ACTION PLAN

(JANUARY, 2023 - DECEMBER, 2023)

Submitted At

Zonal Workshop at Kalimpong

7th - 9th June, 2023

Submitted By

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Contents

ACTION PLAN - 2023

(January 2023 to December 2023)

1. Name of the KVK:

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2. Name of host organization:

Address	Telephone		E mail
	Office	FAX	
Visva-Bharati, Santiniketan, Dist. -Birbhum, Pin- 731235, West Bengal	03463-262751 to 262756	03463-262672	Vice-Chancellor: vice-chancellor@visva-bharati.ac.in Registrar: registrar@visva-bharati.ac.in Principal, PSB (Institute of Agriculture): akbarikpsbvb@rediffmail.com

3. Training Programmes to be organized (January 2023 to December 2023)

(a). Farmers / Farm Women:

Thematic Area	Title of the Programme	Venue On/Off	No.	Duration	Tentative Date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
IPM	Diseases of pest: Pumpkin and Bitter Gourd	OFF	01	03	Jan, 2023	10	00	20	00	20	00	50	0	50
Disease Management	Identification and improvement of lower conception rate of bovine	ON	01	02	-do-	09	00	12	00	09	00	30	0	30
Composite Fish Culture and Fish Disease	Prevention and Control Method of Various Fish Diseases	ON	01	03	-do-	08	00	15	00	07	00	30	0	30
Management of FPOs and SHGs	Development of Marketing Channel for FPOs and SHGs Products	OFF	01	02	-do-	14	00	20	00	16	00	50	0	50
Seed Production	Recent technologies for seed production of summer pulses	ON	01	04	Feb, 2023	08	00	05	00	17	00	30	0	30
IPM	Pest, Disease Management on Summer Black Gram, Green Gram and Ground Nut	OFF	01	03	-do-	10	00	20	00	20	00	50	0	50
Integrated Farming	Role of Animal Husbandry in Integrated Fish Farming	ON	01	04	-do-	08	00	12	00	10	00	30	0	30
Sheep Farming	Improvement of Sheep farming for enhanced income generation	ON	01	02	-do-	09	00	12	00	00	09	21	9	30
Entrepreneurship Development	Development of Farmers Club as Business Facilitators (BF)	ON	01	02	-do-	08	00	12	00	10	00	30	0	30
Feed Management	Low-cost feed preparation for better production performance of livestock	ON	01	02	-do-	09	00	12	00	09	00	30	0	30
Group Dynamics	Concept, Formation and Functioning of Joint Liability Group	ON	01	03	April, 2023	08	02	12	04	04	00	24	6	30
Disease Management	Identification and control of diseases in poultry and their prophylactic measures	ON	01	02	-do-	09	00	00	12	09	00	18	12	30
Crop Diversification	Specific Agro technology for cultivation of Ekangi (*K. galanga*) in rainfed monocropped situation	ON	01	04	May, 2023	09	00	04	00	17	00	30	0	30
Production Technology	Improved Cultivation Practices of Finger Millet and Pearl Millet	ON	01	04	-do-	11	00	06	00	33	00	50	0	50
IPM	Appropriate IPM for sustainable agriculture	ON	01	03	-do-	08	00	12	00	10	00	30	0	30
Disease Management	Zoonotic diseases and public health	ON	01	02	-do-	09	00	15	00	06	00	30	0	30
Market led Extension	Formation of Farmers Producers Organization (FPO)	ON	01	02	-do-	08	00	12	00	10	00	30	0	30
Institutional Credit Supply	Mechanism and Use of Kisan Credit Card (KCC)	OFF	01	03	-do-	11	00	20	00	19	00	50	0	50
Resource Conservation Technology	Direct seeding technologies of rice	ON	01	04	June, 2023	10	00	05	00	15	00	30	0	30
IPM	Integrated Pest, Disease and Weed Management in *Kharif* Paddy	ON	01	03	-do-	07	00	15	00	08	00	30	0	30
Disease management	Identification and control of diseases in Dairy Animal with their prophylactic measures	ON	01	04	-do-	09	00	15	00	06	00	30	0	30

Group Dynamics (Farmers' Organization)	Formation of Farmers' Club	OFF	01	02	-do-	12	00	20	00	18	00	50	0	50
Group Dynamics (Farmers' Organization)	Formation of Farmers' Interest Groups	OFF	01	02	-do-	12	00	20	00	18	00	50	0	50
Soil Health Management	Application of azolla and Dhaincha for green manuring in Kharif paddy	ON	01	04	July, 2023	09	00	06	00	15	00	30	0	30
Seed Production	Participatory Paddy Seed Production Technologies in Kharif (Phase – I)	ON	01	03	-do-	09	00	06	00	15	00	30	0	30
Cultivation of Vegetables	Improved Package and Practices of Kharif Seasonal Vegetables	ON	01	02	-do-	00	00	30	00	00	00	30	0	30
IPM	Integrated Pest, Disease and Weed Management in Different Millets	ON	01	03	-do-	08	00	12	00	10	00	30	0	30
Women and childcare	Nutritional Requirement of Pre-School Children	OFF	01	01	-do-	00	20	00	20	00	10	0	50	50
Dairy Management	Establish, Maintenance and Management of Small-Scale Dairy Unit	ON	01	04	-do-	05	00	10	00	10	00	25	0	25
Management in Farm Animal	Back Yard Farming Improvement with Utilization of Natural Resources	ON	01	02	-do-	08	00	12	00	10	00	30	0	30
Insurance	Evolution of Crop Insurance (CI) and Pradhan Mantri Fasal Bima Yojona (PMFBY)	ON	01	02	-do-	10	00	12	00	08	00	30	0	30
Soil Health and Fertility Management	Interpretation of Soil Health Card for nutrient management of Kharif paddy	ON	01	04	Aug, 2023	08	00	06	00	16	00	30	0	30
IPM	Sustainable Pest and disease management in early Cauliflower, Broccoli, Cabbage and other Rabi vegetables	OFF	01	03	-do-	10	00	20	00	20	00	50	0	50
Value addition	Value addition to livestock product	ON	01	01	-do-	09	00	12	00	00	09	21	9	30
Disaster Management	Disaster Management with Special Reference to Agriculture and Related Sectors	ON	01	03	-do-	10	00	12	00	08	00	30	0	30
Market led Extension	Marketing Information and Market Linkage of Vegetable Farmers	ON	01	03	-do-	10	00	12	00	08	00	30	0	30
Seed Production	Participatory Paddy Seed Production Technologies in Kharif (Phase – II)	ON	01	03	Sep, 2023	09	00	06	00	15	00	30	0	30
Management of Problematic Soil	Acid Soil Management in Rabi Seasonal Vegetables	ON	01	02	-do-	00	00	30	00	00	00	30	0	30
IPM	Pest, Disease Management on Rabi Seasonal Oil Seeds and Pulses	OFF	01	03	-do-	10	00	20	00	20	00	50	0	50
Duck Farming	Commercial Duck rearing both for Meet and Egg Purpose	OFF	01	02	-do-	00	14	00	20	00	16	0	50	50
Hatchery Management and Culture of Fresh Water Prawn	Fresh Water Giant Prawn Culture with Indian Major Carps (IMC) and Exotic Carps	ON	01	05	-do-	09	00	12	00	09	00	30	0	30
Composite Fish Culture and Fish Disease	Improved Disease Management Practices in Fresh Water Aquaculture	ON	01	03	-do-	07	00	15	00	08	00	30	0	30
Market Led Extension	Marketing Information and Market Linkage of Pulse and Oilseed Farmers	ON	01	03	-do-	10	00	12	00	08	00	30	0	30
IPM	IPM on Solanaceous Crops like Potato, Tomato, Chilli etc.	ON	01	03	Oct, 2023	08	00	12	00	10	00	30	0	30
Goat Farming	Scientific Goat Rearing for better income generation	OFF	01	02	-do-	14	00	00	20	00	16	14	36	50

Integrated Farming System	Contribution of different suitable components for successful IFS	ON	01	04	-do-	08	00	12	00	10	00	30	0	30
Poultry	Commercial poultry farming for enhanced income	ON	01	02	-do-	08	00	00	12	10	00	18	12	30
Household Food Security	Nutrition Gardening	ON	01	02	-do-	00	05	00	25	00	00	0	30	30
Income Generation activities for empowerment of rural women	Training on Batik Work	ON	01	07	-do-	00	08	00	00	00	12	0	20	20
Institutional Credit Flow Mechanism	Linking of Agriculture Infrastructure Fund (AIF) with Co-operatives, FPOs and FPCs	OFF	01	02	-do-	12	00	20	00	18	00	50	0	50
IPM	Pest control on Wheat, Sugarcane and High Value Vegetables like French Bean, Capsicum etc.	OFF	01	03	Nov, 2023	10	00	20	00	20	00	50	0	50
Women and childcare	Nutritional Requirement of Pre-School Children	OFF	01	01	-do-	00	20	00	20	00	10	0	50	50
Awareness Generation on Nutrition	Design of Low Cost, High Nutritious Diet for Vulnerable Group	OFF	01	01	-do-	00	15	00	20	00	15	0	50	50
Piggery Management	Scientific Piggery Management for improved livelihood	OFF	01	02	-do-	15	00	00	30	05	00	20	30	50
Carp Fry and Fingerling Rearing	Scientific Method of Carp Fry and Fingerling Rearing	ON	01	04	-do-	06	00	11	00	13	00	30	0	30
Fish feed preparation and application	Preparation of Balanced Fish Feed from Low-Cost Ingredients	ON	01	04	-do-	05	00	12	00	13	00	30	0	30
Feed Management	Quality Fodder Cultivation	ON	01	01	Dec, 2023	09	00	12	00	09	00	30	0	30
Production of Bio- Pesticides and Seed Treatment of Various Crops	Identification of Different Bio Pesticides and Seed Borne Diseases and their Treatments	ON	01	03	-do-	08	00	12	00	10	00	30	0	30
Group Dynamics (Micro Finance)	Formation of Farmers' Producers' Organizations (FPOs) based on successful and functional Self-Help Groups (SHGs)	OFF	01	03	-do-	15	00	20	00	15	00	50	0	50
Insurance	Concept, Functioning and Use of Pradhan Mantri Fasal Bima Yojona (PMFBY)	ON	01	02	-do-	10	00	12	00	08	00	30	0	30
Income generation through Animal Science	Ornamental bird rearing	ON	01	2	-do-	10	00	12	00	08	00	30	0	30
Total			**61**	**169**		**495**	**84**	**696**	**183**	**620**	**97**	**1811**	**364**	**2175**

(b) Rural Youths

Thematic Area	Title of the Programme	Venue (On/ Off)	No.	Duration	Tentative date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Mushroom Production	Scientific mushroom and spawn production for income generation.	ON	01	15	Jan, 2023	10	00	10	00	10	00	30	00	30
Bee Keeping	Small scale Bee keeping practices for income generation	ON	01	15	Feb, 2023	13	00	06	00	11	00	30	00	30
Bee Keeping	Honeybee Culture for small scale honey production unit	ON	01	15	March, 2023	08	00	06	00	16	00	30	00	30
Production of Organic Inputs for Natural Farming	Preparation and use of Inputs like Beejamrita, Jeebamrita etc.	ON	01	15	March, 2023	20	00	04	00	11	00	35	00	30
Goat Rearing	Scientific goat rearing	ON	01	15	April, 2023	15	00	04	00	11	00	30	00	30
Para extension workers	Agricultural Extension service provider	ON	01	15	June, 2023	15	00	04	00	11	00	30	00	30
Poultry Farming	Commercial broiler and layer farming	ON	01	15	Sep, 2023	15	00	09	00	06	00	30	00	30
Production of Organic Inputs	Preparation and use of organic inputs like Vermicompost, Azolla etc.	ON	01	15	Nov, 2023	20	00	04	00	11	00	35	00	35
Total			08			**106**	**00**	**47**	**00**	**87**	**00**	**240**	**00**	**240**

(c). Extension Functionaries

Thematic Area	Title of the Programme	Venue (On/ Off)	No.	Duration	Tentative Date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Crop Diversification	Natural Farming for Sustainable Agriculture	ON	01	01	March, 2023	12	00	08	00	20	00	40	00	40
Capacity building for ICT application	Governmental support for agriculture and related sector using ICT tools	ON	01	01	July, 2023	12	00	08	00	20	00	40	00	40
Integrated Pest Management (IPM)	Storage pest and their management	ON	01	01	-do-	12	00	08	00	20	00	40	00	40
Management of Farm Animals	Refreshment Training for "Pranibandhus" and "Pranimitras"	ON	01	01	-do-	12	00	08	00	20	00	40	00	40
Integrated Pest Management (IPM)	Strategic pest management for Natural Farming	ON	01	01	Sep, 202	12	00	08	00	20	00	40	00	40
Productivity Enhancement in Field Crops with Millets	Intercropping Systems with Millets to boost up total productivity	ON	01	01	Nov, 2023	12	00	08	00	20	00	40	00	40
Management of Farm Animals	Genetic Resource Conservation of Domestic Animals and Poultry	ON	01	01	Dec, 2023	12	00	08	00	20	00	40	00	40
Total			**07**			**84**	**00**	**56**	**00**	**140**	**00**	**280**	**00**	**280**

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
I. Crop Production													
Weed Management													
Resource Conservation Technologies	1	15	0	15	10	0	10	5	0	5	30	0	30
Cropping Systems													
Crop Diversification	1	17	0	17	9	0	9	4	0	4	30	0	30
Integrated Farming													
Water management													
Seed production	3	47	0	47	26	0	26	17	0	17	90	0	90
Nursery management													
Integrated Crop Management													
Fodder production													
Production of organic inputs													
Others, (cultivation of crops)													
TOTAL	**5**	**79**	**0**	**79**	**45**	**0**	**45**	**26**	**0**	**26**	**150**	**0**	**150**
II. Horticulture													
a) Vegetable Crops													
Integrated nutrient management													
Water management													
Enterprise development													
Skill development													
Yield increment													
Production of low volume and high value crops													
Off-season vegetables													
Nursery raising													
Exotic vegetables like Broccoli													
Export potential vegetables													
Grading and standardization													
Protective cultivation (Green Houses, Shade Net etc.)													
Cultivation of Vegetable	1	00	00	00	00	00	00	30	00	30	30	0	30
TOTAL	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**30**	**0**	**30**	**30**	**0**	**30**
b) Fruits													
Training and Pruning													
Layout and Management of Orchards													
Cultivation of Fruit													
Management of young plants/orchards													
Rejuvenation of old orchards													
Export potential fruits													
Micro irrigation systems of orchards													
Plant propagation techniques													
Others, if any (INM)													
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
c) Ornamental Plants													
Nursery Management													
Management of potted plants													
Export potential of ornamental plants													
Propagation techniques of Ornamental Plants													
Others, if any													
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
d) Plantation crops													
Production and Management technology													
Processing and value addition													
Others, if any													
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
e) Tuber crops													
Production and Management technology													
Processing and value addition													
Others, if any													
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
f) Spices													

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													
Processing and value addition													
Others, if any													
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
g) Medicinal and Aromatic Plants													
Nursery management													
Production and management technology													
Post-harvest technology and value addition													
Others, if any													
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
III. Soil Health and Fertility Management													
Soil fertility management													
Soil and Water Conservation													
Integrated Nutrient Management	1	16	0	16	8	0	8	6	0	6	30	0	30
Production and use of organic inputs	1	15	0	15	9	0	9	6	0	6	30	0	30
Management of Problematic soils	1	00	00	00	00	00	00	30	00	30	30	00	30
Micronutrient deficiency in crops													
Nutrient Use Efficiency													
Soil and Water Testing	1	33	0	33	11	0	11	6	0	6	50	0	50
Others, if any													
TOTAL	**4**	**64**	**0**	**64**	**28**	**0**	**28**	**48**	**0**	**48**	**140**	**0**	**140**
IV. Livestock Production and Management													
Dairy Management	1	10	0	10	5	0	5	10	0	10	25	0	25
Poultry Management	1	10	0	10	8	0	8	00	12	12	18	12	30
Piggery Management	1	5	00	5	15	00	15	00	30	30	20	30	50
Rabbit Management													
Disease Management	4	30	0	30	36	0	36	42	12	54	108	12	120
Feed management	2	18	00	18	18	00	18	24	00	24	60	00	60
Production of quality animal products	1	00	09	09	09	00	09		12	00	21	09	30
Goat farming	1	00	16	16	14	00	14	00	20	20	14	36	50
Integrated farming system	1	10	0	10	8	0	8	12	0	12	30	0	30
Quail farming													
Sheep farming	1	0	9	9	9	0	9	12	0	12	21	09	30
Duck farming	1	00	16	16	00	14	14	00	20	20	00	50	50
Management in farm animal & others	1	08	00	18	12	00	12	24	10	00	30	00	30
Ornamental bird rearing	1	08	00	08	10	00	18	12	00	12	30	00	30
TOTAL	**16**	**99**	**50**	**159**	**144**	**14**	**166**	**136**	**116**	**206**	**377**	**158**	**535**
V. Home Science/Women empowerment													
Household food security by kitchen gardening and nutrition gardening	1	00	00	00	00	05	05	00	25	25	00	30	30
Design and development of low/minimum cost diet													
Designing and development for high nutrient efficiency diet													
Minimization of nutrient loss in processing													
Gender mainstreaming through SHGs													
Storage loss minimization techniques													
Enterprise development													
Value addition													
Income generation activities for empowerment of rural Women	1	00	12	12	00	08	08	00	00	00	00	20	20
Location specific drudgery reduction technologies													
Rural Crafts													
Capacity building													
Women and childcare	2	00	20	20	00	40	40	00	40	40	00	100	100
Awareness generation on nutrition	1	00	15	15	00	15	15	00	20	20	00	50	50
TOTAL	**5**	**0**	**47**	**47**	**0**	**68**	**68**	**0**	**85**	**85**	**0**	**200**	**200**
VI. Agril. Engineering													
Installation and maintenance of micro irrigation systems													
Use of Plastics in farming practices													
Production of small tools and implements													
Repair and maintenance of farm machinery and implements													
Small scale processing and value addition													

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
Post-Harvest Technology													
Others, if any													
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
VII. Plant Protection													
Integrated Pest Management	4	58	0	58	35	0	35	67	0	67	160	0	160
Integrated Disease Management	4	70	0	70	38	0	38	72	0	72	180	00	180
Biocontrol of pests and diseases													
Production of bio control agents and bio pesticides	1	10	00	10	08	00	08	12	00	12	30	00	30
Others, if any	1	10	0	10	8	0	8	12	0	12	30	0	30
TOTAL	**10**	**148**	**0**	**148**	**89**	**0**	**89**	**163**	**0**	**163**	**400**	**0**	**400**
VIII. Fisheries													
Integrated fish farming													
Carp breeding and hatchery management													
Carp fry and fingerling rearing	1	13	00	13	06	00	06	11	00	11	30	00	30
Composite fish culture & fish disease	2	15	0	15	15	0	15	30	0	30	60	0	60
Fish feed preparation & its application to fishpond, like nursery, rearing & stocking pond	1	13	00	13	05	00	05	12	00	12	30	00	30
Hatchery management and culture of freshwater prawn	1	9	00	9	9	00	9	12	00	12	30	00	30
Breeding and culture of ornamental fishes													
Portable plastic carp hatchery													
Pen culture of fish and prawn													
Shrimp farming													
Edible oyster farming													
Pearl culture													
Fish processing and value addition													
Others, if any													
TOTAL	**5**	**50**	**0**	**50**	**35**	**0**	**35**	**65**	**0**	**65**	**150**	**0**	**150**
IX. Production of Inputs at site													
Seed Production													
Planting material production													
Bio-agents production													
Bio-pesticides production													
Bio-fertilizer production													
Vermi-compost production													
Organic manures production													
Production of fry and fingerlings													
Production of Bee-colonies and wax sheets													
Small tools and implements													
Production of livestock feed and fodder													
Production of Fish feed													
Others, if any													
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
X. Capacity Building and Group Dynamics													
Leadership development													
Group dynamics	4	55	00	55	47	02	49	72	04	76	174	6	180
Formation and Management of SHGs	1	16	0	16	14	0	14	20	0	20	50	0	50
Mobilization of social capital													
Entrepreneurial development of farmers/youths	1	10	0	10	8	0	8	12	0	12	30	0	30
WTO and IPR issues	1	18	0	18	12	00	12	20	00	20	50	00	50
Market led extension	3	26	0	26	28	00	28	36	00	36	90	00	90
Disaster Management	1	8	0	8	10	0	10	12	0	12	30	0	30
Insurance	2	16	00	16	20	00	20	24	00	24	60	00	60
Institutional Credit Supply	01	19	0	19	11	0	11	20	0	20	50	0	50
TOTAL	**14**	**168**	**0**	**168**	**150**	**2**	**152**	**216**	**4**	**220**	**534**	**6**	**540**
XI Agro-forestry													
Production technologies													
Nursery management													
Integrated Farming Systems	1	10	00	10	8	0	8	12	0	12	30	00	30
TOTAL	**1**	**10**	**0**	**10**	**8**	**0**	**8**	**12**	**0**	**12**	**30**	**0**	**30**
XII. Others (Pl. Specify)													
TOTAL	**61**	**618**	**97**	**715**	**499**	**84**	**583**	**696**	**205**	**901**	**1813**	**386**	**2199**

Rural youth

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	1	10	00	10	10	00	10	10	00	10	30	00	30
Bee-keeping	2	27	00	27	21	00	21	12	00	12	60	00	60
Integrated farming													
Seed production													
Production of organic inputs	2	22	00	22	40	00	40	08	00	08	70	00	70
Planting material production													
Vermi-culture													
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production													
Repair and maintenance of farm machinery and implements													
Nursery Management of Horticulture crops													
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Poultry farming	1	06	00	06	15	00	15	09	00	09	30	00	30
Sheep and goat rearing	1	06	00	06	15	00	15	09	00	09	30	00	30
Quail farming													
Piggery													
Rabbit farming													
Poultry production													
Ornamental fisheries													
Para vets													
Para extension workers	1	11	00	11	15	00	15	04	00	04	30	00	30
Composite fish culture													
Freshwater prawn culture													
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing													
Small scale processing													
Post-Harvest Technology													
Tailoring and Stitching													
Rural Crafts													
Enterprise development													
Others if any (Carp breeding and Hatchery management)													
TOTAL	**8**	**82**	**0**	**82**	**116**	**0**	**116**	**52**	**0**	**52**	**250**	**0**	**250**

Extension functionaries

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	1	20	00	20	12	00	12	08	00	08	40	00	40
Integrated Pest Management	2	40	00	40	24	00	24	16	00	16	80	00	80
Integrated Nutrient management													
Rejuvenation of old orchards													
Value addition													
Protected cultivation technology													
Formation and Management of SHGs													
Group Dynamics and farmers organization													
Information networking among farmers													
Capacity building for ICT application	1	20	00	20	12	00	12	08	00	08	40	00	40
Care and maintenance of farm machinery and implements													
WTO and IPR issues													
Management in farm animals	2	40	00	40	24	00	24	16	00	16	80	00	80
Livestock feed and fodder production													
Household food security													
Women and Childcare													
Low cost and nutrient efficient diet designing													
Production and use of organic inputs													
Gender mainstreaming through SHGs													
Crop intensification													
Crop diversification	1	20	00	20	12	00	12	08	00	08	40	00	40
TOTAL	**7**	**140**	**00**	**140**	**84**	**00**	**84**	**56**	**00**	**56**	**280**	**00**	**280**

4. Frontline demonstration to be conducted

FLD-1:

Crop: Green Manuring with Azolla

Thrust Area: Soil Management, **Thematic Area**: Soil health and fertility management.

Season: Pre-kharif, 2023

Farming Situation: Medium to low land with sandy loam soil, Supervisor (s): Dr. Subrata Mandal, Senior Scientist & Head and Sri Palash Ankure, Farm Manager

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
01.	Azolla in Kharif paddy	20 ha	Green manuring in kharif paddy	Growth, yield and economics of kharif paddy cultivation, Soil O.C status	Azolla Culture	30000	-	40	0	10	0	25	0	75	0	75

FLD-2:

Crop: Ekangi (*Kaempheria galanga*)

Thrust Area: Crop Diversification, **Thematic Area**: Cultivation Medicinal Plants

Season: Pre-kharif, 2023 **Farming Situation**: Medium to Up land with sandy loam soil, mono-cropped area,

Supervisor (s): Dr. Subrata Mandal, Senior Scientist & Head and Sri Palash Ankure, Farm Manager

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
02.	Ekangi	0.26 ha	Improved planting material with cultivation methods	Growth, yield and economics of Ekangi cultivation	Rhizomes of Ekangi	20000	-	10	0	5	0	5	0	20	0	20

FLD-3:

Crop: Kharif Rice

Thrust Area: Production Technology, **Thematic Area**: Varietal Replacement, **Season**: Kharif, 2023

Farming Situation: Medium to Low land with sandy loam soil, Supervisor (s): Dr. Subrata Mandal, Senior Scientist & Head and Sri Palash Ankure, Farm Manager

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
03.	Paddy	40 ha	New variety of Paddy Rani Dhan replacing the old variety MTU-7029	Growth, yield and economics of Kharif paddy cultivation	Seeds of new variety	45000	40000	60	0	20	0	40	0	120	0	120

FLD-4:

Crop: Brinjal

***Thrust* Area**: Production Technology, **Thematic Area**: Insect Pest Management, **Season**: Summer, 2023

Farming Situation: Medium land with sandy loam soil, Supervisor (s): Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)

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
04.	Brinjal	4 ha	Use of Pheromone with funnel trap to control brinjal fruit and shoot borer.	% Of damage, yield and cost benefit ratio	Pheromone with funnel trap	30000	60000	15	0	8	0	7	0	30	0	30

FLD-5:

Crop: Mango

Thrust Area: Production Technology, **Thematic Area**: Insect Pest Management, **Season**: Pre Kharif, 2023

Farming Situation: Up land with sandy loam soil, Supervisor (s): Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)

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
05.	Mango	4 ha	Use of Pheromone with funnel trap to control Mango fruit fly.	% Of damage, yield and cost benefit ratio	Pheromone with delta trap	15000	25000	15	0	8	0	7	0	30	0	30

FLD-6:

Crop: Kharif Rice

Thrust Area: Production Technology, **Thematic Area**: Seed treatment, **Season**: Kharif, 2023

Farming Situation: Medium to Low land with sandy loam soil, Supervisor (s): Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)

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
06.	Paddy	50 ha	*Trichoderma viridi* as paddy seed treating agent	Yield and economics of Kharif paddy cultivation	Seed treatment	5000	10000	15	0	8	0	7	0	30	0	30

FLD-7:

Crop: Elephant Foot Yam

Thrust Area: Crop Diversification, **Thematic Area**: Varietal replacement, **Season**: Kharif, 2023

Farming Situation: Medium to up land with sandy loam soil, monocropped area, Supervisor (s): Dr Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)

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
07.	Elephant Foot Yam	0.14 ha	Improved variety Bidhan Kusum	Corn size, yield and economics	Corn of EFY	25000	10000	10	0	5	0	5	0	20	0	20

FLD-8:

Crop: Drum Stick

Thrust Area: Crop Diversification, **Thematic Area**: Varietal replacement, **Season**: Kharif, 2023

Farming Situation: Up land with sandy loam soil, Supervisor (s): Dr Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)

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	Drumstick (Baromasia)	2000 plants	PKM-1 variety	Growth, yield and economics	Seeds of drumstick	12000	6000	30	0	10	0	20	0	60	0	60

FLD-9:

Crop: Finger Millet

Thrust Area: Production Technology, **Thematic Area**: New Introduction, **Season**: Kharif, 2023

Farming Situation: Rainfed up land with sandy loam soil, Supervisor (s): Dr. Subrata Mandal, Senior Scientist & Head and Sri Palash Ankure, Farm Manager

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
09.	Finger Millet	2 ha	Indravati	Growth, yield and economics	Seeds of Finger Millet	10,000	Nil	10	0	2	0	3	0	15	0	15

FLD-10:

Crop: Green Fodder

Thrust Area: Animal health, **Thematic Area**: Feed Management, **Season**: Kharif, 2023

Farming Situation: - Rainfed upland-medium land, Supervisor (s): Dr Madhuchhanda Khan, Subject Matter Specialist (Animal Science) and Dr. Subrata Mandal, Senior Scientist & Head

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
10.	Maize	3.0 ha	Improved Var,				-									
	Rice bean	1.0 ha	J 1106	Yield, economics	Seed	Collaborative		10	0	5	0	5	0	20	0	20
	Oat (Rabi)	1.0 ha	Bidhan-2	Yield, economics	Seed	-do-	-	10	0	5	0	5	0	20	0	20
			Kent	Yield, economics	Seed	5000.00	-	5	0	5	0	5	0	15	0	15

FLD-11:

Enterprise: Poultry

Thrust Area: Improved Livestock Production, **Thematic Area**: Diversification in livestock production **Season**: Post Kharif, 2023

Farming Situation: Semi Intensive system, **Supervisor (s):** Dr Madhuchhanda Khan, Subject Matter Specialist (Animal Science)

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
11.	Guinea Fowl	30Unit (10 no. of birds per unit)	Guinea Fowl	Body weight, Growth, economics	Guinea fowl	30000	-	18	12	0	0	0	0	18	12	30

FLD-12:

Enterprise: Poultry

Thrust Area: Improved Livestock Production

Thematic Area: Diversification in livestock production, **Season**: Post Kharif, 2023

Farming Situation: Semi intensive System, Supervisor (s): Dr Madhuchhanda Khan, Subject Matter Specialist (Animal Science)

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
12.	Poultry (Kaveri)	30 Unit (10 no. of birds per unit)	Introduction of Kaveri	Body weight, Growth, Egg laying, economics	Kaveri	30000	-	18	12	0	0	0	0	18	12	30

FLD-13:

Enterprise: Goat

Thrust Area: Improved Livestock Production, **Thematic Area**: Health Management, **Season**: Post Kharif, 2023

Farming Situation: Semi Intensive system, Supervisor (s): Dr Madhuchhanda Khan, Subject Matter Specialist (Animal Science)

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
13.	Goat	10 Unit (2 nos. of kid/Unit)	Doramectin@200 mg/Kg body weight SC at 3 months interval	Kid body weight, Oestrous, EPG, Kidding performance	Doramectin	3000	-	10	00	00	00	00	00	10	00	10

FLD-14:

Crop: Backyard Nutrition Garden

Thrust Area: Women empowerment, **Thematic Area**: Nutrition Management

Season: Rabi, 2023

Farming Situation: Irrigated medium land situation, Supervisor (s): Dr. Subrata Mandal, Senior Scientist & Head and Sri Palash Ankure, Farm Manager

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
14.	Backyard Nutrition Garden	0.2 ha	Improved high yielding varieties of rabi vegetables	Yield and economics	Seeds of vegetables	15000	5000	15	0	5	0	10	0	30	0	30

FLD-15:

Crop: Broccoli

Thrust Area: Production Technology, **Thematic Area**: Nutrient Management

Season: Rabi, 2023

Farming Situation: Irrigated medium land situation, Supervisor (s): Dr. Subrata Mandal, Senior Scientist & Head and Sri Palash Ankure, Farm Manager

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
15.	Broccoli	3 ha	Foliar spray of Boron-20 @ 2 ml/lt of water at 25 and 45 DAT	Yield and economics	Boron-20	1, 25,000 /ha	1,13000 /ha	40	0	10	0	25	0	75	0	75

FLD-16:

Enterprise: Participatory preparation of Extension Literature

Thrust Area: Empowerment of marginalized section, **Thematic Area**: Group dynamics.

Time: Jan. – Dec. 2023

Farming Situation: - Intensive cropping system, Supervisor (s): Dr Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)

NOTE: CFLD on Pulses and Oilseeds will be conducted as per allotment from ICAR-ATARI, Kolkata

Sl. No.	Enterprises	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
16.	Participatory preparation of Extension Literatures in Vernacular Languages	10 no.	Participatory preparation of Extension Literatures on seed production of Oilseeds and Pulses in Vernacular Languages	1. Percentage Change in Total Production. 2. Percentage Change in Productivity. 3. Percentage Change in Gross Cost. 4. Percentage Change in Gross Return. 5. Percentage Change in Net Return 6. Percentage Change in B: C Ratio	Preparation of Extension Literatures	10,000.00	-	5	0	3	0	2	0	10	0	10

Extension and Training activities under FLD:

Activity	Title of Activity	Venue On/Off	No.	Duration	Clientele	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Training	Layout and Planting of Elephant's Foot Yam including Management of Crop Field.	ON	01	01	PF	07	00	03	00	15	00	25	00	25
Training	Use of sex Pheromone with funnel trap to control Mango fruit fly.	ON	01	01	PF	15	00	8	00	7	00	30	00	30
Training	Establishment of Back Yard Nutrition Garden	ON	01	01	PF	00	05	00	20	00	05	00	30	30
Training	Cultivation of Barmasia Drumstick Var. PKM – 1	ON	01	01	PF	12	00	08	00	20	00	40	00	40
Training	Scientific Poultry Management	ON	01	02	PF	03	00	04	00	03	00	10	00	10
Training	Formation of Self-Help Groups for Accumulation of Social Capital and Increasing the Family Income	ON	03	01	PF	12	08	20	10	07	03	39	21	60
Training	Use of sex Pheromone with funnel trap to control brinjal fruit and shoot borer.	ON	01	01	PF	15	00	8	00	7	00	30	00	30
Training	Techniques of rearing Kadaknath	ON	01	01	PF	08	00	12	00	10	00	30	00	30
Training	Land Preparation and Sowing of Wheat	ON	01	04	PF	08	00	03	00	14	00	25	00	25
Training	Production Practices of different Improved Green Fodder Crops	ON	01	01	PF	04	00	04	00	12	00	20	00	20
Training	Techniques of Sheep rearing	ON	01	04	PF	03	00	05	00	02	00	10	00	10
Training	*Trichoderma viridi* as paddy seed treating agent for reducing fungal disease.	ON	01	01	PF	15	00	8	00	7	00	30	00	30

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

Name of the Crop / Enterprise	Variety / Type	Period From…… to ……	Area (ha.)	Details of Production				
				Type of Produce	Expected Production (quintals)	Cost of Inputs (Rs.)	Expected Gross Income (Rs.)	Expected Net Income (Rs.)
Rice	Rani Dhan, MTU-1153, CR- 800	July - Nov, 2023	2.5 ha	Seed	100 q	16,000.00	40,000.00	24,000.00
Blackgram	PU - 31	Aug - Oct, 2023	0.33 ha	Seed	5 q	8000.00	30000.00	22000.00
Lentil	WBL-77, L-4717	Oct,2023-Jan, 2024	0.46 ha	Seed	3 q	9000.00	30000.00	21000.00
Mustard	NRCHB-101, CS-60	Oct,2023-Jan, 2024	0.5 ha	Seed	4 q	10000.00	40000.00	30000.00
Sesame	Sabitri	Aug - Oct, 2023	0.5 ha	Seed	4 q	10000.00	40000.00	30000.00
Ekangi	*K. galanga*	May,2023- Jan, 2024	0.02 ha	Rhizome	2.5 q	5000.00	25000.00	20000.00
Azolla	*A. pinnata*	May - Aug, 2023	-	Azolla culture	5.0 q	5000.00	25000.00	20000.00
Elephant Foot Yam	Gajendra (Kavoor)	May - Dec, 2023	0.027 ha	Corm	1.5 q	5000.00	15000.00	10000.00
Vermicompost	-	Jan - Dec, 2023	-	Organic inputs	15 q	5000.00	15000.00	10000.00
Earth worms	-	Jan - Dec, 2023	-	Bio agents	5000 nos.	500.00	2500.00	2000.00
Veg. Seedlings	Brinjal, Tomato, Chili, Capsicum, Cabbage, Cauliflower, Broccoli etc.	Sep - Dec, 2023	-	Seedlings	50000 nos.	50000.00	200000.00	150000.00

b) Village Seed Production Programme

Name of the Crop / Enterprise	Variety / Type	Period From…… to ……	Area (ha.)	No. of Farmers	Details of Production				
					Type of Produce	Expected Production (quintals)	Cost of Inputs (Rs.)	Expected Gross Income (Rs.)	Expected Net Income (Rs.)
Rice	MTU-7029, IR – 36, IET – 4786, GB – 1, MTU – 1153, CR – 800, Rani Dhan	July-Dec, 2023	50 ha	65	Seed	240.00	3,36,000.00	7,20,000.00	3,84,000.00
Black Gram	WBU – 109, PU -31, WBU – 108	Aug-Nov, 2023	30 ha	75	Seed	318.00	1,45,000.00	25,44,000.00	23,99,000.00
Sesame	Sabitri	Aug - Nov, 2023	45 ha	100	Seed	410.00	2,50,000.00	32,80,000.00	30,30,000.00
Green Gram	Samrat, Panna, IPM-02-3	Feb - May, 2023	30 ha	60	Seed	266.00	1,75,000.00	19,53,000.00	21,28,000.00

6. Extension Activities

Nature of Extension Activity	No. of activities	Farmers				Extension Officials			Total		
		M	F	T	SC/ ST (% of total)	Male	Female	Total	Male	Female	Total
Field Day	19	480	180	660	52	50	21	71	530	201	731
KisanMela	01	180	145	325	58	15	03	18	195	148	343
KisanGhosthi											
Exhibition											
Film Show	01	105	25	130	51	05	02	07	110	27	137
Method Demonstrations											
Farmers Seminar											
Workshop											
Group meetings											
Lectures delivered as resource persons											
Advisory Services through Kisan Mobile SMS Services	12	5000	2000	7000	50	60	12	72	5060	2012	7072
Scientist's visit to farmers field	37	175	110	285	50	50	25	75	225	135	360
Farmers visit to KVK	124	259	159	418	31	106	48	154	365	207	572
Diagnostic visits											
Exposure visits	6	260	105	365	40	10	03	13	270	118	388
Ex-trainees Sammelan											
Soil health Camp											
Animal Health Camp	2	46	38	84	54	8	4	12	54	42	96
Agri mobile clinic											
Soil test campaigns											
Farm Science Club Conveners meet											
Self Help Group Conveners meetings											
Mahila Mandals Conveners meetings											
Celebration of important days (specify) (Soil Health Day)	01	70	34	104	51	04	02	06	74	36	110
Sankalp Se Siddhi											
Swatchta Hi Sewa											
MahilaKisan Divas	01	00	51	51	61	04	02	06	04	53	57
Any Other (Specify) Awareness Camp	01	52	09	61	51	05	02	07	57	11	68
Any Other (Specify) Farmers' Awareness Camps on DAMU	06	150	90	240	53	08	01	09	158	91	249
Total	**211**	**6777**	**2946**	**9723**		**325**	**125**	**450**	**7102**	**3071**	**10,173**

7. Revolving Fund (in Rs. Lakh)

Opening balance of 2022-23 (As on 31.12.2022)	Amount proposed to be invested during 2023-24	Expected Return
12.52168	**5.00**	**5.00**

8. Expected fund from other sources and its proposed utilization

Project	Source	Amount to be received. (Rs. in lakh)
Short Term Research on Prevention and Control of Piglet Anaemia by oral supplementation of Iron in sows and their piglets	ATMA, Birbhum	4.65 Lakh
Short Term Research on Fertilizer assessment of Finger Millet in Birbhum District	ATMA, Birbhum	2.00 Lakh
Diploma course in Agricultural Extension for Input Dealers	DAESI	16.00 Lakh
Rural Agricultural Work Experience (RAWE)	Public and Private Sector Universities with Agriculture Faculty	3.00 Lakh

9. On-farm trials to be conducted

OFT-1

Season	Summer, 2023 (2nd Year)
Title	Assessment of insecticide efficiency to control major insect pest of Green Gram
Problem Diagnosed	Flower drop is a common phenomenon in pulse crop in Birbhum District. Spraying of 'B' is not effective in most of the cases. Proper insecticide is also not tested in the fanner's field. So, yield is low due to low flower set and pod formation due to the attack of thrips.
Hypothesis	Application of proper insecticide may manage the thrips attack and reduce the flower drop and increase the yield & net return
Farmers practice	Generally, farmers do not use any insecticide to control thrips.
Micro-farming situation	Summer green gram is cultivated in irrigated medium land (Lateritic Soil). Soil is ready loam in texture having pH 5.8-6.2 in this district.
Production System	Paddy-Mustard/Potato-Green gram/Black Gram
Thematic area	Pest Management.
Objective	To study the effect of insecticide application to manage thrips and increase yield of Black Gram in summer season
Sowing Time	February –March,2023
Variety to be used	PDM 84-139
Details of Technology assessment	Farmers Practice: Application of conventional insecticides as required but not specific for thrips. Technology Option-I- Thiamethoxam 25% WG gm/lit at 21 days interval. Technology Option-II- Thiamethoxam 25% WG (l gm/lit) + Lamda cyhalothrin 5% SC (0.5 ml/lit) at 21 days interval. Technology Option-Ill- Fipronil + acetamiprid a 1.6 ml/lit of water at 21 days interval
Source of Technology	Package of Practices for Pulse Cultivation, ICAR-IIPR, Kanpur, Uttar Pradesh, India.
No. of replication	7 in RCBD
Plot Size (each replication /farmer)	0.13 ha
Total Plot Size	0.91 ha
Critical input	**a)** KVK Share: Seed, insecticide, fertilizer. **b)** Farmers Share: irrigation, labour etc.
Performance / Monitoring Indicator	Growth, Yield Parameter, Yield, Pest Incidence %, Economic Evaluation
Approximate cost shared by KVK for seeds, fertilizer, insecticide etc.	10000.00
Supervisor (s): Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)	

OFT- 2

Season	Post kharif, 2023 (2nd Year)
Title	Assessment of insecticide efficiency against gram pod borer in Black Gram
Problem Diagnosed	Gram pod borer is very predominant insect pest which causes severe loses in kharif black gram. The random use of common insecticides is not much effective to control the insect. So, yield is low in post kharif pulse.
Hypothesis	Application of proper insecticide with newer molecules may manage the severe infestation of gram pod borer and increase the yield and net return.
Farmer's practice	Generally, farmers do not use pest specific insecticide. They generally apply the commonly used insecticides like Cholorpyriphos 20 EC, Carbosulphan, Cypermethrin etc. but not following any routine practice
Micro-farming situation	Kharif black gram is cultivated in rainfed upland (Lateritic Soil). Soil is sandy loam in texture having pH 5.8-6.2 in this district.
Production System	Black gram-fallow
Thematic area	Pest Management.
Objective	To study the effect of new molecule application to manage gram pod borer and increase yield of black gram in post kharif season
Sowing Time	August, 2023
Details of Technology assessment	Farmers Practice- Application of Cholorpyriphos 20 EC, Carbosulphan, Cypermethrin however not following any routine practice. Technology Option-I- Thiodicarb 75% (750 gm /ha) at 30 days interval Technology Option-II- Lufenuron 5.4 EC (600 ml/ha) at 30 days interval Technology Option-Ill- Chlorantaniprole 18.5 SC (150 ml/ha at 30 days interval
Source of Technology	P K Sarkar and D Ray, Incidence and bio-rational management of black gram pod borer complex with lufenuron and its non-target toxicity. International Journal of Applied Agriculture and Horticulture Science. 4(7) p.901
No. of replication	7 in RCBD
Plot Size (each replication /farmer)	0.13 ha
Total Plot Size	0.91 ha
Critical input	a) KVK Share: Seed, insecticide, fertilizer. b) Farmers Share: irrigation, labour etc.
Performance / Monitoring Indicator	Growth, Yield Parameter, Yield, Pest Incidence %, Economic Evaluation
Approximate cost shared by KVK for seeds, fertilizer, insecticide etc.	10000.00
Supervisor (s): Sri Sourav Mondal, Subject Matter Specialist (Plant Protection)	

OFT-3

Season	Post Kharif, 2022 (1st year)
Title	Assessment of different form of "Pashu Chocolate" (UMB Block) in lactating dairy cattle
Problem Definition	Poor feeding practices and the low availability of quality feeds in unorganized dairy farming by small and marginal farmer.
Hypothesis	Adequate nutrition plays important role in dairy cattle productivity
Thematic Area	Nutrition Management
Objective	To Assess the performance of UMB Block or Crumpsy Form supplementation to improve the productivity of animal
Micro Farming Situation	Upland farming system
Production System	Semi intensive system
Farmers' Practice	Small farmers keep 2-3 crossbreed milch cows under semi-intensive system
Variety / Breed to be used	Crossbreed cow
Details of technology Assessment	Control: Farmer's Practice Technology Option – I: Block Form Technology Option - II: Homemade Form
Source of Technology	ICAR-IVRI, Animal Nutrition Division,Izatnagar, Bareilly , Uttar Pradesh
Numbers of Replications	07
Numbers Of cow per Replication	02
Total Numbers of cows	14
Critical Input	a. KVK Share: Pashu Chocolate (UMB Block), Homemade Form b. Farmer's Share: Cow
Performance / Monitoring Indicators	Palatibility, Milk Yield, Feed Intake,Cost effectiveness
Approximate Costs shared by the KVK	Rs 40,000.00 (Rupees Thirty thousand) only.
Supervisor (s): Dr Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	

OFT-4

Season	Rabi, 2023 (2nd Year)
Title	Assessment of Zinc & Boron application in quality and yield of Tomato in lateritic soil of Birbhum District
Problem diagnosed	In lateritic acid soil of Birbhum district micronutrient deficiency is very prominent. Stunted growth and cracking of fruits in Tomato is very common. Due to these problems the yield and market price of tomato is reduced.
Hypothesis	Application of Zinc and Boron may reduce the problems and may increase the yield of Tomato
Farmers' practice	Farmers cultivate tomato with recommended fertilizer application without any micronutrient use.
Production System	Paddy-Tomato- Summer vegetables
Thematic Area	Nutrient Management
Source	Effect of foliar application of micronutrients in tomato. The Asian Journal of Horticulture: 9 (2): 297-300 Saravaiya *et al.* 2014
Objective	To increase the quality and productivity of tomato and maximize the profit
Details of technology assessment	Farmers' Practice: With Recommended Fertilizer without any micronutrient
	Technology Option I: Recommended Fertilizer with recommended dose of soil application of Zinc and Boron as basal application
	Technology Option II: Recommended Fertilizer with Foliar application of Zinc EDTA @ 1g/lt of water and Boron-20 @ 2g/lt of water twice at 25 and 45 DAT
Replication	7 nos.
Plot Size (each replication /farmers)	0.03 ha
Total Plot Size	0.23 ha
Critical input	Tomato seedlings, fertilizer and micronutrient boron
Performance/Monitoring indicator	Fruit size, No. of healthy fruits per plant, yield and economics
Total cost of KVK share	Rs. 10,000.00
Supervisor (s): Dr. Subrata Mandal, Senior Scientist & Head and Dr. Joydip Mandal, Associate Professor, Department of Horticulture and Post-harvest Technology	

OFT-5

Season	Rabi, 2023 (2nd Year)
Title	Assessment of Lime and Boron application on quality and productivity of Potato in lateritic soil of Birbhum District
Problem diagnosed	In lateritic acid soil micronutrient deficiency of boron causes cracking of the potato tuber and soil acidity increases the scab diseases in different parts of Birbhum district. Due to these problems the yield and market price of potato is reduced.
Hypothesis	Application of lime and Boron may reduce the problems and may increase the yield of potato
Farmers' practice	Farmers cultivate potato with recommended fertilizer application without any use of lime and micronutrient.
Production System	Paddy-Potato- Sesame/Black gram
Thematic Area	Nutrient Management
Source	Effect of applied lime and boron on the availability of nutrients in an acid soil. Journal of Plant Nutrition. 37 (3): 357-373 Barman *et al*. 2014
Objective	To increase the quality and productivity of potato and maximize the profit
Details of technology assessment	Farmers' Practice: With Recommended Fertilizer without any micronutrient and lime Technology Option I: Recommended Fertilizer + Lime @ 10 % of the recommended dose + soil application of Boron @ 4 kg/ha as basal application Technology Option II: Recommended Fertilizer + Lime @ 10 % of the recommended dose + foliar application Boron-20 @ 2g/litre of water twice at 25 and 45 DAT
Replication	7 nos.
Plot Size (each replication /farmers)	0.02ha
Total Plot Size	0.14 ha
Critical input	Seed tuber, lime, fertilizer and micronutrient boron
Performance/Monitoring indicator	Tuber size, No. of healthy tubers per plant, yield and economics, Soil Analysis
Total cost of KVK share	Rs. 20,000.00
Supervisor (s): Dr. Subrata Mandal, Senior Scientist & Head and Sri Palash Ankure, Farm Manager	

OFT-6

Season	Rabi, 2023 (2nd Year)
Title	Assessment of Sulphur Application in Productivity Enhancement of Onion under Laterite Track of Birbhum District, West Bengal
Problem diagnosed	Sulphur is an important nutrient that affects the yield and quality of onion. Red and Laterite soils of West Bengal found deficient in sulphur ranged from 13 to 73 per cent with an average of 45.2 per cent. Among them, as per SAI (Sulphur Availability Index) 87 per cent of the surface soil samples of Birbhum district fall under low sulphur range. Severe sulphur deficiency during bulb development has detrimental effect on yield and quality of onion.
Hypothesis	Sulphur application may increase the bulb yield of onion and also improves its quality,
Farmers' practice	Farmers mostly apply NPK as 10-26-26 (basal) and Urea (top dressing). In general, they do not use sulphur containing SSP or separate dose of sulphur for onion crop.
Production system	Paddy-Onion-Summer vegetables
Thematic area	Nutrient management
Source	Shreya Mondal, G. K. Ghosh and Joydip Mandal. 2020. Effect of Graded Levels of Sulphur as Magnesium Sulphate on Yield and Quality of Onion (*Allium cepa* L.) in Red and Lateritic Soils of West Bengal, India. *International Journal of Current Microbiology and Applied Sciences.*9(4): 2858-2866.
Objective	To study the effect of sulphur application in onion
Details of technology assessment	Farmers' practice: NPK application @ 125-100-100 kg/ha; Source of fertilizer as 10-26-26 (NPK) and Urea (N) Technology option I: NPK application @ 125-100-100 kg/ha; Source of fertilizer as Urea (N), SSP (16% P_2O_5 + 12% S) and MOP (K_2O) Technology option II: NPK application @ 125-100-100 kg/ha; Source of fertilizer as 10-26-26 (NPK), Urea (N) + Sulphur 40 kg/ha (basal)
Replications	07
Plot size	0.019 ha
Total area	0.133 ha
Critical input	Seed ling and fertilizers
Performance/Monitoring indicator	Bulb size, yield and economics
Total cost of KVK share	Rs. 10,000.00
Supervisor (s): Dr. Subrata Mandal, Senior Scientist & Head and Dr. Joydip Mandal, Associate Professor, Department of Horticulture and Post-harvest Technology	

OFT – 7

Season	January, 2023 – December, 2023 (1st. Year)
Title	Assessing efficacy of Method of Transfer of Technology regarding Millet Cultivation
Problem Definition	The chosen Method of Transfer of Technology largely affects the adoption of any given Technology with special reference to economic benefit arising out of that Technology.
Hypothesis	The Methods of Transfer of Technology which emphasizes Skill Training will influences more adoption of the Technology as well as increased level of Income from that specific adopted Technology.
Present Situation	Generally, in West Bengal situation, most of the Transfer of Technology Methods are Information and Knowledge Development Training Programmes.
Prevalent Practice	Most of the Transfer of Technology Methods are Information and Knowledge Development Training Programmes.
Methodology of Transfer of Technology	Generally, Training Programmes [with various Types of Training like Information and Knowledge Development Training, Skill Development Training (Duration - less than 40 Hours), Skill Development Training (Duration – 40 Hours or More)], Demonstration Programmes like Method Demonstration, Result Demonstration etc. are used as Methodological Tools for Transfer of Technology.
Thematic Area	Methodology of Transfer of Technology
Objective	To assess the efficacy of Method of Transfer of Technology regarding Millet Cultivation with special reference to Adoption of Technology and Average Net Annual Income from the adopted Technology.
Details of Treatments	**Farmers' Option / Prevalent Practice = T_1 = Information and Knowledge Development Training** **T_2= Skill Development Training (Duration – Less than 40 Hours)** **T_3= Skill Development Training (Duration – 40 Hours or More)** **T_4 = Method Demonstration** **T_5 = Result Demonstration**
Source of Technology	Overview of Frontline Extension Tools and Designing OFTs in Extension, R. Roy Burman, ICAR-IARI, New Delhi
Numbers of Replications	03 (Three)
Numbers of Practicing Farmers and Farm Women per Replication Per Transfer of Technology Method	10 (Ten)
Total Numbers of Practicing Farmers and Farm Women	150 (One Hundred Fifty)
Critical Input	A. KVK Share: a. Transfer of Technology regarding Millet Cultivation through Transfer of Technology Methods viz. Information and Knowledge Development Training, Skill Development Training (Duration – Less than 40 Hours), Skill Development Training (Duration – 40 Hours or More), Method Demonstration and Result Demonstration b. Assessing the efficacy of Method of Transfer of Technology regarding Millet Cultivation with special reference to Adoption of Technology and Average Net Annual Income from the adopted Technology. c. Farmers' Share: Cultivation of Millets following the transferred Technology
Performance / Monitoring Indicators	• Percentage of Adoption by the Practicing Farmers and Farm Women to whom the Millet Cultivation Technology has been transferred. • Average Yearly Net Income from Millet Cultivation from the Adopted Farmers and Farm women
Approximate Costs shared by	Rs. 5,000.00
Supervisor (s): Dr. Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	

OFT- 8

Season	**Rabi 2023. (2nd Year)**
Title:	Assessment of optimum planting times of coloured Cauliflower in lateritic soil of Birbhum
Problem diagnosed:	Due to cultivation of longer duration paddy the land for Cauliflower cultivation is not available in time. Therefore, farmers plant Cauliflower in delayed winter which cause smaller curd size and more pest and disease attack. Due to depletion of soil moisture, irrigation cost is increased. Furthermore, coloured cauliflower is new introduction to the farmers without knowing the optimum planting time
Hypothesis	Shifting of planting dates earlier may increase the yield and as well as to minimize the pest and disease attack
Micro farming situation	Cauliflower (coloured) is cultivated in irrigated medium land situation in sandy loam soil
Farmers practice	Farmers generally plant cauliflower in third week of November
Production system	Paddy — Mustard/Potato/ Winter Vegetables-Black Gram
Thematic area	Climate resilient production technology.
Objective:	Shifting of planting dates earlier to improve yield.
Sowing time:	1st to 3rd week of November, 2022.
Details of technology	Farmers' Practice: Planting on Third week of November Technology Option - I: Planting on November 1st week Technology Option – II- Planting on November 2nd week
Source of Technology	S. Islam, S. Datta and Ranjit Chatterjee: Influence of Planting Date on Performance of Cauliflower (Brassica oleracea var. botrytis L.) Varieties at Terai Region of West Bengal, India. International Journal of Bio-resource and Stress Management, 7(3):426-431(2016).
No. of replication:	7 nos.
Plot size (each replication/ farmer:	0.03 ha
Total plot size:	0.23 ha
Critical input:	Coloured Cauliflower seedling, fertilizer and micronutrient.
Performance/Monitoring indicator:	Curd size, no of hollow stem per unit area, soil moisture percentage, crop water requirement, yield and economics.
Approximate cost shared by KVK for limes. seeds, fertilizer, soil testing etc.	10000.00
Supervisor (s): Sri Sayak Mahato, Subject Matter Specialist (Agro meteorology) and Sri Palash Ankure, Farm Manager	

OFT – 9

Season	Kharif,2023
Title of the OFT	Comparative performance analysis of Aseel chicks in two types of intensive cage rearing
Thematic area	Production management of livestock
Problem diagnosed	The indigenous native breeds are small in body size (adult live weight of 1.0- 1.5 kg) and low egg producers (50- 60 numbers of eggs annually) in backyard system of rearing: Prone to predatory animal attack
Important cause	Low output from local poultry birds reared in backyard.
Production system	Intensive cage rearing system
Micro Farming situation	Small/marginal farmer
Objective	To study the Comparative performance of Aseel chicks in two types of intensive cage rearing
Details of technology assessment	Farmer's practice: Rearing of chicks over traditional objects (like jute bags, straw etc.) Technology option I: Rearing of chicks in cage with metal net floor. Technology option II: Rearing of chicks in cage with non-metal bamboo floor
Source of technology	Zhao Y, Shepherd T, Swanson J, Mench J, Karcher D, Xin H. Comparative evaluation of three egg production systems: Housing characteristics and management practices. Poultry Science. 2015; 94:475–94. pmid:25737566
Critical Inputs	Aseel Chicks and cage system
Performance/Monitoring indicator:	Body Weight, Egg Production, Mortality %
No. of replication	08
Unit size	10 nos. of Aseel chicks in each treatment
Approximate cost shared by KVK	Rs. 32000.00
Supervisor (s): Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)	

OFT – 10

Season	2023	
Title	Assessment of different form of poshu chocolate (UMMB) in lactating dairy cattle	
Thematic area	Nutrition management	
Problem diagnosed	Poor feeding practice and the low availability of quality feeds in unorganized dairy farming by small and marginal farmer	
Production system	Semi Intensive system	
Micro farming situation	Upland farming system	
Existing practice	Small farmers keep 2-3 crossbreed milch cows under semi-intensive system	
Objectives	To assess the performance of UMB Block or crumpsy form supplementation to improve the productivity of animal	
Treatment	Control: Farmer's practice (Basal diet) Technology Option I: Block form Technology Option II: Homemade Form	
	Formula of UMMB: Wheat Bran-850 gm Molasses-750 gm Mineral mixture-40 gm Urea-200 gm Common salt-20 gm Vit AD_3 - 200 mg Cement-200 gm	Homemade form: Molasses-750 gm Mineral mixture-40 gm Common salt-20 gm Vit AD_3-200 mg Wheat bran-850 gm Urea-200 gm
Critical Input	KVK input: Pashu chocolate (UMMB), Homemade Form Farmer's Share: Cow	
Unit Size	2	
Replication	7	
Performance /Monitoring Indicator	Palatability, Milk Yield, Feed Intake, Cost effectiveness	
Approximate cost shared by KVK	Rs. 40000 (Rupees Forty thousand)	
Source of Technology	ICAR-IVRI	
Supervisor (s): Dr. Madhuchhanda Khan, Subject Matter Specialist (Animal Science)		

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.)
01.	FLD on Baby Corn & Silo pit funded by ICAR-IIMR, Ludhiana	03.00 Lakh

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

4 success stories will be developed.

Tentative Title: a) Small scale Goatery entrepreneurship development

b) Small scale Mushroom entrepreneurship development

c) Increasing income by pulse cultivation

d)Increasing income through oilseed cultivation.

12. Scientific Advisory Committee

Date of SAC meeting held during 2022-23	Proposed date during 2023-24
24th. February, 2023	10th December, 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	200	50	10	50	10	70	10	170	30	200	20	100
Water Samples	100	30	-	30	-	40	-	100	-	100	10	
Other (Please specify)	-											
Total	300	80	10	80	10	110	10	270	30	300	30	100

14. Fund Requirement and Expenditure

	Expenditure (From April, 2022 to Jan, 2023) Rs. In lakh	Anticipated Requirement as Per BE (2023-24) Rs. In lakh
Recurring		
Pay and Allowances	105.07	210.00
TA	01.75	03.50
HRD	-	00.30
Contingencies	13.27	30.00
TOTAL(A)	**120.09**	**243.80**
Non-Recurring		
Works		
i) Boundary wall cum fencing	10.00 (Up to March 2023)	15.00
Vehicle a) Four-Wheeler Replacement	09.00 (Up to March 2023)	-
Equipment, Furniture and Furnishing i) Replacement of Tractor with accessories	7.50 (Up to March 2023)	04.00
Library	0.10 (Up to March 2023)	0.10
TOTAL (B)	**26.60**	**19.10**
TOTAL (A + B)	**146.69**	**262.90**

N. B.

Equipment & Furniture:

(i) Information Technology Rs. 1.50 Lakh

(ii) Computer / Laptop and Office Furniture and Farm Equipment Rs. 2.50 Lakh

Works:

(i) Installation of New Electricity Connection Rs. 5.00 Lakh

(ii) Maintenance / Renovation of Farm Shed, Godown, Threshing Floor, Trainees Hostel, Office Building etc. Rs. 10.00 Lakh

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

The Rathindra Krishi Vigyan Kendra has assessed, disseminated, popularized and handed over the under noted technologies, products, processes and services among the farming community of Birbhum District.

A. Cultivation of Kharif Oilseed Crop Sesame, Var. - SWB-32-10-1 (Sabitri): -
Variety: - Seeds of Improved Variety SWB-32-10-1 (Sabitri) @ 6 kg. / ha
Herbicide Application - Application of herbicides Pendimethalin @ 3 lit. / ha at 1 – 3 DAS.
Sulphur application
Micro-Nutrient Spray - Foliar Spray of Micro-Nutrients: - Zn EDTA @ 1 gm. / lit. of water at 25 and 45 DAS.
Average Net Return to the farmer due to the practice is Rs. 33,265.00 / ha. / Annum and 416 numbers of farmers adopted the practice in the district.

B. Crop Diversification through Cultivation of High Value Low Volume Vegetable viz. Broccoli: -
Spacing - 2.0 feet X 2.0 feet
Time of Planting - August – October
Seed Treatment – Treated with 2 - 2.5 gm Thiram / litre of water.
Application of Manures and Fertilizers per hectare – Compost- 20-25 ton; 160 (100 + 60) kg. Urea; 550 kg. SSP; 170 kg. MoP
Application of Micro-nutrients - 1 - 1.5 kg Molybdenum and 20 kg. Sodium borate per hectare before planting.
Average Net Return to the farmer due to the practice is Rs. 1,52,500.00 / ha. / Annum and 307 numbers of farmers adopted the practice in the district.

C. Low-Cost Commercial Vermin-Composting Unit: -

Earthworms (*Eisenia foetidae*) are being used.
Low-cost pits built-up with mainly bare bricks covered Polythene Sheets are to be used.
Organic farm and domestic wastes along with cow dung are to be used as compost culture media.
Regular optimum watering of compost media is to be ensured.
Sieving and packaging of usable Vermin-Compost is done as and when necessary.
Average Net Return to the practicing farmers due to the practice is Rs. 85,714.00 / ha. / Annum and 151 numbers of farmers adopted the practice in the district.

D. Feeding of Quality Green Fodder both Leguminous and Non-Leguminous to Milch Cattles: -

Recommended Package of Practices for Fodder Cultivation such as Land Preparation, Fertilizer Application, Timely Sowing, Fertilizer Application, Irrigation Scheduling, Integrated Pest Management Practices and Harvesting Schedules.
Short Duration Varieties of Fodder Crops viz. Maize, Cow Pea etc. between two seasonal crops.

Cultivation of Cereal Fodder Crops like Maize, Sorghum, Oat etc. with Fodder Legumes like Cow Pea, Berseem etc.
Cultivation of Multi-Cut Varieties of Fodder Crops at regular intervals to get optimum production.
Legume and Non-Legume Fodders should be mixed in 1: 3 ratio.
For lactating Crossbred Milch Cows, the production ration contains 1.25 + 1 kg concentrate per 2.5 kg Milk Production and requires 25 to 30 kgs. Green Grasses when Green Grass is plenty.
For lactating Deshi Milch Cows, the feed schedule consists of 1 + 1 kg. Concentrate per 2.5 to 3.0 kg Milk Production with up to 20 kg. Fodder feeding**.**
Every 10 kgs. Fodder feeding will reduce 1 kg. Concentrate feeding and thus reducing the cost of inputs.

Average Net Return to the practicing dairy farmers due to the practice is Rs. 54,850.00 / Cow / Lactation and 169 numbers of dairy farmers adopted the practice in the district.

E. Manifold Increase in Farm Income through cultivation of *Ekangi* - a Medicinal Plant – a truly potential Crop Diversification Effort

Name of the Farmer: Sri Bipadtaran Ghosh
Address of the Farmer: Village: Kartikdanga, P.O. - Raipur, C. D. Block – Bolpur – Sriniketan, Dist. – Birbhum, Pin. – 731204, West Bengal, India.
Mobile Phone No. – 8101987627

Ekangi is also known as Aromatic Ginger, Kencur etc. Cultivation of Ekangi (*Kaempferia galanga L.*), a medicinal plant was imitated by the Rathindra KVK (RKVK) in the Kartikdanga village in Kharif season, in mono cropped rice area as a part of the crop diversification programme. *Ekangi* has several medicinal properties. Its rhizome powder is used as appetite enhancer and also treating for stomach-ache. The rhizome extract is largely used as limiting agent for rheumatism, repellent of mosquito and nematode against *Meloidogyne* in wheat.

Before cultivation of *Ekangi,* Sri Bipadtaran Ghosh cultivated the Kharif Rice Variety MTU-7029 and earned Net Return of Rs. 33,461.00 per ha in their rain-fed mono cropped situation with B:C ratio of 1.50.

In the financial year of 2020-21, Sri Bipadtaran Ghosh has cultivated *Ekangi* in the same 0.283 ha of land in Kharif Season with a harvested produce of Rhizomes of 36.79 q and a Net Income of Rs. 1,99,798.00; this is in sharp contrast when Sri Ghosh used to cultivate Kharif Rice Variety MTU -7029 with a harvested produce of 15.85 q and a Net Return of only Rs. 9,474.00 thus increasing the Net Income of Sri Ghosh by 2008 per cent. Now Sri Ghosh is cultivating *Ekangi* with a Net Return of Rs. 7,12,000.00 per ha in the Kharif Season with a B: C ratio of 5.25.

Sri Ghosh is selling the harvested Rhizomes of *Ekangi* with an Average Sale Price of Rs. 6,700.00 / quintal of harvested Rhizomes of *Ekangi* to big business houses of Murshidabad District. The Businessmen come with truck to their village for purchasing the harvested Rhizomes.

Contribution of Rathindra KVK: - The Rathindra KVK prepared the following package of practice suitable for this locality by cultivating *Ekangi* in different small plots in the Rathindra KVK medicinal plant garden.

- Totally rainfed
- **Time of Planting –** May-June with nor-wester
- **Seed Rate:** 7.5 q/ha (Rhizome of 4 cm length of 2 buds)
- **Land Preparation:** Only 2 cross ploughing with levelling.
- **Choice of Land:** Medium to upland with proper drainage facility in mono cropped area.
- **Planting:** Spacing 25 cm X 25 cm, Depth: 4 cm.
- **Seed Treatment:** Dipped in solution of *Trichoderma viridi* (4 gm/kg seeds).
- **Manures and Fertilizer:** Well rotten FarmYard Manure (FYM) 10 ton/ha as basal.
- **Top dressing** at one month after planting: Urea 75 kg/ha, SSP- 600 kg/ha. MOP- 100 kg/ha.
- **Top dressing** after three months of planting: Urea – 75 kg/ha.
- **Intercultural Operation:** Weeding at 2nd and 4th week, then straw mulching.
- **Herbicide Use:** Spraying of Glyphosate @ 5 ml/lt. of water at 15 days after planting.
- **Harvest:** 6-8 months after planting.
- **Yield:**130- 160 q/ha.

The Rathindra KVK imparted Skill Development Training on the above-mentioned package of practices for *Ekangi* cultivation to Sri Bipadtaran Ghosh and other 17 fellow farmers for five times in last five years. Also, the Rathindra KVK organized Front Line Demonstration (FLD) Programme on *Ekangi* production on 0.26 hectares of land in 2015-16, 2016-17, 2017-18 and 2018-19 in the Kartickdanga Village by providing quality Rhizomes as seeds and assorted package of practices for cultivation of *Ekangi* for 18 partner farmers of that Village.

Getting information about the success of *Ekangi* as a diversified crop, E-TV Bangla (a Private Sector All India Television Channel) and Anandabazar Patrika (one of the most popular Newspaper in Vernacular Bengali language) published and disseminated the cultivation practices and potential of Ekangi as a diversified Herbal Crop of Kharif Season in rainfed mono-cropped Aman Rice areas. Rathindra KVK played a pivotal role in disseminating the potential of *Ekangi* cultivation in Kharif season through utilizing Mass Media sources such as Radio Programmes broadcasted by All India Radio, Television Programmes telecasted by the Santiniketan Channel; Doordarshan Kendra, Santiniketan; E-TV Bangla, and Daily Newspapers like Anandabazar Patrika etc.

Economic Impact

Before start of the cultivation of *Ekangi,* the farmers of Kartickdanga Village produced only Kharif Rice Variety MTU-7029 and earned Net Return of Rs. 22,500.00 per ha in their rainfed mono cropped area with B:C ratio of 1.33.

After crop diversification effort with *Ekangi* cultivation initiated by the Rathindra KVK the Economics of Cultivation is as follows:

Year: - 2016-17 Crop: - Kharif Rice Variety MTU-7029					
Av. Yield	**Av. Sale Price**	**Gross Cost (Rs. / ha)**	**Gross Return (Rs. / ha)**	**Net Return (Rs. / ha)**	**B:C ratio**
56 quintal / ha	Rs. 1,800 / quintal	67,339.00	1,00,800.00	33,461.00	1.50

Year: - 2020-21 Crop: - *Ekangi*					
Av. Yield	**Av. Sale Price**	**Gross Cost (Rs. /ha)**	**Gross return (Rs. /ha)**	**Net Return (Rs. /ha)**	**B:C ratio**
130 quintal / ha	Rs. 6,700.00 / quintal	1,65,000.00	8,71,000.00	7,12,000.00	5.28

Social Impact – As the farm income is getting increased by manifold, the community perception to *Ekangi* cultivation is getting more encouraging. Other farmers are being more and more attracted to cultivate the *Ekangi* crop.

Environmental Impact –*Ekangi* is a totally rain-fed crop, so there is no loss of water. Total rainwater is used for production. Crops cover the fields within 3 Months, so no soil erosion through leaching is occurred due to heavy rain or heavy wind. Evaporation is lowered down from the area, so Ground Water Table is maintained properly. It is an herbal or medicinal crop. The products from it are always herbal or without Chemical. Use of the products from it helps to reduce the chemical load to human body as well as nature.

Horizontal Spread - In the year 2015-16, only three farmers of Kartikdanga Village, C. D. Block – Bolpur – Sriniketan of Birbhum District started *Ekangi* cultivation as Partner Farmers of the FLD Programmes initiated by the Rathindra KVK in 0.26 ha area. It increased in 4 ha area with 15 farmers in that village in the year 2016-17 and further it was cultivated in 6.7 ha land in that village with 25 farmers. Beside that it is now spreaded to other 7 villages involving 30 farmers of surrounding 3 other Blocks of the district.

F. The taste of success with homemade incubator and poultry rearing

Name and Contacts of farmer: Amit Ghosh, Mobile No- 9547322311, email-id: rathindrakvk@gmail.com

Address: C/O-Dinabandhu Ghosh, Vill- Galundi(Paschim Para) P.O.-Galundi, Bolpur , Dist- Birbhum, 731240,West Bengal

Name and Contacts of KVK: Rathindra KVK, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, P. O. – Sriniketan, Dist. – Birbhum, West Bengal – 731236, India.

A brief about the successful venture:

Amit Ghosh was an electrician. He is having only 1 acre of land and cultivating mainly paddy, mustard, potato to maintain his own means of livelihood. The income from his activities was not satisfactory. He visited Rathindra Krishi Vigyan Kendra frequently to know other possible avenues of earning from Animal Husbandry and related sectors. Rathindra Krishi Vigyan Kendra identified his technical skill and motivated him to develop homemade Incubator and begin poultry rearing in both backyard and deep litter system. Krishi Vigyan Kendra proved to be a real helping hand as they came up with the installation of his home-made Incubator that helped in fast hatching of eggs and increasing the production of Women Self Help Groups. RKVK, Birbhum also helped him to create linkages with different Women Self Help Groups and Agricultural Technology Management Agency (ATMA) for installation of his homemade Incubator. Nowadays he is earning Rs. 22000/ from his poultry keeping and related venture.

Contribution of KVK towards that venture: Sri Ghosh was given a 3-day intensive skill development training programmes on scientific poultry farming and management practices and low-cost feed formulation of poultry by Rathindra KVK, Birbhum. He also attended various awareness programmes and exposure visits to public as well as private sector poultry farms for gaining firsthand experiences. Free of cost Vaccine along with vety. medicine e.g., antibiotic, anticoccidial drugs, vitamins and mineral supplements supplied by Krishi Vigyan Kendra was also part of the initial inputs. He was also supported by technical know-how to develop a homemade Incubator. The marketing of his homemade incubator was also extended by RKVK by linking with, different SHGs, Agricultural Technology Management Agency (ATMA) and other poultry farmers.

Coverage and Impact of training / hand holding on the successful venture:

The training helped him to learn scientific management of various aspects of poultry rearing. Technical support to develop homemade incubator by Krishi Vigyan Kendra made the venture a profitable one.

Use of homemade incubator boosts up the fast production of chicks in rural area. Using this low-cost incubator continuous production and supply of rural backyard poultry chicks e.g., Vanraja, RIR, Aseel. Kadaknath etc. is possible. It is well known that backyard poultry production has immense importance to overcome the never-ending problems of poverty, hunger and malnutrition in rural India.

Horizontal spread of the successful case: Amit participates in various training programme as a resource person. After installation of his low-cost homemade incubator, he trained and assisted the SHG members in successful hatching of eggs. His success attracted rural youths and farm women to start poultry rearing and hatching their own chicks.

Cultivation of Kharif Oilseed Crop Sesame, Var. - SWB-32-10-1 (Sabitri)

Sri Nilu Das (partnered by the Rathindra Krishi Vigyan Kendra, Visva-Bharati) of Village: - Baro Shimulia, Dist. - Birbhum in his Field of Broccoli

Sri Partha Mal (a Rural Youth nurtured by the Rathindra Krishi Vigyan Kendra, Visva-Bharati) watering the Vermin-Compost Materials in his Low-Cost Commercial Vermin-Composting Unit at Village: - Daronda, Dist. - Birbhum

Cultivation of Green Fodder for Cattle Feeding at the Rathindra Krishi Vigyan Kendra, Visva-Bharati adopted Village: - Digha, C. D. Block: Sainthia, District - Birbhum through the Kendra Initiative

Use of Green Fodder for Cattle Feeding at the Rathindra Krishi Vigyan Kendra, Visva-Bharati adopted Village: - Digha, C. D. Block: Sainthia, District - Birbhum through the Kendra Initiative

Sri Bipadtaran Ghosh with Rathindra KVK Scientist discussing harvested Rhizomes of *Ekangi*

Sri. Amit Ghosh with homemade incubator and poultry rearing

Sri. Amit Ghosh trained and assisted the SHG members in successful hatching of eggs.