KRISHI VIGYAN KENDRA PURNEA



ACTION PLAN

(January to December, 2023)



BIHAR AGRICULTURAL UNIVERSITY SABOUR, BHAGALPUR, (BIHAR)

CONTENTS

Sl. No	Particulars	Page
1.	Introduction	3
2.	Mandate& Activities	3
3.	Thrust Area	4
4.	Location & Agro-climatic Condition	4-5
5.	District Map	6
6.	Linkage	6
7.	Staff Position	7
8.	Training of Programme	9-15
9.	Abstract of Training programme	16-31
10.	Front Line Demonstration	32-37
11.	Seed and Planting material Production	38
12.	Extension activities	38-39
13.	Revolving Fund	39
14.	On farm Trial	40-44
15.	Soil & water testing	45
16.	Technology having wide acceptability	46-48

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 29th 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 clienteles.

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)
	Total	20.11 (ha)

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) ecoregion 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 loaml properties.

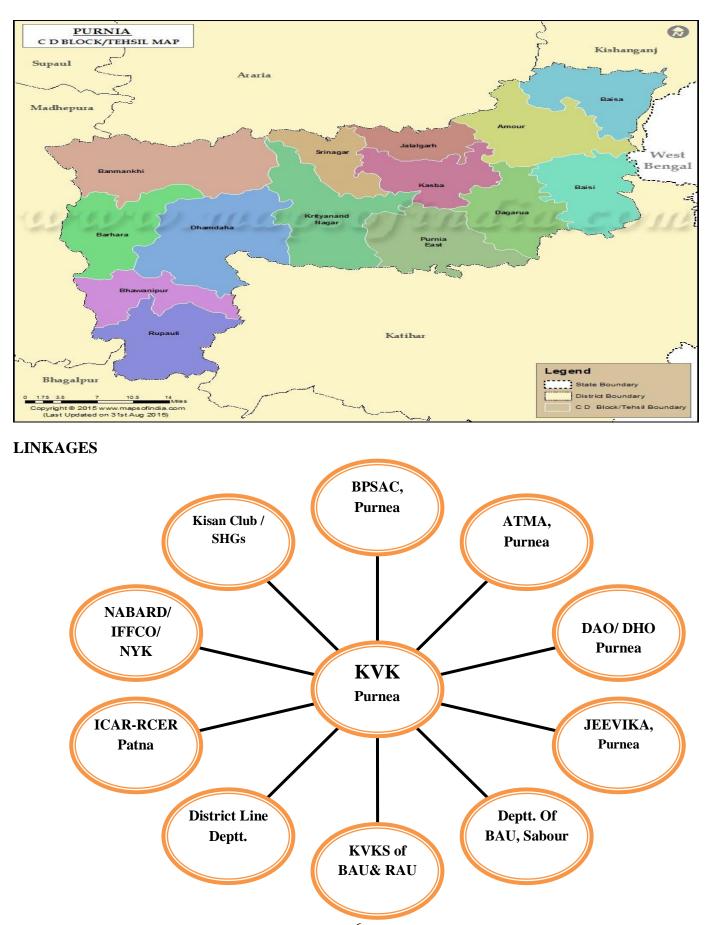
The soil is recognized with p^H 6.5 to 8, low in organic carbon, available N, P₂O₅ and medium in available K₂O. Soil is deficient in Zinc, Sulphur & Boron. The cropping system varies depending on rainfall, land situation and water accumulation in the locality. There are four distinct farming situations viz. Upland, Medium land, low land and deep low land having specific characteristic which determine crop and cropping sequence/cropping patterns in the district.

Sl No.	Сгор	Area (ha)	Production (MT)	Productivity (Kg/ha)
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

Area production and yield of major crops in Purnea district

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

MAP OF PURNEA DISTRICT



Staff Positions:

Sl. No.	Name of Post	Sanction	Present Position	Date of Joining
		Strength		
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	Vacar	nt
4.	SMS (Plant Pathology)	1	Vacar	ıt
5.	SMS (Soil Science/ Ag. Ext.)	1	Vacar	nt
6.	SMS (Home Science)	1	Vacar	nt
7.	SMS (Horticulture)	1	Dr. Sangita Mehta	14.06.2023
8.	SMS (Agro met)	-	Mr. Dayanidhi Chaubey	21.06.2019
9.	Farm Manager	1	Vacar	nt
10.	Assistant	1	Sri Sanjay Kumar	25.04.2013
11.	Prog. Asstt. (Lab Tech.)	1	Vacar	nt
12.	Prog. Asstt. (Computer)	1	Sri Ajit Choudhary	22.05.2013
13.	Stenographer	1	Vacar	nt
14.	Driver	1	Sri Satish Kumar	09.05.2015
15.	Driver	1	Sri Sushil Kumar Yadav	11.05.2015
16.	Supporting staff	2	Vacar	nt

REVISED PROFORMA FOR ACTION PLAN 2023-24

1. Name of the KVK: Purnea

Address	Tele	ephone	E mail
	Office	FAX	
Dr. K.M. Singh,	9430613389	-	kvkpurnea@gmail.com,
Krishi Vigyan Kendra,			purneakvk@gmail.com
Jalalgarh, Purnea, 854327			

2.Name of host organization : BAU Sabour, Bhagalpur

Address	Teleph	one	E mail
	Office	FAX	
Bihar Agricultural University Sabour, Bhagalpur	0641-2452611	-	deebausabour@gmail.com

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

(a) Farmers and farmwomen

Thematic area	Title of Training	No. of	Duration	Venue	Tentative				No. (of Parti	cipants	8		
		Courses		On/	Date	S	С	S	ST	Ot	her		Total	
				Off		Μ	F	Μ	F	Μ	F	Μ	F	Τ
Discipline : Cr	op Production					I		1	1	1	I	1		<u> </u>
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	Duration	Venue	Tentative				No. (of Parti	cipants	5		
		Courses		On/ Off	Date	S	С	S	ST	Ot	her		Total	
				OII		Μ	F	Μ	F	Μ	F	M	F	Т
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
	Sub Total	18	39	0	0	36	72	72	36	288	36	396	144	540
Discipline : Ho	orticulture													<u> </u>
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	Duration	Venue	Tentative				No. (of Parti	cipants	5		
		Courses		On/ Off	Date	S	С	S	ST	Ot	her		Total	
				OII		М	F	М	F	Μ	F	M	F	Т
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
	Sub Total	18	36	0	0	36	72	72	36	288	36	396	144	540

Thematic area	Title of Training	No. of	Duration	Venue	Tentative					of Parti	cipants	5		
		Courses		On/ Off	Date	S			Т		her		Total	
				OII		Μ	F	Μ	F	Μ	F	Μ	F	Т
Discipline : Agr	omet													
Awareness	Awareness 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			Duration	Venue	Tentative					of Parti	cipant	s		
			Courses		On/ Off	Date		SC	S	Т		her		Total	
					On		Μ	F	Μ	F	Μ	F	Μ	F	Т
FAP	Weather forecast informa	tion	1	2	Off/On	14-15 Feb. 2023	2	4	4	2	16	2	22	8	30
FAP	Weather forecast informa	tion	1	2	Off/On	27-28 Feb. 2023	2	4	4	2	16	2	22	8	30
Productivity Enhancement	Preparation & application different products under Natural farming	of	1	2	Off/On	27-28 March 2023	2	4	4	2	16	2	22	8	30
FAP	Weather forecast informa	tion	1	2	Off/On	18-19 April 2023	2	4	4	2	16	2	22	8	30
	Sub Total		18	37	0	0	36	72	72	36	288	36	396	144	540
	Grand Total		54	112	0	0	108	216	216	108	864	108	1188	432	162
			1	Venue	Tentativ	20			BAL -	- 1 1)	A				
							ч –				ticipa Other		7	lotol	
Thematic	Title of Training	No	Duratio	On/	Date	so			T		Other			otal F	Т
area	Title of Training	No.	Duration	On/			C F	S M			Other		M	otal F	Т
area	Crop Production	No.	Duration	On/		M			T		Other				Т
area Discipline : (ÿ	No.	Duration 3	On/	Date	M			T		Other []	F			T 30
area Discipline : C	Crop Production Production of organic			n On/	Date	M M	F	Μ	T F	M	Other []	F	M	F	
area Discipline : C	Crop ProductionProduction of organicinputsBio-FertilizertechniquesSeedproduction	1	3	On/ Off On On	Date 16-18 Ja 2023 20-24 Fe 2023 15-17 Ma	M M an 2 eb 2 rch	F 4 4	M 4 4	F 2 2 2	16 16	Other [] 5 5	F2	M 22 22 22	F 8 8	30 30
area Discipline : C	Crop Production Production of organic inputs Bio-Fertilizer techniques	1	3	On/ Off On	Date 16-18 Ja 2023 20-24 Fe 2023	an 2 eb 2	F	M	F 2	16	Other [] 5 5	F	M 22	F 8	30
area Discipline : C	Crop ProductionProduction of organicinputsBio-FertilizertechniquesSeedproduction	1	3	On/ Off On On	Date 16-18 Ja 2023 20-24 Fe 2023 15-17 Ma	M M an 2 eb 2 urch 2	F 4 4	M 4 4	F 2 2 2	16 16	Other [] 5	F22	M 22 22 22	F 8 8	30 30
area Discipline : C	Crop ProductionProduction of organicinputsBio-FertilizertechniquesSeedproductiontechniques of paddySeedproduction	1 1 1	3 3 3 3	On/ Off On On On On	Date 16-18 Ja 2023 20-24 Fe 2023 15-17 Ma 2023 18-20 Ap 2023 28-30 No	M M an 2 eb 2 urch 2 oril 2 ov	F 4 4 4 4 4	M 4 4 4	F 2 2 2 2 2 2 2 2	16 16 16 16	Other [] 5	F 2 2 2 2	M 22 22 22 22 22 22 22	F 8 8 8 8 8	30 30 30 30
area Discipline : C	Crop ProductionProduction of organicinputsBio-FertilizertechniquesSeedproductiontechniques of paddySeedproduction	1	3 3 3	On/ Off On On On	Date 16-18 Ja 2023 20-24 Fe 2023 15-17 Ma 2023 18-20 Ap 2023	M M an 2 eb 2 urch 2 oril 2 ov 2	F 4 4 4 4	M 4 4	F 2 2 2 2 2	16 16 16	Other [] 5	F 2 2 2 2	M 22 22 22 22	F 8 8 8 8	30 30 30

				Venue	Tentative				No. of	f Partic	ipants			
Thematic				On/	Date	S	С	S	Т	Ot	her		Total	
area	Title of Training	No.	Duration	Off		Μ	F	Μ	F	Μ	F	Μ	F	Т
Sub Total		6	15	0	0	12	24	24	12	96	12	132	48	180
Discipline :	Horticulture									-		-		
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	ProcessingandpreservationofseasonalfruitswegetablesK	1		On	28-30 Nov 2023	2	4	4	2	16	2	22	8	30
	Sub Total	6	15	0	0	12	24	24	12	96	12	132	48	180
G	Frand Total	12	30	0	0	24	48	48	24	192	24	264	96	360

(c) Extension functionaries

				Venue	Tentative	No. o	of Parti	cipants						
Thrust area/				On/Off	Date	SC		ST		Othe	r	Total		
Thematic area	Title of Training	No.	Duration			Μ	F	Μ	F	Μ	F	Μ	F	Т
Discipline : Cr	op Production													
	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
	Improvedpackageofpractices for Rabipulse production	1	2	On	14-16 Oct. 2023	2	4	4	2	16	2	22	8	30
Sub Total		4	4	0	0	8	16	16	8	64	8	88	32	120
Discipline : Ho	rticulture													
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
Sub Total		4	8	0	0	8	16	16	8	64	8	88	32	120
Grand Total		8	12	0	0	16	32	32	16	128	16	176	64	240

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

Farmers and Farm women

	-				No.	of Particip	ants						
			Other			SC			ST			Grand Tot	al
Thematic Area	No. of Courses	Μ	F	Т	Μ	F	Т	Μ	F	Т	Μ	F	Т
I. Crop Production	n												
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
TOTAL	18	288	36	324	36	72	108	72	36	108	396	144	540
II. Horticulture													
a) Vegetable Crop	s												
Integrated													
nutrient													
management	1	16	2	18	4	2	6	2	4	6	22	8	30

					No.	of Particip	ants						
			Other			SC			ST		G	and Tota	al
Thematic Area	No. of Courses	Μ	F	Т	Μ	F	Т	Μ	F	Т	Μ	F	Т
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					0		10		0	10			
Vegetable)	2	32	4	36	8	4	12	4	8	12	44	16	60
SUB TOTAL	10	160	20	180	40	20	60	20	40	60	220	80	300
b) Fruits			1		1					1			•
Training and													
Pruning	1	16	2	18	4	2	6	2	4	6	22	8	30
Layout and													
Management of			-									c.	_
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

					No.	of Particip	ants						
			Other			SC			ST		G	and Tot	al
Thematic Area	No. of Courses	Μ	F	Т	Μ	F	Т	Μ	F	Т	М	F	Т
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
SUB TOTAL	6	96	12	108	24	12	36	12	24	36	132	48	180
	-										-	-	
c) Ornamental Pla	ints												
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
SUB TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
		U	U	U	U U	v	v	U U	U	U	U	U	
d) Plantation crop	S												

					No.	of Particip	ants						
			Other			SC			ST		G	rand Tota	al
Thematic Area	No. of Courses	Μ	F	Т	Μ	F	Т	Μ	F	Т	Μ	F	Т
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
SUB TOTAL	1	16	2	18	2	4	6	4	2	6	22	8	30
e) Tuber crops													
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
SUB TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
f) Spices													
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
SUB TOTAL	1	16	2	18	2	4	6	4	2	6	22	8	30
			I	1	I	1		I			I		
g) Medicinal and A	Aromatic Plants												
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

					No.	of Particip	ants						
			Other			SC			ST		G	Frand Tota	al
Thematic Area	No. of Courses	Μ	F	Т	Μ	F	Т	Μ	F	Т	М	F	Т
Others, if any	0	0	0	0	0	0	0	0	0	0	0	0	0
SUB TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	18	288	36	324	68	40	108	40	68	108	396	144	540
III. Soil Health an	d Fertility Manag	ement											
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	0	0	0	0	0	0	0	0	0	0	0	0	0
inputs Management of	0	0	0	0	0	0	0	0	0	0	0	0	0
Problematic soils	0	0	0	0	0	0	0	0	0	0	0	0	0
Micro nutrient	0	0	0	0	0	0	0	0	0	U	0	0	0
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
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
IV. Livestock Proc	luction and Mana	gement											
Dairy		-											
Management	0	0	0	0	0	0	0	0	0	0	0	0	0
Poultry													
Management													
Piggery			c.						c.			-	
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

					No.	of Particip	ants						
			Other			SC			ST		6	Frand Tota	al
Thematic Area	No. of Courses	Μ	F	Т	Μ	F	Т	Μ	F	Т	Μ	F	Т
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
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
V. Home Science/	Women empowern	nent											
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

					No.	of Particip	ants						
			Other			SC			ST		6	Frand Tota	al
Thematic Area	No. of Courses	Μ	F	Т	Μ	F	Т	Μ	F	Т	Μ	F	Т
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
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
VI. Agril. Enginee	ring												
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

					No.	of Particip	ants						
			Other			SC			ST		6	Frand Tota	al
Thematic Area	No. of Courses	Μ	F	Т	М	F	Т	Μ	F	Т	Μ	F	Т
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
ΓΟΤΑL	0	0	0	0	0	0	0	0	0	0	0	0	0
VII. Plant Protecti	ion												
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
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
VIII. Fisheries													
Integrated fish													
Farming	0	0	0	0	0	0	0	0	0	0	0	0	0
Carp breeding	~	~			<u> </u>		~			~			
and hatchery													
management	0	0	0	0	0	0	0	0	0	0	0	0	0

					No.	of Particip	ants						
			Other			SC			ST		G	Frand Tot	al
Thematic Area	No. of Courses	Μ	F	Т	Μ	F	Т	Μ	F	Т	Μ	F	Т
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	0	0	0	0	0	0	0	0	0	0	0	0	0
freshwater prawn	0	0	0	0	0	0	0	0	0	0	0	0	0
Breeding and													
culture of	0	0	0	0	0	0	0	0	0	0	0	0	0
ornamental fishes Portable plastic	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	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0	0
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		0	0	0		<u> </u>	0	<u> </u>	0	0	6		_
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
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
IX. Production of	Inputs at site												
Seed Production	0	0	0	0	0	0	0	0	0	0	0	0	0

					No.	of Particip	ants						
			Other			SC			ST		6	Frand Tota	al
Thematic Area	No. of Courses	Μ	F	Т	Μ	F	Т	Μ	F	Т	Μ	F	Т
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
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
X. Capacity Build	ing and Group Dy	namics						-					-
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

					No	. of Partic	ipants						
			Other			SC			ST		(Grand Tot	al
Thematic Area	No. of Courses	Μ	F	Т	Μ	F	Т	Μ	F	Т	Μ	F	Т
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	0	0	0	0	0	0	0	0		0	0	0	0
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
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
XI Agro-forestry	1	-									_		
Production													
technologies	0	0	0	0	0	0	0	0	0	0	0	0	0
Nursery													
management													
Integrated	0	0	0	0	0	0	0	0	0	0	0	0	0
Farming Systems	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0
XII. Others (Pl. S												1	I
GKMS	18	288	36	324	36	72	108	72	36	108	396	144	540
SUB TOTAL	18	288	36	324	36	72	108	72	36	108	396	144	540
TOTAL	54	864	108	972	140	184	324	184	140	324	1188	432	162
Rural youth													
					No. of I	Participar	nts						
Thematic	No. of	Oth				SC			ST		G	rand Tota	al
Area	Courses M	[F]		Μ	F	Т	Μ	F	Т	Μ	F	Т
Mushroom													
Production	0 0	0	0)	0	0	0	0	0	0	0	0	0
Bee-keeping					<u>~</u>		0			0	0	0	0
				,			0			U	U	U	0
Integrated													_
farming	0 0	0	0	`	0	0	0	0	0	0	0	0	0

					No.	of Particip	oants						
Thematic	No. of		Other			SC			ST		G	Frand Tot	al
Area	Courses	Μ	F	Т	Μ	F	Т	Μ	F	Т	Μ	F	Т
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	0	0	0	0	0	0	0	0	0	0	0	0	
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

					No.	of Partici _f	oants						
Thematic	No. of		Other			SC			ST	_	6	Frand Tot	al
Area	Courses	Μ	F	Т	Μ	F	Т	Μ	F	Т	Μ	F	Г
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		0											
technology	0	0	0	0	0	0	0	0	0	0	0	0	

						No. of F	Participar	nts						
Thematic	No. of		Other	•			SC			ST		G	rand Tot	al
Area	Courses	Μ	F	J	- -	Μ	F	Т	Μ	F	Т	Μ	F	Т
Fry and fingerling rearing	0	0	0	0	,	0	0	0	0	0	0	0	0	0
Small scale processing	0	0	0	C		0	0	0	0	0	0	0	0	0
Post Harvest		16	2			2		6		2	6	22	8	30
Technology Tailoring and Stitching	1 0	0	0			0	4 0	0	4	0	0	0	<u> </u>	0
Rural Crafts	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
Others if any (ICT												Ŭ		0
application in agriculture)	0	0	0	C)	0	0	0	0	0	0	0	0	0
TOTAL	10	160	20	18		20	40	60	40	20	60	220	80	300
Extension funct Thematic Are		. of rses)ther			of Partici SC			ST			Frand To	
			Μ	F	Т	Μ	F	Т	Μ	F	Т	Μ	F	Т
Productivity enhancement in f 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
Integrated Nutrie management	ent 2	2	32	4	36	4	8	12	8	4	12	44	16	60

Thematic Area	No. of				No. (of Particip	oants				G	rand Tot	al
	Courses		Other			SC			ST				
		Μ	F	Т	Μ	F	Т	Μ	F	Т	Μ	F	Τ
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				No.	of Particij	pants				G	rand Tot	al
	Courses		Other			SC			ST				
		Μ	F	Т	Μ	F	Т	Μ	F	Т	Μ	F	Т
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
TOTAL	8	128	16	144	16	32	48	32	16	48	176	64	240

4. Frontline demonstration to be conducted*

Sl. No.	Сгор	Variety	Thrust Area	Thematic Area	Season:	Farming Situation:
1.	Jute	Jute (VarJRO- 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

SI.	Crop &	Proposed	Technology	Parameter (Data)	in		Cultivat Rs.)/ha	tion		No	o. of fa	armo	ers / de	emons	trati	on	
No.	variety /	Area (ha)/	package for	relation	to	Name of			S	С	S	Γ	Oth	ner		Total	L
110.	Enterprises	Unit (No.)	demonstration	technology		Inputs	Demo	Local	Μ	F	Μ	F	М	F	м	F	Т
				demonstrate	d	mputs			IVI	Ľ	IVI	Ľ	IVI	Ľ	IVI	Ľ	1
1	Jute (Var	10.00	Seed + Seed	Yield	&	Seed +	10000	8000	0	0	17	8	0	0	17	8	25
	JRO-524,		Treatment	Economics		Seed											
	JBO 2003 H)					Treatment											

FLD (Front Line Demonstration) 2:-

Crop: Paddy Thrust Area: Promotion of HYV paddy Thematic Area: ICM Season: Kharif 23-24 Farming Situation: Low land

SI.	Crop &	Proposed	Technology	Parameter (Data)	in		Cultiva Rs.)/ ha	tion		N	o. of f	arme	ers / de	emons	trati	on	
No.	variety /	Area (ha)/	package for	relation	to	Name of			S	C	S	Γ	Oth	ner		Total	L
110.	Enterprises	Unit (No.)	demonstration	technology		Inputs	Demo	Local	М	F	М	F	Μ	F	М	F	т
				demonstrate	ed	inputs			IVI	Г	IVI	Г	IVI	Г	IVI	Г	1
2	Paddy (Var	5.00	Seed + Seed	Yield	&	Seed +	10000	8000	0	0	15	10	0	0	15	10	25
	Sabour		Treatment	Economics		Seed											
	Sampan)					Treatment											

FLD (Front Line Demonstration) 3:-

Crop: Paddy Thrust Area: Soil health management Thematic Area: INM Season: Kharif 23- 24 Farming Situation: Medium /Low land

	51.	Crop &	Proposed	Technology	Parameter (Data)	in		Cultiva (s.) / ha	tion		N	o. of f	arm	ers / de	mons	trati	0 n	
	No.	variety /	Area (ha)/	1 0	relation	to	Name of			S	2	S	Г	Oth	er		Total	
1		Enterprises	Unit (No.)	demonstration	technology demonstrate	ed	Inputs	Demo	Local	Μ	F	Μ	F	М	F	Μ	F	Т
3	3	Paddy (BGA)	10.00	BGA Culture	Yield	&	BGA	10000	-	0	0	20	5	0	0	20	5	25
		if available			Economics		Culture											

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

				Parameter	Cost of Cu	iltivatio	n (Rs.)		No	o. of f	arme	ers / de	mons	trati	on	
SI.	Crop &	Proposed	Technology	(Data) in				S	2	S	Г	Oth	ler		Total	
No.	variety /	Area (ha)/	package for	relation to	Name of	Demo	Local									
110.	Enterprises	Unit (No.)	demonstration	technology	Inputs	Demo	LUCAI	Μ	F	Μ	F	\mathbf{M}	F	Μ	F	Τ
				demonstrated												
4	Wheat	5.00	Seed & Seed	Yield &	Seed +	37000	28000	0	0	15	10	0	0	15	10	25
	(Variety-		treatment	Economics	Seed											
	BHU 25,				Treatment											
	BHU 31)															

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

	Crop &	Proposed	Technology	Parameter (Data) i	in	Cost of Cu	ltivatio	n (Rs.)	S		o. of f SZ		ers / de Otl			-	
Sl. No.	variety / Enterprises	Area (ha)/ Unit (No.)	package for demonstration	relation t	to	Name of Inputs	Demo	Local	SC M	F	M	F	M	F	Μ	<u>Total</u> F	T
				demonstrated	1												
5	Vegetable	1.0	Seed & Seed	Yield &	&	Seed +	37000	28000	0	0	15	10	0	0	15	10	25
	seed		treatment	Economics		Seed											
					1	Treatment											

FLD (Front Line Demonstration) 6:-

Crop: Makhana Thrust Area: Makhana production Thematic Area: Varietal evaluation Season: Rabi 23-24 Farming Situation: Low land

ΙΓ					Parameter		Cost of Cu	ltivatior	n (Rs.)		No). of f	arme	ers / de	mons	tratio	on	
	SI.	Crop &	Proposed	Technology	(Data)	in				SC	7)	SI	Γ	Oth	ler	•	Total	L
	No.	variety /	Area (ha)/	package for	relation	to	Name of	Demo	Local	М	Б	М	Б	N	F	N	Б	T
		Enterprises	Unit (No.)	demonstration	technology demonstrate	h	Inputs			IVI	ľ	IVI	r	Μ	r	Μ	F	
	6	Makhana	3.00	Sabour	Yield	.u &	Makhana			0	0	15	10	0	0	15	10	25
	U	maxialla	5.00	Makhana-1	Economics	u	Seed			V	v	15	10	U	V	15	10	23

FLD (Front Line Demonstration) 7:-

Crop: Foxtail Millet Thrust Area: Millet promotion Thematic Area: ICM Season: Rabi 23-24 Farming Situation: Upland / medium land

ΙΓ		variety / Area (h		1 0	Parameter		Cost of Cultivation (Rs.)			No. of farmers / demonstration								
	SI.		Proposed		relation to	in		Demo	Local	SC		ST		Other		Total		
	No.		Area (ha)/ Unit (No.)			to				М	F	М	F	М	F	Μ	F	Т
		Enterprises			demonstrate	ed	inputs											
	7	Foxtail Millet	3.00	RAU 5	Yield	&	Seed	-	-	0	0	15	0	0	0	15	0	15
					Economics													

FLD (Front Line Demonstration) 8:-

Crop: Mushroom production **Thrust Area:** Mushroom production **Thematic Area:** Mushroom production **Season:** Rabi 23-24 **Farming Situation:** -

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

Activity	Title of Activity	No.	Clientele	Duration	Venue On/Off	Ря		. of ipan	ts					
						S		S		Otł	ıer	To	tal	
						M	F	M	F	M	F	M	F	Т
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 /	Variety / Type	Period		Details of Production							
Enterprise	Type	From Jan 2023 to Dec 2023		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 /	Variety / Type	Period From	Area (ha.)	No. of farmers		Details of	f Producti	ion	
Enterprise		to 			Type of Produce	Expected Production(q)	Cost of inputs (Rs.)	Expected Gross income (Rs.)	Expect ed Net Income (Rs.)

Extension Activities

Sl.	Activities/ Sub-	No. of	Farm	ers			Extens	sion Offici	als	Total		
No	activities	activities proposed	М	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

(On rai							
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 syste	em: Medium / Low land					
VIII.	Technology for Test	ing: 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.	XII. Technology Options:						
	 Farmers' Practice :-RDF (150:60:40 kg N:P₂O₅:K₂O/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 						
XXI XXI XXV XXV XXV XXV	V. Unit Size 7. No of Replica 71. Unit Cost 71. Total Cost 71. Monitoring I 71. Initial and fin 71. <u>Yield data</u>	: Rs. 800/- : Rs. 8000/- indicator: nal soil nutrient status (pH, OC, NPK) ive tillers / sq m rt (g)					
XIX.							

Soil Science (1- 3, Sept. 2022) at BAU Sabour, Bhagalpur.

FT (On Farm Trial) 2, Agronomy,

•	a	
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 syste	em: Medium / Low land
VIII	. Technology for Test	ing: Application of Nano urea at two growth stages in paddy
IV	Existing Prostico	• No application of Nano Uroa in groups by the formers
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.
VII	Technology Ontion	

XII. Technology Options:

Farmers' Practice:- RDF (120:60:40 kg N:P₂O₅:K₂O/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	: $10 \text{ m x } 20 \text{ m} = 200 \text{ sq m in each technical option}$				
XV.	No of Replications	: 10				
XVI.	Unit Cost	: Rs. 800/-				
XVII.	Total Cost	: Rs. 8000/-				
XVIII	. Monitoring Indicate	or:				
	Initial and final soil nutrient status (pH, OC, NPK)					
	<u>Yield data</u>					
	No. of effectiv	ve tillers / sq m				
	1000 grain wt	(g)				
	Yield (Q/ha)					
	Economics					
XIX.	XIX. Source of Technology: In House, OFT Finalization workshop on Agronomy & Soil					
	Science (1-3, Sept. 2	2022) at BAU Sabour, Bhagalpur.				

OFT (On Farm Trial) 3, Agronomy

<u>OFT (</u>	On Farm Trial) 3, A	gronomy					
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 syste	em: Medium to up land					
VIII.	Technology for Test	ing: 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 Opt	tion 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					
	Unit Size	: $200m^2$					
	No of Replications	:10					
	Unit Cost	: Rs. 800					
	Total Cost I. Monitoring Indicat	: Rs. 8000/-					
ΛΥΠ	e	and final soil nutrient status (pH, OC, NPK)					
	<u>Yield</u>	-					
	No. of effective tillers / sq m						
		rain 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 syste	m: Irrigated medium land				
VIII.	Technology for Test	ing: 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					
	Technica	al 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				
XVII	I. Monitoring Indicate	or:				
		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.	XIX. Source of Technology: CSAUAT, Kanpur					

OFT (On Farm Trial) 5, Horticulture

I.	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 syste	•					
VIII.	Technology for Test	ing: 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						
	Techn	ical Option II :- Use of Boron 1.5 kg / ha					
XIII.	Critical Inputs	: Boron					
XIV.	Unit Size	: 100 m ²					
XV.	No of Replications	: 10					
XVI.	Unit Cost	: Rs. 300/-					
XVII.	Total Cost	: Rs. 3000/-					
XVIII	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	No	. of	Farn	ners	5	No. of	No. of SHC				
	Samples	SC		ST		Other		Total			Villages	distributed
		Μ	F	Μ	F	Μ	F	Μ	F	T	-	
Soil Samples	650	-	-	-	-	-	-	-	-	-	-	-
Water Samples												
Other (Please specify)												
Total												

14. Fund requirement and expenditure (Rs.)*

Heads	Expenditure (last year) (Rs.) up to 31.03.2022	Expected fund requirement (Rs.)
Total * Any additional requirement may	· · · · · · · · · · · · · · · · · · ·	

* 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 overreliance 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 Sesbanea, 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 Sesbanea 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.