existing Practice** : No application of Nano Urea in crops by the farmers.
- X. Hypothesis** : Application of Nano urea can reduce the use of urea and improve the soil status.
- XI. Objective(s)** : To reduce cost of cultivation, dependency on urea and improvement in soil health.

### **XII. Technology Options:**

**Farmers' Practice:-** RDF (120:60:40 kg N:P<sub>2</sub>O<sub>5</sub>:K<sub>2</sub>O/ha)

**Technical Option I:-** 50 % RDN and 100 % P & K + Nano urea @ 4 ml per lit. water

(Single Spray at 35 DAS)

**Technical Option II:-** 50 % RDN and 100 % P & K + Nano urea @ 4 ml per lit. water

(Two Spray at 35 and 60- 65 DAS)

- XIII. Critical Inputs** : Seed, Fertilizer, Nano Urea
- XIV. Unit Size** : 10 m x 20 m = 200 sq m in each technical option
- XV. No of Replications** : 10
- XVI. Unit Cost** : Rs. 800/-
- XVII. Total Cost** : Rs. 8000/-

### **XVIII. Monitoring Indicator:**

Initial and final soil nutrient status (pH, OC, NPK)

#### **Yield data**

No. of effective tillers / sq m

1000 grain wt (g)

Yield (Q/ha)

Economics

- XIX. Source of Technology:** In House, OFT Finalization workshop on Agronomy & Soil Science (1- 3, Sept. 2022) at BAU Sabour, Bhagalpur.

### **OFT (On Farm Trial) 3, Agronomy**

- I. Season** : Rabi 2023- 24
- II. Title of the OFT** : Integration of fertilizer in different form on yield of lentil
- III. Thematic Area** : INM
- IV. Problem diagnosed** : Injudicious use of chemical fertilizer.
- V. Important Cause** : Unbalanced fertilizer use
- VI. Production system** : Rice – Lentil
- VII. Micro farming system:** Medium to up land
- VIII. Technology for Testing:** Application of water soluble fertilizer and Bio- fertilizers
- IX. Existing Practice** : Application of traditionally DAP and Urea
- X. Hypothesis** : Null & Alternate
- XI. Objective(s)** : To reduce cost of cultivation, dependency on Urea, DAP and improvement in soil health.

#### **XII. Technology Options:**

**Farmers' Practice:-** Seed Treatment + RDF (20:40:0 kg N:P:K/ha)

**Technical Option I:-** 50 % of RDN + WS 18:18:18 @ 5gm / ltr. Water

(Single spray at flowering stage)

**Technical Option II:-** Seed Treatment with PSB + Rhizobium, 50 % of RDF + WS 18:18:18 @ 5gm / ltr. Water (Single spray at flowering stage)

**XIII. Critical Inputs** :Seed, Fertilizer

**XIV. Unit Size** : 200m<sup>2</sup>

**XV. No of Replications** :10

**XVI. Unit Cost** : Rs. 800

**XVII. Total Cost** : Rs. 8000/-

#### **XVIII. Monitoring Indicator:**

Initial and final soil nutrient status (pH, OC, NPK)

##### **Yield data**

No. of effective tillers / sq m

1000 grain wt (g)

Yield (Q/ha)

Economics

**XIX. Source of Technology:** In House, OFT Finalization workshop on Agronomy & Soil Science (1- 3, Sept. 2022) at BAU Sabour, Bhagalpur.

#### **OFT (On Farm Trial) 4, Horticulture,**

- I. Season : Rabi 2023- 24**
- II. Title of the OFT : Effect of age of seedling on growth and yield of Rabi tomato**
- III. Thematic Area : Vegetable cultivation**
- IV. Problem diagnosed : Poor quality and low yield of tomato due to transplanting of over age seedling**
- V. Important Cause : Improper growth and yield of crop**
- VI. Production system : Wheat – Okra**
- VII. Micro farming system: Irrigated medium land**
- VIII. Technology for Testing: Effect of age of seedling on growth and yield of Rabi tomato**
- IX. Existing Practice : Transplanting of over age seedling**
- X. Hypothesis : Survivality of seedling**
- XI. Objective(s) : To obtain better quality and high yield of tomato**
- XII. Technology Options:**
- Farmers' Practice :-** Transplanting of 32 days old seedling
- Technical Option I:-** Transplanting of 24 days old seedling
- Technical Option II:-** Transplanting of 28 days old seedling
- XIII. Critical Inputs : Seeds**
- XIV. Unit Size : 200 square meter**
- XV. No of Replications : 10**
- XVI. Unit Cost : Rs 500=00**
- XVII. Total Cost : Rs 5000=00**
- XVIII. Monitoring Indicator:**
- Plant height (cm),
- No. of branch / plant,
- No. of fruit / plant,
- Yield (q/ha),
- Cost of cultivation, Gross return, Net return, B:C ratio
- XIX. Source of Technology: CSAUAT, Kanpur**

## **OFT (On Farm Trial) 5, Horticulture**

- I. Season : Rabi 2023- 24**
- II. Title of the OFT : Assessment of effect of different doses of Boron application in cauliflower**
- III. Thematic Area : INM**
- IV. Problem diagnosed : Poor curd formation**
- V. Important Cause : Poor quality curd, off colour curd and poor yield**
- VI. Production system : Paddy-Potato-Cauliflower**
- VII. Micro farming system: Irrigated**
- VIII. Technology for Testing: Better quality of curd and yield**
- IX. Existing Practice : No use of Boron**
- X. Hypothesis : Use of Boron before cultivation of crop may be the possible option**
- XI. Objective(s) : To obtain better quality crop produce**
- XII. Technology Options:**
- Farmers' Practice :- No use of Boron**
- Technical Option I :- Use of Boron 2.1 kg / ha**
- Technical Option II :- Use of Boron 1.5 kg / ha**
- XIII. Critical Inputs : Boron**
- XIV. Unit Size : 100 m<sup>2</sup>**
- XV. No of Replications : 10**
- XVI. Unit Cost : Rs. 300/-**
- XVII. Total Cost : Rs. 3000/-**
- XVIII. Monitoring Indicator:**
- Yield, Curd Colour, Curd weight, Economics
- XIX. Source of Technology: RAU Pusa**

**10. List of Projects to be implemented by funding from other sources (other than KVK fund)**

Sl. No.	Name of the project	Fund expected (Rs. In Lakh)
1	CRA Programme	18.0
2	Biotech Kisan Hub	-
3	GKMS	13.0
4	Makhana Development scheme	0.50
5	Natural farming	2.50

**11. No. of success stories proposed to be developed with their tentative titles-**

Five number of success story will be prepared during the year entitled

- a. Mushroom cultivation
- b. Makhana cultivation
- c. Natural farming
- d. Cluster Front Line Demonstration
- e. Climate Resilient Agriculture

**12. Scientific Advisory Committee**

Date of SAC meeting held during 2022-23	Proposed date during 2023-24
23.06.2022	24.06.2023

**13. Soil and water testing**

Details	No. of Samples	No. of Farmers									No. of Villages	No. of SHC distributed
		SC		ST		Other		Total				
		M	F	M	F	M	F	M	F	T		
Soil Samples	650	-	-	-	-	-	-	-	-	-	-	-
Water Samples												
Other (Please specify)												
<b>Total</b>												

**14. Fund requirement and expenditure (Rs.)\***

Heads	Expenditure (last year) (Rs.) up to 31.03.2022	Expected fund requirement (Rs.)
<b>Total</b>		

\* Any additional requirement may be suitably justified.

**15. Every KVK should bring a brief write-up supported by quality photographs about the technology having wide acceptability among the farming community of the district with factual data**

**1. Harnessing Zero Tillage Technology to Enhance Resource Conservation.**



Zero Tillage Technology, also known as the practice of sowing seeds without tilling the field, offers various advantages. This innovative method not only reduces the expenses associated with field preparation but also minimizes the amount of irrigation water required. Additionally, it effectively controls weed population and promotes an eco-friendly approach to sowing by minimizing fuel combustion. By ensuring proper seed and fertilizer placement, this technique facilitates improved germination, making it particularly beneficial for timely sowing of Rabi crops, specifically wheat, even in late sown conditions.

The implementation of Zero Tillage Technology in wheat, Mung bean, jute, and other various crop sowing has been actively pursued by KVK, Purnea since 2009 through their front line demonstration program. The introduction of ZT in wheat cultivation has led to substantial savings, with a recorded reduction of 45 liters of diesel per hectare and a corresponding decrease in sowing costs by Rs. 3500 per hectare. Furthermore, these demonstrations have shown an average yield increase of 16 per cent. The introduction of this technology in wheat cultivation has resulted in a favorable benefit-cost ratio of 2.17, contributing to a remarkable 10 per cent annual expansion of ZT adoption for wheat, Mung bean, jute, and other various crop sowing within the district.

**2. Implementing Direct Seeding Rice (DSR) Technique for Cost Effective Rice Cultivation:**



The practice of transplanting seedlings after their growth is widespread among farmers engaged in rice cultivation. This method necessitates a large workforce, leading to significant labor



expenses, especially during the peak period of transplanting in the Kharif season. Consequently, there has been an observed increase in the cost of cultivating rice, resulting in a low benefit-cost ratio. Especially ZT paddy reduce residue burning problem and decreases the gases emission, environment pollution caused by it.

Given these circumstances, the farming communities in the district have embraced the practice of Direct Seeding Technology, employing a paddy Multi crop planter zero till and drum seeder. This technology has proven to be easily adaptable in the local area, particularly due to the early onset of precipitation in the Kharif season towards the end of May. Furthermore, the affordability and user-friendly operation of the Multi crop planter zero till and paddy drum seeder make it highly suitable for Direct Seeding of Rice (DSR) practices. By implementing this technology, the total cost of transplanting is reduced, while maintaining a nearly sustainable rice yield with a benefit ratio of 2.25.

### **3. Soil health and fertility management through green manuring**



The excessive and imbalanced use of inorganic/chemical fertilizers, particularly an over-reliance on urea, has resulted in a decline in soil fertility across various crop cultivation practices. In such circumstances, the most effective option to support soil health is through the practice of green manuring in fields. Considering the limitations posed by the local cattle population, which restricts the availability of organic compost or vermicompost in large quantities, green manuring using leguminous crops such as Sesbania, Green gram, and Cow Pea has proven to be the most beneficial approach, especially in areas affected by salinity and water logging.

It has been observed that the incorporation of 50-day-old Sesbania plants into the soil results in a significant increase of 90 kg of available nitrogen per hectare, highlighting the effectiveness of this green manuring method.

### **4. Saving Water technique through Raised bed planting.**



Raised bed planting is widely regarded as the most effective method for planting maize during the monsoon and winter seasons, regardless of whether there is excess moisture or limited water

availability in rainfed conditions. By planting on the southern side of east-west ridges or beds, optimal germination can be achieved. Ideally, a raised bed planter equipped with inclined plates, cupping, or roller-type seed metering systems should be utilized. This enables the precise placement of seeds and fertilizers in a single operation, resulting in a desirable crop stand, increased productivity, and improved resource utilization.

By employing raised bed planting technology, significant water savings of 20-30% can be realized while achieving higher productivity up to 110 q/ha in Purnea district. Furthermore, in situations where there is temporary excess soil moisture or waterlogging caused by heavy rains especially in kharif season, the furrows act as drainage channels, protecting the crop from the detrimental effects of excessive soil moisture stress. To fully exploit the potential of bed planting technology, it is advisable to establish permanent beds, allowing for sowing in a single pass without the need for preparatory tillage. Permanent beds are particularly advantageous in situations with excess soil moisture, as they offer higher infiltration rates and help safeguard the crop against temporary water logging damage.