

**ACTION PLAN, 2022 (January, 2022 to December, 2022)****1. Name of the KVK:**

Address	Telephone	E mail
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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 2022 to December 2022)****(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: and pumpkin bittergourd	Off	01	03	January , 2022	10	00	20	00	20	00	50	00	50
Disease Management	Identification and improvement of lower conception rate of bovine	ON	01	02	-do-	09	00	12	00	09	00	30	00	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	00	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	00	50
Seed Production	Recent technologies for seed production of summer pulses	ON	01	04	February , 2022	08	00	05	00	17	00	30	00	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	00	50

Integrated Farming	Role of Animal Husbandry in Integrated Fish Farming	On	01	04	-do-	08	00	12	00	10	00	30	00	30
Sheep Farming	Improvement of Sheep farming for enhanced income generation	ON	01	02	-do-	09	00	12	00	00	09	21	09	30
Entrepreneurship Development	Development of Farmers Club as Business Facilitators (BF)	ON	01	02	-do-	08	00	12	00	10	00	30	00	30
Feed Management	Low cost feed preparation for better production performance of livestock	ON	01	02	-do-	09	00	12	00	09	00	30	00	30
Group Dynamics	Concept, Formation and Functioning of Joint Liability Group	ON	01	03	April 2022	08	02	12	04	04	00	24	06	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 ( <i>K. galanga</i> ) in rainfed monocropped situation	ON	01	04	May, 2022	09	00	04	00	17	00	30	00	30
Soil Health and Fertility Management	Appropriate soil sampling methodologies for soil testing	Off	01	04	-do-	11	00	06	00	33	00	50	00	50
IPM	Appropriate IPM for sustainable agriculture	ON	01	03	-do-	08	00	12	00	10	00	30	00	30
Disease Management	Zoonotic diseases and public health	ON	01	02	-do-	09	00	15	00	06	00	30	00	30
Market led Extension	Formation of Farmers Producers Organization (FPO)	ON	01	02	-do-	08	00	12	00	10	00	30	00	30
Institutional Credit Supply	Mechanism and Use of Kisan Credit Card (KCC)	Off	01	03	-do-	11	00	20	00	19	00	50	00	50

Resource Conservation Technology	Direct seeding technologies of rice	ON	01	04	June, 2022	10	00	05	00	15	00	30	00	30
IPM	Integrated Pest, Disease and Weed Management in <i>Kharif</i> Paddy (Phase – I)	ON	01	03	-do-	07	00	15	00	08	00	30	00	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	00	30
Group Dynamics (Farmers' Organization)	Formation of Farmers' Club	Off	01	02	-do-	12	00	20	00	18	00	50	00	50
Group Dynamics (Farmers' Organization)	Formation of Farmers' Interest Groups	Off	01	02	-do-	12	00	20	00	18	00	50	00	50
Soil Health Management	Application of azolla and dhaincha for green manuring in <i>Kharif</i> paddy	ON	01	04	July, 2021	09	00	06	00	15	00	30	00	30
Seed Production	Participatory Paddy Seed Production Technologies in <i>Kharif</i> (Phase – I)	ON	01	03	-do-	09	00	06	00	15	00	30	00	30
Cultivation of Vegetables	Improved Package and Practices of <i>Kharif</i> Seasonal Vegetables	ON	01	02	-do-	00	00	30	00	00	00	30	00	30
IPM	Integrated Pest, Disease and Weed Management In <i>Kharif</i> Paddy (Phase – II)	ON	01	03	-do-	08	00	12	00	10	00	30	00	30
Women and child care	Nutritional Requirement of Pre-School Children	Off	01	01	-do-	00	20	00	20	00	10	00	50	50
Dairy Management	Establish, Maintenance and Management of Small Scale Dairy Unit	ON	01	04	-do-	05	00	10	00	10	00	25	00	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	00	30
Insurance	Evolution of Crop Insurance (CI) and Pradhan Mantri Fasal Bima Yojana (PMFBY)	ON	01	02	-do-	10	00	12	00	08	00	30	00	30

Soil Health and Fertility Management	Interpretation of Soil Health Card for nutrient management of Kharif paddy	ON	01	04	August, 2022	08	00	06	00	16	00	30	00	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	00	50
Value addition	Value addition to livestock product	ON	01	01	-do-	09	00	12	00	00	09	21	09	30
Disaster Management	Disaster Management with Special Reference to Agriculture and Related Sectors	ON	01	03	-do-	10	00	12	00	08	00	30	00	30
Market led Extension	Marketing Information and Market Linkage of Vegetable Farmers	ON	01	03	-do-	10	00	12	00	08	00	30	00	30
Seed Production	Participatory Paddy Seed Production Technologies in Kharif (Phase – II)	ON	01	03	September, 2022	09	00	06	00	15	00	30	00	30
Management of Problematic Soil	Acid Soil Management in Rabi Seasonal Vegetables	ON	01	02	-do-	00	00	30	00	00	00	30	00	30
IPM	Pest, Disease Management on Rabi Seasonal Oil Seeds and Pulses	Off	01	03	-do-	10	00	20	00	20	00	50	00	50
Duck Farming	Commercial Duck rearing both for Meet and Egg Purpose	Off	01	02	-do-	00	14	00	20	00	16	50	00	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	00	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	00	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	00	30

IPM	IPM on Solanaceous Crops like potato, tomato, chilli etc	ON	01	03	October, 2022	08	00	12	00	10	00	30	00	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	00	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	00	30	30
Income Generation activities for empowerment of rural women	Training on Batik Work	ON	01	07	-do-	00	08	00	00	00	12	00	20	20
WTO and TRIPS Related Issues	Protection of Plant Varieties and Farmers' Rights Act (PPV & FRA) -2001	Off	01	02	-do-	12	00	20	00	18	00	50	00	50
IPM	Pest control on Wheat, Sugarcane and High Value Vegetables like French bean , Capsicum etc.	Off	01	03	November, 2022	10	00	20	00	20	00	50	00	50
Women and child care	Nutritional Requirement of Pre-School Children	Off	01	01	-do-	00	20	00	20	00	10	00	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	00	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	00	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	00	30
Feed Management	Quality Fodder Cultivation	ON	01	01	December, 2022	09	00	12	00	09	00	30	00	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	00	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	00	50
Insurance	Concept, Functioning and Use of Pradhan Mantri FasalBimaYojona (PMFBY)	ON	01	02	-do-	10	00	12	00	08	00	30	00	30
Income generation through Animal Science	Ornamental bird rearing	ON	01	2	-do-	10	00	12	00	08	00	30	00	30

**(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	January, 2022	10	00	10	00	10	00	30	00	30
Bee Keeping	Small scale Bee keeping practices for income generation	ON	01	15	February, 2022	13	00	06	00	11	00	30	00	30
Bee Keeping	Honey Bee Culture for small scale honey production unit	ON	01	15	March, 2022	08	00	06	00	16	00	30	00	30
Production of Organic Inputs	Preparation and use of Organic Inputs	ON	01	15	March, 2022	20	00	04	00	11	00	35	00	30
Goat Rearing	Scientific goat rearing	ON	01	15	April, 2022	15	00	04	00	11	00	30	00	30
Para extension workers	Agricultural Extension service provider	ON	01	15	June, 2022	15	00	04	00	11	00	30	00	30
Poultry Farming	Commercial broiler and layer farming	ON	01	15	September, 2022	15	00	09	00	06	00	30	00	30
Production of Organic Inputs	Preparation and use of Vermicompost	ON	01	15	November, 2022	20	00	04	00	11	00	35	00	35
Total						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	Crop diversification for increasing farmer's income	ON	01	01	March , 2022	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, 2022	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	September. 2022	12	00	08	00	20	00	40	00	40
Productivity Enhancement in Field Crops.	Acid Soil Management to boost up crop productivity	ON	01	01	November 2022	12	00	08	00	20	00	40	00	40
Management of Farm Animals	Genetic Resource Conservation of Domestic Animals and Poultry	ON	01	01	December 2022	12	00	08	00	20	00	40	00	40
Total						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			
<b>I. Crop Production</b>													
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													
<b>II. Horticulture</b>													
<b>a) Vegetable Crops</b>													
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													
<b>b) Fruits</b>													
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													
<b>c) Ornamental Plants</b>													
Nursery Management													
Management of potted plants													
Export potential of ornamental plants													
Propagation techniques of Ornamental Plants													

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST			M	F	T
		M	F	T	M	F	T	M	F	T			
Others, if any													
<b>TOTAL</b>													
<b>d) Plantation crops</b>													
Production and Management technology													
Processing and value addition													
Others, if any													
<b>TOTAL</b>													
<b>e) Tuber crops</b>													
Production and Management technology													
Processing and value addition													
Others, if any													
<b>TOTAL</b>													
<b>f) Spices</b>													
Production and Management technology													
Processing and value addition													
Others, if any													
<b>TOTAL</b>													
<b>g) Medicinal and Aromatic Plants</b>													
Nursery management													
Production and management technology													
Post harvest technology and value addition													
Others, if any													
<b>TOTAL</b>													
<b>III. Soil Health and Fertility Management</b>													
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
Micro nutrient 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													
<b>TOTAL</b>													
<b>IV. Livestock Production and Management</b>													
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
<b>TOTAL</b>													

Thematic Area	No. of Courses	No. of Participants									Grand Total			
		Other			SC			ST			M	F	T	
		M	F	T	M	F	T	M	F	T				
<b>V. Home Science/Women empowerment</b>														
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 child care	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	
<b>TOTAL</b>														
<b>VI. Agril. Engineering</b>														
Installation and maintenance of micro irrigation systems														
Use of Plastics in farming practices														
Production of small tools and implements														
Repair and maintenance of farm machinery and implements														
Small scale processing and value addition														
Post Harvest Technology														
Others, if any														
<b>TOTAL</b>														
<b>VII. Plant Protection</b>														
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	
Bio-control 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	
<b>TOTAL</b>														
<b>VIII. Fisheries</b>														
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 fish pond, 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	

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				
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														
<b>TOTAL</b>														
<b>IX. Production of Inputs at site</b>														
Seed Production														
Planting material production														
Bio-agents production														
Bio-pesticides production														
Bio-fertilizer production														
Vermi-compost production														
Organic manures production														
Production of fry and fingerlings														
Production of Bee-colonies and wax sheets														
Small tools and implements														
Production of livestock feed and fodder														
Production of Fish feed														
Others, if any														
<b>TOTAL</b>														
<b>X. Capacity Building and Group Dynamics</b>														
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	
<b>TOTAL</b>														
<b>XI Agro-forestry</b>														
Production technologies														
Nursery management														
Integrated Farming Systems	1	10	00	10	8	0	8	12	0	12	30	00	30	
<b>TOTAL</b>														
<b>XII. Others (Pl. Specify)</b>														
<b>TOTAL</b>	61	618	97	715	499	84	583	696	205	901	1763	386	2149	

**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)													
<b>TOTAL</b>	<b>8</b>	<b>87</b>	<b>00</b>	<b>87</b>	<b>116</b>	<b>00</b>	<b>116</b>	<b>47</b>	<b>00</b>	<b>47</b>	<b>250</b>	<b>00</b>	<b>250</b>

**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 Child care													
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
<b>TOTAL</b>	<b>7</b>	<b>140</b>	<b>00</b>	<b>140</b>	<b>84</b>	<b>00</b>	<b>84</b>	<b>56</b>	<b>00</b>	<b>56</b>	<b>280</b>	<b>00</b>	<b>280</b>

**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, 2022**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
1	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, 2022, **Farming Situation:** Medium to Up land with sandy loam soil, mono-cropped area,

Supervisor (s): Dr. Subrata Mandal, Senior Scientist &amp; 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
2	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, 2022**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
3	Paddy	40 ha	New variety of Paddy RaniDhan 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, 2022**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
4.	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, 2022**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
5.	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, 2022**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
6	Paddy	50 ha	<i>Trichoderma viridi</i> 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, 2022**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
7	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, 2022**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	Drum Stick (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:** Green Fodder**Thrust Area:** Animal health, **Thematic Area:** Feed Management**Season:** Kharif, 2022**Farming Situation:** - Rainfed upland-medium land, Supervisor (s): Dr Madhuchhanda Khan, Subject Matter Specialist (Animal Science) and Dr. Subrata Mandal

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

**FLD-10:****Enterprise:** Poultry (Coloured broiler)**Thrust Area:** Improved Live Stock Production, **Thematic Area:** Diversification in live stock production**Season:** Post Kharif, 2022**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
10.	Coloured Broiler	30 unit  (10 no. of birds per unit)	Coloured broiler	Body weight, Growth, economics	Coloured broiler	30000	-	18	12	0	0	0	0	18	12	30

**FLD-11:****Enterprise:** Poultry**Thrust Area:** Improved Live Stock Production**Thematic Area:** Diversification in live stock production**Season:** Post Kharif, 2022**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.	Poultry (KadakNath)	30 unit (10 no. of birds per unit)	Introduction of Kadaknath	Growth, Body weight and economics	Kadaknath	30000	-	18	12	0	0	0	0	18	12	30

**FLD-12:****Enterprise:** Sheep**Thrust Area:** Improved Live Stock Production, **Thematic Area:** Health Management**Season:** Post Kharif, 2022**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	Lamb (6 months old)	10 unit (2 lamb /unit)	Doramectin @ 200 mg/ kg body weight SC at 3 months interval	Lamb body weight, Oestrous, EPG	Doramectin	3000	-	4	2	2	0	2	0	8	2	10

**FLD-13:****Crop:** Backyard Nutrition Garden**Thrust Area:** Women empowerment, **Thematic Area:** Nutrition Management**Season:** Rabi, 2022**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
13	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-14:****Crop:** Broccoli**Thrust Area:** Production Technology, **Thematic Area:** Nutrient Management**Season:** Rabi, 2022**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	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-15:**

Enterprise: Participatory preparation of Extension Literature

**Thrust Area:** Empowerment of marginalize section, **Thematic Area:** Group dynamics**Time:** Jan. – Dec., 2022**Farming Situation:** - Intensive cropping system, Supervisor (s): Dr Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)

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
12	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

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

## Extension and Training activities under FLD:

Activity	Title of Activity	Venue On/Off	No.	Duration	Clientele	No. of Participants								
						SC		ST		Other		Total		T
						M	F	M	F	M	F	M	F	
<b>Training</b>	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
<b>Training</b>	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
<b>Training</b>	Establishment of Back Yard Nutrition Garden	ON	01	01	PF	00	05	00	20	00	05	00	30	30
<b>Training</b>	Cultivation of Barmasia Drumstick Var. PKM – 1	ON	01	01	PF	12	00	08	00	20	00	40	00	40
<b>Training</b>	Scientific Poultry Management	ON	01	02	PF	03	00	04	00	03	00	10	00	10
<b>Training</b>	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
<b>Training</b>	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
<b>Training</b>	Techniques of rearing Kadaknath	ON	01	01	PF	08	00	12	00	10	00	30	00	30
<b>Training</b>	Land Preparation and Sowing of Wheat	ON	01	04	PF	08	00	03	00	14	00	25	00	25
<b>Training</b>	Production Practices of different Improved Green Fodder Crops	ON	01	01	PF	04	00	04	00	12	00	20	00	20
<b>Training</b>	Techniques of Sheep rearing	ON	01	04	PF	03	00	05	00	02	00	10	00	10
<b>Training</b>	<i>Trichoderma viridi</i> 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.)
Paddy	Rani Dhan, IET-4786, MTU-1010	July-November,22	2.5 ha	Seed	80 q	15000.00	36000.00	21000.00
Blackgram	WBU-109	August-October,22	0.33 ha	Seed	3 q	8000.00	30000.00	22000.00
Lentil	WBL-77	October,22-January, 23	0.33 ha	Seed	2.5 q	9000.00	30000.00	21000.00
Mustard	B-9, JD-6	October,22-January,23	0.5 ha	Seed	4 q	10000.00	40000.00	30000.00
Sesame	Sabitri	August-October,22	0.5 ha	Seed	4 q	10000.00	40000.00	30000.00
Ekangi	<i>K.galanga</i>	May 22- January, 23	0.02 ha	Rhizome	2.5 q	5000.00	25000.00	20000.00
Azolla	<i>A. pinnata</i>	May-August,22	-	Azolla culture	5.0 q	5000.00	25000.00	20000.00
Elephant Foot Yam	Bidhan Kusum	May,22-Decem, 22	0.027 ha	Corm	1.5 q	5000.00	15000.00	10000.00
Vermicompost	-	January,22-December,22	-	Organic inputs	15 q	5000.00	15000.00	10000.00
Earth worms	-	January,22-December,22	-	Bio agents	5000nos	500.00	2500.00	2000.00
Veg. Seedlings	Brinjal, Tomato, Chilli, capsicum, cabbage, cauliflower, broccoli etc	September,22-December, 22	-	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(q)	Cost of inputs (Rs.)	Expected Gross income (Rs.)	Expected Net Income (Rs.)
Paddy	MTU-7029, IR – 36, IET – 4786, GB – 1, MTU – 1010	July- December,22	48 ha	60	Seed	240.00	3,36,000.00	7,20,000.00	3,84,000.00
Black Gram	WBU – 109, PU -31WBU – 108	August- November,22	29 ha	70	Seed	318.00	1,45,000.00	25,44,000.00	23,99,000.00
Sesame	Sabitri	August- November,22	41 ha	100	Seed	410.00	2,50,000.00	32,80,000.00	30,30,000.00
Green Gram	Samrat, Panna, IPM-02-3	February- May,22	25 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
Scientific 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											
MahilaMandals 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
<b>Total</b>	<b>211</b>	<b>6777</b>	<b>2946</b>	<b>9723</b>		<b>325</b>	<b>125</b>	<b>450</b>	<b>7102</b>	<b>3071</b>	<b>10,173</b>

**7. Revolving Fund (in Rs. Lakh)**

<b>Opening balance of 2021-22 (As on 01.04.2021)</b>	<b>Amount proposed to be invested during 2021-22</b>	<b>Expected Return</b>
<b>4,96,225.38</b>	<b>2,78,920.00</b>	<b>4.00</b>

**8. Expected fund from other sources and its proposed utilization**

<b>Project</b>	<b>Source</b>	<b>Amount to be received (Rs. in lakh)</b>
Farmers Scientists Interaction on Rabi- Summer Crops	ATMA, Birbhum	0.20 Lakh
Farmers Scientists Interaction on Integrated Farming System	ATMA, Birbhum	0.20 Lakh
FLD on Crop Diversification through Ekangi cultivation	ATMA, Birbhum	2.50 Lakh
Short Term Research on Integrated Farming System	ATMA, Birbhum	4.0 Lakh
Diploma course in Agricultural Extension for Input Dealers	DAESI	8.0 Lakh

**9. On-farm trials to be conducted****OFT-1**

Season	Summer, 2022 (1 <sup>st</sup> 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 farmer'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 heavy 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,2022
Variety to be used	PDM 84-139
Details of Technology assessment Source of Technology	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 (1 gm/lit) + Lambda cyhalothrin 5% SC (0.5 ml/lit) at 21 days interval Technology Option-III- Fipronil + acetamiprid a 1.6 ml/lit of water at 21 days interval Package of Practices for Pulse Cultivation, ICAR-IIPR, Kanpur, Uttar Pradesh, India.
No. of replication	7 in RCBD
Plot Size (each replication /farmers)	0.13 ha
Total Plot Size	0.91 ha
Critical input	a) KVK Share: Seed, insecticide, fertilizer. b) Farmers Share: irrigation, labour etc.
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, 2022 (1 <sup>st</sup> 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 losses 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 Chlorpyrifos 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, 2022
Details of Technology assessment	Farmers Practice- Application of Chlorpyrifos 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-III- Chlorantiprole 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 /farmers)	0.13 ha
Total Plot Size	0.91 ha
Critical input	a) KVK Share: Seed, insecticide, fertilizer. b) Farmers Share: irrigation, labour etc.
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 (1 <sup>st</sup> 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), Home made Form b. Farmer’s Share: Cow
Performance / Monitoring Indicators	Palatability ,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, 2022 (1 <sup>st</sup> 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 <i>et al.</i> 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/l of water and Boron-20 @ 2g/l 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, 2022 (1 <sup>st</sup> 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 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/Blackgram
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 <i>et al.</i> 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/lit 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
Supervisor (s): Dr. Subrata Mandal, Senior Scientist & Head and Sri Palash Ankure, Farm Manager	

**OFT-6**

Season	Rabi, 2022 (1 <sup>st</sup> 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 ( <i>Allium cepa</i> L.) in Red and Lateritic Soils of West Bengal, India. <i>International Journal of Current Microbiology and Applied Sciences</i> .9(4): 2858-2866.
Objective	To study the effect of sulphur application in onion
Details of technology assessment	<u>Farmers' practice</u> : NPK application @ 125-100-100 kg/ha; Source of fertilizer as 10-26-26 (NPK) and Urea (N)  <u>Technology option I</u> : NPK application @ 125-100-100 kg/ha; Source of fertilizer as Urea (N), SSP (16% P <sub>2</sub> O <sub>5</sub> + 12% S) and MOP (K <sub>2</sub> O)  <u>Technology option II</u> : 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

<b>Season</b>	January, 2022 – December, 2022 (2 <sup>nd</sup> year)
<b>Title</b>	Assessing performance of different SHGs with different numbers of product focus areas on annual savings
<b>Problem Definition</b>	The selection of appropriate product focus areas of Self Help Groups (SHGs) is important for efficient group dynamics as well as group performances. The selection of suitable numbers of product focus areas of a SHG is largely influenced by various socio-economic and situational factors which in turn affect the economic performances such as annual savings from the group activities.
<b>Hypothesis</b>	Relatively groups having more than 03 (Three) numbers of product focus areas will have more annual savings as it will enjoy both a higher revenue generation as well as a more favourable economy of scale of business.
<b>Present Situation</b>	Generally in West Bengal situation, the majority of SHGs are having up-to 03 (Three) product focus areas.
<b>Prevalent Practice</b>	The Govt. encourages formation of SHGs with multiple product focus areas [Ref: - Memo No.925/W. B. S. R. L. M / Prog / 6P – 176 / 2015, Dated: - 15.09.2015 issued by “Anandadhara”, West Bengal State Rural Livelihoods Mission (WBSRLM), Panchayats and Rural Development Department, Govt. of West Bengal].
<b>Group Formation System</b>	Generally 10 – 20 numbers of persons of a locality or nearby localities can form a Self Help Group.
<b>Thematic Area</b>	Group dynamics
<b>Objective</b>	To assess the extent of annual savings by different SHGs having different numbers of product focus areas.
<b>SHGs to be involved</b>	Various SHGs having a diverse numbers of product focus areas.
<b>Details of Treatments</b>	<b>Farmers’ Option = T<sub>1</sub> = 03 Numbers of Product Focus Areas</b> <b>T<sub>2</sub>= Two Numbers of Product Focus Areas</b> <b>T<sub>3</sub>= Single Number of Product Focus Area</b> <b>T<sub>4</sub>= More than Three Numbers of Product Focus Areas</b>
<b>Source of Technology</b>	Overview of Frontline Extension Tools and Designing OFTs in Extension, R. Roy Burman, ICAR-IARI, New Delhi
<b>Numbers of Replications</b>	10 (Ten)
<b>Numbers of SHGs per Member Size Group</b>	10 (Ten)
<b>Total Numbers of SHGs</b>	40 (Thirty)
<b>Critical Input</b>	a. KVK Share: Assessing the economic performances of SHGs having various numbers of product focus areas. b. Farmers’ Share: Running of SHG activities and maintaining the financial records of the SHGs.
<b>Performance / Monitoring Indicators</b>	<ul style="list-style-type: none"> <li>•Savings from own contribution of members</li> <li>•Saving from interest of loan to its member and outsider</li> <li>•Income from different economic activities of the group</li> <li>•Revolving fund receive from block</li> <li>•Savings from donation</li> <li>•Other sources of income-Income from lottery, Harvesting of crops, organizing stall in fairs, social festivals etc.</li> </ul>
<b>Approximate Costs shared by the KVK</b>	Rs. 5,000.00
Supervisor (s): Dr Prabuddha Ray, Subject Matter Specialist (Agricultural Extension)	

## OFT- 8

Season	Rabi 2022-23. (1 <sup>st</sup> 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:	1 <sup>st</sup> to 3 <sup>rd</sup> week of November, 2022.
Details of technology	Farmers' Practice : Planting on Third week of November
	Technology Option - I : Planting on November 1 <sup>st</sup> week
	Technology Option – II- Planting on November 2 <sup>nd</sup> 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/ farmers :	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

**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.)
1.	FLD on Baby Corn & Silo pit funded by ICAR-IIMR, Ludhiana	3.0.lakh
2	Bio efficiency data generation of Lufenuron 5.4% EC on Blackgram for control of gram pod borer by Rainbow Agro Sciences	3.0 lakh
3	Trial on Nano DAP in Kharif paddy by IFFCO	0.40 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 2020-21	Proposed date during 2022-23
27 <sup>th</sup> . February, 2021	25 <sup>th</sup> January, 2022

**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, 2021 to January, 2022) Rs. In lakh	Anticipated Requirement as Per BE (2022-23) Rs. In lakh
<b>Recurring</b>		
Pay and Allowances	107.505	166.00
7 <sup>th</sup> CPC Arrear	36.00	
TA	00.01	00.50
HRD	-	-
Contingencies	25.81	23.00
<b>TOTAL(A)</b>		
<b>Non Recurring</b>		
<b>Works</b>		
i) Repair & Renovation of Building	3.90	-
ii) Irrigation system	-	4.00
<b>Vehicle</b>		
Equipment, Furniture and Furnishing	-	2.30
Soil and Water Testing / Plant Diagnostic Lab	-	-
Library	-	0.10
<b>TOTAL (B)</b>	<b>3.90</b>	<b>6.40</b>
<b>TOTAL (A + B)</b>	<b>173.225</b>	<b>195.90</b>

## N. B.

\* (i) Irrigation system with Submersible of KVK seed production farm -Rs. 4 .00 lakh

\* (ii) Administrative Building 1st. Floor (550.00 Square Meters) – Rs. 275.00 Lakhs

\* (iii) Trainees' Hostel 1st. Floor (305.00 Square Meters) – Rs. 137.25 Lakhs

\* (iv) Construction of Processing Unit (400.00 Square Meters) – 140.00 Lakhs

\*\* (i) Office Furniture, AC Machines etc. – Rs. 04.00 Lakhs and \*\* (ii) Farm Equipment – Rs. 03.00 Lakhs

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: -

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: -**

**Earth-Worms (*Eisenia foetida*)** 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.

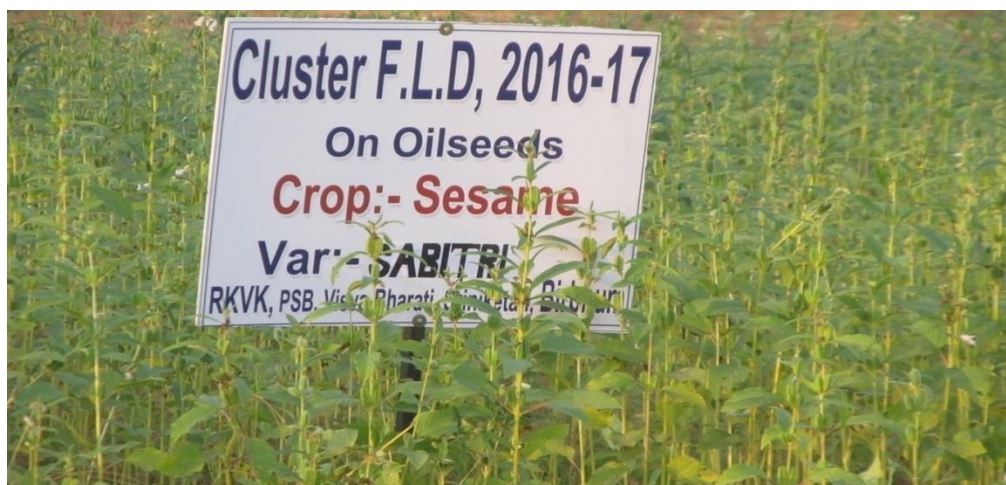
**Legume and Non-Legume** Fodders should be mixed in 1: 3 ratio.

**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.



**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**





# ACTION PLAN

(JANUARY, 2022 - DECEMBER, 2022)

Submitted to

**ICAR- ATAR- Agricultural Technology Application  
Research Institute, Kolkata (Zone-V)**

**Kolkata, Bhumi Vihar Complex  
Block- GB, Sector- III, Salt Lake City  
Kolkata- 700097, West Bengal**

Submitted By

**Rathindra Krishi Vigyan Kendra**  
Palli Siksha Bhavana  
(Institute of Agriculture)  
Visva-Bharati  
Sriniketan, Birbhum  
West Bengal- 731236

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