



ACTION PLAN

(April 2020 to March 2021)



Krishi Vigyan Kendra, Angul, Odisha Zone-V (ICAR-ATARI, Kolkata)



**Odisha University of Agriculture & Technology
Bhubaneswar**

REVISED PROFORMA FOR ACTION PLAN 2020

1. Name of the KVK: Krishi Vigyan Kendra, Angul

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2. Name of host organization :

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3. Training programme to be organized (January to December 2020)

(a) Farmers and farmwomen

Thematic area	Title of Training	No.	Duration (day)	Venue On/ Off	Tentative Date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
IPM	Integrated pest management in kharif paddy	1	1	Off	05.09.2020	3		2	1	10	9	15	10	25
IPDM	Integrated disease and pest management in solanaceous vegetables	1	1	Off	21.08.2020	5	1	4	6	5	4	14	11	25
Production of bio control agents and bio pesticides	Use of neem and neem based pesticides.	1	1	Off	18.09.2020	3	4	4	2	8	4	15	10	25
IPM	Management of pod borers in pigeonpea	1	1	Off	18.11.2020	1		2	3	12	7	15	10	25
IDM	Disease management in banana	1	1	Off	12.10.2020			4	6	10	5	14	11	25
IPM	Integrated pest management in cole crops	1	1	Off	22.12.2020	4	2		3	12	4	16	9	25
IPM	Management of major insect pests in greengram	1	1	Off	14.08.2020	6				11	8	17	8	25
IPM	Management of insect pests in cashew apple	1	1	Off	22.01.2021	2	3	7	3	9	1	18	7	25
Safe use of pesticides	Need based safe use of pesticides	1	1	Off	24.11.2020	3	1	5	6	8	2	16	9	25
IPDM	Seed treatment for insect pests and disease management	1	1	Off	15.02.2021	1	2	7	2	7	6	15	10	25
Protected cultivation	Protray method of seedling raising in vegetable	1	1	Off	7.08.2020	0	0	4	6	10	5	14	11	25
Production of low volume and high value crops	Trellis system of growing cucurbit vegetables	1	1	Off	21.09.2020	5	1	4	6	5	4	14	11	25

Thematic area	Title of Training	No.	Duration (day)	Venue On/Off	Tentative Date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Integrated nutrient management	Micronutrient application in vegetable crops	1	1	Off	15.10.2020	3	0	2	1	10	9	15	10	25
Household food security by kitchen gardening and nutrition gardening	Nutritional gardening for rural farm women	1	1	Off	17.07.2020								25	25
Income generation activities for empowerment of rural Women	Paddy straw mushroom cultivation in crumpled straw	1	1	Off	25.07.2020								25	25
Location specific drudgery reduction technologies	Drudgery reduction by using root wash two row rice transplanters	1	1	Off	07.08.2020								25	25
Location specific drudgery reduction technologies	Drudgery reduction by using Akola mini dal mill	1	1	Off	09.09.2020								25	25
Design and development of low/minimum cost diet	Preparation of low cost nutritious recipes from locally available foods.	1	1	Off	25.09.2020								25	25
Storage loss minimization techniques	Storage loss minimization techniques in cereals and pulses	1	1	Off	16.10.2020								25	25
Value addition	Preparation of sweet potato and pulse flour fortified noodles	1	1	Off	16.01.2021								25	25
Value addition	Value added products from Tomato	1	1	Off	20.02.2021								25	25
Value addition	Value added product from Jackfruit	1	1	Off	05.03.2021								25	25
Value addition	Preparation of Mango RTS and amchur powder	1	1	Off	20.03.2021								25	25
Production and management technology	Improved package & practices of Medicinal & aromatic crops	1	1	Off	15.07.2020	2		1		22		25		25
Extension Management	Strengthening of rainfed production system for sustainable agriculture	1	1	Off	29.07.2020	2		1		22		25		25

Thematic area	Title of Training	No.	Duration (day)	Venue On/ Off	Tentative Date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Information & Communication Technology	ICT enabled platforms for agricultural development	1	1	Off	20.08.2020	2		1		22		25		25
Poultry Management	Backyard poultry farming with improved managerial practices	1	1	Off	13.07.2020	2	15			6	2	8	17	25
Disease Management	Care and management of Mastitis in dairy animals	1	1	Off	05.08.2020	2		1		22		25		25
Poultry Management	Complete documentation and record keeping in poultry farming	1	1	Off	27.08.2020	2		1		22		25		25
Dairy Management	Repeat breeding and anestrus management in dairy animals	1	1	Off	07.09.2020	2				22	1	24	1	25
Goat farming	Feeding and health management in goats	1	1	Off	24.09.2020	2		1			22	3	22	25
Disease Management	Various Contagious disease & their control in dairy animals	1	1	Off	09.10.2020	2		1		22		25		25
Feed management	Feeding of processed crop residues for better utilization by dairy animal	1	1	Off	02.11.2020	2		1		22		25		25
Poultry Management	Management of heat and cold stress in poultry	1	1	Off	27.11.2020	2		1		22		25		25
Production of quality animal products	Clean milk production	1	1	Off	02.12.2020	2		1		22		25		25
Feed management	New trends of feeding in dairy animals	1	1	Off	28.12.2020	2		1		22		25		25
Carp fry and fingerling rearing	Carp fingerling production in seasonal ponds	1	1	Off	22.07.2020	1	2	1	1	7	13	9	16	25

Thematic area	Title of Training	No.	Duration (day)	Venue On/Off	Tentative Date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Production Management	Water management practices for enhancement of fish yield	1	1	Off	19.08.2020	1	2	1	1	7	13	9	16	25
Production Management	Production of stunted yearlings	1	1	Off	24.09.2020	1	2	1	1	7	13	9	16	25
Production Management	Culture of Amur Carp with IMC & its scientific management	1	1	Off	15.07.2020	1	2	1	1	7	13	9	16	25
Hatchery management and culture of freshwater prawn	Monoculture of F. W. Prawn	1	1	Off	25.11.2020	1	2	1	1	7	13	9	16	25
Composite fish culture & fish disease	Fish Disease diagnosis and management	1	1	Off	08.12.2020	1	2	1	1	7	13	9	16	25

(b) Rural youths

Thematic area	Title of Training	No.	Duration (day)	Venue On/Off	Tentative Date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Production of bio control agents and bio pesticides	Preparation procedures of different biopesticides	1	2	On	28.08.2020			5	2	6	2	11	4	15
IPM	Preparation of all kinds of insect traps use in pest management	1	2	On	23.12.2020	5	1	3	1	3	2	11	4	15
Bee-keeping	Rearing of Honey Bee	1	4	On	12.01.2021	1	1	3	2	2	1	6	4	10
Enterprise Development	Mushroom spawn production techniques	1	2	On	12.08.2020	1	2	1	2	4	5	6	9	15
Income generation activities for empowerment of rural Women	Oyster mushroom cultivation by different substrate	1	2	On	24.11.2020		3				12		15	15
Value addition	Women empowerment through processing and value addition of fruits and vegetables	1	4	On	21.1.2021								10	10

Thematic area	Title of Training	No.	Duration (day)	Venue On/ Off	Tentative Date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Entrepreneurship development	Project writing techniques for availing government support	1	2	On	08.09.2020		6			9		9	6	15
Entrepreneurship development	Agri-entrepreneurship development & farming innovations for youth for agricultural development	1	2	On	07.10.2020		6			9		9	6	15
Entrepreneurship development	Migrant workers in commercial agriculture	1	2	On	05.11.2020		6			9		9	6	15
Feed management	Hydroponic fodder cultivation for livestock feed management	1	2	On	14.10.2020					9	6	9	9	15
Disease Management	Important diseases of poultry and their prevention	1	2	On	12.01.2021					9	6	9	6	15
Dairying	Commercial dairy farming	1	5	On	04.01.2021		4			6		6	4	10
Production Management	Use of FRP Carp hatchery for fish seed production	1	2	On	25.8.2020	1		1		8	5	10	5	15
Fish feed preparation & its application to fish pond, like nursery, rearing & stocking pond	Use of different types of probiotic for augmentation of fish yield	1	2	On	19.8.2020		1		1	8	5	8	7	15
Fish feed preparation & its application to fish pond, like nursery, rearing & stocking pond	Low cost fish feed preparation methods and its use	1	5	On	24.11.2020					5	5	5	5	10

(c) Extension functionaries

Thrust area/ Thematic area	Title of Training	No.	Duration (day)	Venue On/ Off	Tentative Date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
IPM	Integrated pest management practices in different field crops	1	1	Off	25.09.2020	2		3	1	4		9	1	10
IDM	Integrated disease management for different vegetables	1	1	On	23.02.2021	1	1	4			4	5	5	10
Location specific drudgery reduction technologies	Drudgery reduction of farm women through women friendly implements	1	1	On	18.09.2020		3				12		12	15
Low cost and nutrient efficient diet designing	Preparation of Nutri-guide for different age groups	1	1	On	22.12.2020		3				12		12	15
Information & Communication Technology	Digital agriculture for profit oriented farming	1	2	On	05.08.2020					10	5	10	5	15
Group dynamics	Gender & group dynamics in subsistence farming	1	2	On	20.11.2020					10	5	10	5	15
Extension Management	Methods of analysing impact of agriculture technology	1	2	On	09.12.2020					10	5	10	5	15
Disease diagnosis	Post-mortem examination of domestic animals for diagnosis	1	1	On	18.11.2020					10	5	10	5	15
Disease management	Bird flu and its preventive measures	1	1	On	20.01.2021					10	5	10	5	15
Production Management	Innovative Aquaculture Practices	1	2	On	16.12.2020	1		1		8	5	10	5	15
Production Management	Medium carp culture with IMC	1	2	On	23.08.2020		1		1	7	6	7	8	15

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													
Cropping Systems													
Crop Diversification													
Integrated Farming													
Water management													
Seed production													
Nursery management													
Integrated Crop Management													
Fodder production													
Production of organic inputs													
Others, (cultivation of crops)													
TOTAL													
II. Horticulture													
a) Vegetable Crops													
Integrated nutrient management	1	10	9	19	3		3	2	1	3	15	10	25
Water management													
Enterprise development													
Skill development													
Yield increment													
Production of low volume and high value crops	1	5	4	9	5	1	6	4	6	10	14	11	25
Off-season vegetables													
Nursery raising													
Exotic vegetables like Broccoli													
Export potential vegetables													
Grading and standardization													
Protective cultivation (Green Houses, Shade Net etc.)	1	10	5	15				4	6	10	14	11	25
Others, if any (Cultivation of Vegetable)													
TOTAL	3	25	18	43	8	1	9	10	13	23	43	32	75
b) Fruits													

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			
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													
c) Ornamental Plants													
Nursery Management													
Management of potted plants													
Export potential of ornamental plants													
Propagation techniques of Ornamental Plants													
Others, if any													
TOTAL													
d) Plantation crops													
Production and Management technology													
Processing and value addition													
Others, if any													
TOTAL													
e) Tuber crops													
Production and Management technology													
Processing and value addition													
Others, if any													
TOTAL													
f) Spices													
Production and Management technology													
Processing and value addition													
Others, if any													
TOTAL													

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			
g) Medicinal and Aromatic Plants													
Nursery management													
Production and management technology	1	22		22	2		2	1		1	25		25
Post harvest technology and value addition													
Others, if any													
TOTAL	1	22		22	2		2	1		1	25		25
III. Soil Health and Fertility Management													
Soil fertility management													
Soil and Water Conservation													
Integrated Nutrient Management													
Production and use of organic inputs													
Management of Problematic soils													
Micro nutrient deficiency in crops													
Nutrient Use Efficiency													
Soil and Water Testing													
Others, if any													
TOTAL													
IV. Livestock Production and Management													
Dairy Management	1	22	1	23	2		2				24	1	25
Poultry Management	3	50	2	52	6	15	21	2		2	58	17	75
Piggery Management													
Rabbit Management													
Disease Management	2	44		44	4		4	2		2	50		50
Feed management	2	44		44	4		4	2		2	50		50
Production of quality animal products	1	22		22	2		2	1		1	25		25
Others, if any (Goat farming)	1		22	22		2	2	1		1	3	22	25
TOTAL	10	182	25	207	18	17	35	8	-	8	210	40	250
V. Home Science/ Women empowerment													
Household food security by kitchen gardening and nutrition gardening	1		25									25	25
Design and development of low/minimum cost diet	1		25									25	25

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			
Designing and development for high nutrient efficiency diet													
Minimization of nutrient loss in processing													
Gender mainstreaming through SHGs													
Storage loss minimization techniques	1		25									25	25
Enterprise development													
Value addition	4		100									100	100
Income generation activities for empowerment of rural Women	1		25									25	25
Location specific drudgery reduction technologies	2		50									50	50
Rural Crafts													
Capacity building													
Women and child care													
Others, if any													
TOTAL	10	-	250	250	-	-	-	-	-	-	-	250	250
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													
Post Harvest Technology													
Others, if any													
TOTAL													
VII. Plant Protection													
Integrated Pest Management	5	54	29	83	16	5	21	11	10	21	81	44	125
Integrated Disease Management	1	10	5	15				4	6	10	14	11	25
Integrated Pest & Disease Management	2	12	10	22	6	3	9	11	10	21	29	21	50

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			
Bio-control of pests and diseases													
Production of bio control agents and bio pesticides	1	8	4	12	3	4	7	4	2	6	15	10	25
Safe use of pesticides	1	8	2	10	3	1	4	5	6	11	16	9	25
TOTAL	10	92	50	142	28	13	41	35	34	69	155	95	250
VIII. Fisheries													
Integrated fish farming													
Carp breeding and hatchery management													
Carp fry and fingerling rearing	1	7	13	20	1	2	3	1	1	2	9	16	25
Composite fish culture & fish disease	1	7	13	20	1	2	3	1	1	2	9	16	25
Fish feed preparation & its application to fish pond, like nursery, rearing & stocking pond													
Hatchery management and culture of freshwater prawn	1	7	13	20	1	2	3	1	1	2	9	16	25
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													
Water management practices for enhancement of fish yield	1	7	13	20	1	2	3	1	1	2	9	16	25
Production of stunted yearlings	1	7	13	20	1	2	3	1	1	2	9	16	25
Culture of Amur Carp with IMC & its scientific management	1	7	13	20	1	2	3	1	1	2	9	16	25
TOTAL	6	42	78	120	6	12	18	6	6	12	54	96	150
IX. Production of Inputs at site													
Seed Production													

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST			M	F	T
		M	F	T	M	F	T	M	F	T			
Planting material production													
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													
X. Capacity Building and Group Dynamics													
Leadership development													
Group dynamics													
Formation and Management of SHGs													
Mobilization of social capital													
Entrepreneurial development of farmers/youths													
WTO and IPR issues													
Extension management	1	22		22	2		2	1		1	25		25
ICT	1	22		22	2		2	1		1	25		25
TOTAL	2	44	-	44	4	-	4	2	-	2	50	-	50
XI Agro-forestry													
Production technologies													
Nursery management													
Integrated Farming Systems													
TOTAL													
XII. Others (Pl. Specify)													
TOTAL	42	407	421	828	66	43	109	62	53	115	537	513	1050

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		12	12		3	3					15	15
Bee-keeping	1	2	1	3	1	1	2	3	2	5	6	4	10
Integrated farming													
Seed production													
Production of organic inputs	1	6	2	8				5	2	7	11	4	15
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	1		10	10								10	10
Production of quality animal products													
Dairying	2	15	6	21		4	4				15	10	25
Sheep and goat rearing													
Quail farming													
Piggery													
Rabbit farming													
Poultry production	1	9	6	15							9	6	15
Ornamental fisheries													
Para vets													
Para extension workers													
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	1	5	7	12	1	2	3				6	9	15
IPM	1	3	2	5	5	1	6	3	1	4	11	4	15
Use of FRP Carp hatchery for fish seed production	1	8	5	13	1		1	1		1	10	5	15
Use of different types of probiotic	1	8	5	13		1	1		1	1	8	7	15

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
for augmentation of fish yield													
Low cost fish feed preparation methods and its use	1	5	5	10							5	5	10
Entrepreneurship development	3	27		27		18	18				27	18	45
TOTAL	15	88	61	149	8	30	38	12	6	18	108	97	205

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													
Integrated Pest Management	1	4		4	2		2	3	1	4	9	1	10
Integrated Disease Management	1		4	4	1	1	2	4		4	5	5	10
Integrated Nutrient management													
Rejuvenation of old orchards													
Value addition													
Protected cultivation technology													
Formation and Management of SHGs													
Group Dynamics and farmers organization	1	10	5	15							10	5	15
Information networking among farmers	1	10	5	15							10	5	15
Capacity building for ICT application													
Care and maintenance of farm machinery and implements	1		12	12		3	3					15	15
WTO and IPR issues													
Management in farm animals	1	10	5	15							10	5	15
Livestock feed and fodder production													
Household food security													
Women and Child care													
Low cost and nutrient efficient diet designing	1		12	12		3	3					15	15
Production and use of organic inputs													
Gender mainstreaming through SHGs													
Crop intensification													
Disease diagnosis of animals	1	10	5	15							10	5	15
Innovative Aquaculture Practices	1	8	5	13	1		1	1		1	10	5	15
Medium carp culture with IMC	1	7	6	13		1	1		1	1	7	8	15
Extension management	1	10	5	15							10	5	15
TOTAL	11	69	64	133	4	8	12	8	2	10	81	74	155

4. Frontline demonstration to be conducted*

Crop: Banana

Thrust Area: Reduction of disease incidence in banana

Thematic Area: IDM

Season: Kharif 2020

Farming Situation: Rainfed medium land (Fruits-vegetables)

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	Banana	2ha	Alternate spraying of Bordeaux mixture 1 % and (Tebuconazole 50 WG + Trifloxystrobi 25 WG) @ 200 gm/ha at 15 days interval and additional dose of 25 % potash	% infestation, Yield, B:C ratio	Bordeaux mixture, Nativo	25,000	20,000			2		3		5		5

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/ Off	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Field Day	Field day on IDM practice for management of sigatoka disease in banana	1	Farmers and Farm women	1	Off	0	5	0	2	14	9	14	16	30
Training	Disease management in banana	1	Farmers and Farm women	1	Off	2	2	7	2	9	3	7	18	25

Crop: Cashew apple

Thrust Area: Identification of the key pest and its management

Thematic Area: IPM

Season: Rabi 2021

Farming Situation: Rainfed upland

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	Cashew Apple	2ha	Application of Lambda cyhalothrin 4.9CS @ 0.003% followed by profenophos @ 0.05% or vice versa at flushing and flowering stage	% of damage by TMB, no. of nymphs / m ² , Additional income over additional investment, Yield, B:C ratio	Lambda cyhalothrin, profenophos	30,000	20,000	2		1		2		5		5

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/ Off	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Field Day	Field day on Integrated management of Tea Mosquito Bug in Cashew Apple	1	Farmers and Farm women	1	Off	3	2	8	4	9	4	20	10	30
Training	Management of insect pests in cashew apple	1	Farmers and Farm women	1	Off	2	2	7	2	9	3	7	18	25

Crop: Brinjal

Thrust Area: To reduce the wilting incidence in brinjal with proper cultural and chemical practices

Thematic Area: IDM

Season: Kharif 2020

Farming Situation: Rainfed medium land

Sl. No.	Crop & variety / Enterprises	Proposed Area (ha)/ Unit (No.)	Technology package for demonstration	Parameter (Data) in relation to technology demonstrated	Cost of Cultivation (Rs.)			No. of farmers / demonstration								
					Name of Inputs	Demo	Local	SC		ST		Other		Total		
								M	F	M	F	M	F	M	F	T
3	Brinjal	2ha	Seed treatment with (Metalaxyl + Mancozeb) @ 2gm/kg followed by soil application of Carbofuran 3G @ 1kg a.i./ha at planting and soil drenching with Carbendazim 0.15% + Streptocycline 0.015%	Additional income over additional investment, % of wilting, yield B.C Ratio	Master, Carbofuran and Carbendazim 0.15% + Streptocycline 0.015%	18,000	15,000	1	1	1		2		4	1	5

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/ Off	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Field Day	Field day on Integrated management of wilt complex of brinjal during Kharif	1	Farmers and Farm women	1	Off	2	3	8	3	10	4	20	10	30
Training	Integrated disease and pest management in solanaceous vegetables	1	Farmers and Farm women	1	Off	1	0	5	2	12	5	18	7	25

Crop: Cauliflower

Thrust Area: Identification of key pest and its management with proper cultural and chemical practices as a component of IPM

Thematic Area: IPM

Season: Rabi 2021

Farming Situation: Irrigated medium land

Sl. No.	Crop & variety / Enterprises	Proposed Area (ha)/ Unit (No.)	Technology package for demonstration	Parameter (Data) in relation to technology demonstrated	Cost of Cultivation (Rs.)			No. of farmers / demonstration								
					Name of Inputs	Demo	Local	SC		ST		Other		Total		
								M	F	M	F	M	F	M	F	T
4	Cauliflower	2ha	Growing of mustard as trap crop 16; 1 ratio, 15days before transplanting of main crop + Ph. trap @ 25/ha and alternate spraying of Neem oil 5% and Spinosad 45SC @ 125ml/ha	% of infestation, Additional income over additional investment, Yield and B:C ratio	Pheromone trap, Neem oil and Spinosad	25,000	22,000			2		3		5		5

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/ Off	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Field Day	Field day on Integrated management of DBM in cole crops during rabi	1	Farmers and Farm women	1	Off	3	2	8	4	9	4	20	10	30
Training	Integrated pest management in cole crops	1	Farmers and Farm women	1	Off	2	2	7	2	9	3	7	18	25

Crop: Tomato

Thrust Area: Promotion of high yielding variety cultivation in vegetables for increasing yield

Thematic Area: Production of low volume and high value crops

Season: Rabi

Farming Situation: River valley alluvial with medium rainfall

Sl. No.	Crop & variety / Enterprises	Proposed Area (ha)/ Unit (No.)	Technology package for demonstration	Parameter (Data) in relation to technology demonstrated	Cost of Cultivation (Rs.)			No. of farmers / demonstration								
					Name of Inputs	Demo	Local	SC		ST		Other		Total		
								M	F	M	F	M	F	M	F	T
5	Tomato (Arka Rakhyak)	0.4	Triple resistant tomato variety Arka Rakhyak	Cost of intervention, additional income over additional investment Yield (q/ha), B:C ratio	Seedlings of Arka Rakhyak	22,000	20,000	1		1		3		5		5

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/ Off	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Field Day	Field day on triple disease resistance var. Arka rakhyak	1	Farmers and Farm women	1	Off	3	2	8	4	9	4	20	10	30
Training	Training on micronutrient application in vegetable crops	1	Farmers and Farm women	1	Off	2	2	7	2	9	3	7	18	25

Crop: Drumstick

Thrust Area: Promotion of improved variety of drumstick for higher yield

Thematic Area: Production of low volume and high value crops

Season: Kharif

Farming Situation: Rainfed upland

Sl. No.	Crop & variety / Enterprises	Proposed Area (ha)/ Unit (No.)	Technology package for demonstration	Parameter (Data) in relation to technology demonstrated	Cost of Cultivation (Rs.)			No. of farmers / demonstration								
					Name of Inputs	Demo	Local	SC		ST		Other		Total		
								M	F	M	F	M	F	M	F	T
6	Drumstick (Bhagya)	1	Improved drumstick variety Bhagya	Cost of intervention, additional income over additional investment Yield (q/ha), B:C ratio	Seedlings of Bhagya	20000	15000	2				3		5		5

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/ Off	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Field Day	Field day on Improved drumstick variety Bhagya	1	Farmers and Farm women	1	Off	3	2	8	4	9	4	20	10	30

Crop: Vegetables

Thrust Area: Family food and nutritional security.

Thematic Area: Household food security by kitchen gardening and nutrition gardening

Season: Kharif & Rabi 2020-21

Farming Situation: Home stead

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	Organic nutritional garden for Improving Nutritional Security of farm family	0.8	Spinach, Amaranthus, Coriander, Green peas, Carrot, Broccoli, Radish, Tomato, Onion, Cowpea, cucurbits in fencing according to the season with Two Papaya Plants, One Lime, one drumstick and two Banana trees and floriculture in bunds Support structure: Low cost poly tunnel for seedlings raising+ Trellising structure+ Vermi tank	Consumption of vegetables/day Mean increase in consumption of nutrients as compared to RDA (%) B:C Ratio Additional income (%)	Seeds and seedlings	5,000	1,200									10	10

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/ Off	No. of Participants											
						SC		ST		Other		Total					
						M	F	M	F	M	F	M	F	T			
Field day	Organic nutritional garden for Improving Nutritional Security of farm family	1	Farm women	1	Off											30	30
Training	nutritional garden for Improving Nutritional Security of farm family	1	Farm women	1	Off											25	25

Crop/ Enterprise: Demonstration of Akola mini dal mill for processing of pigeon pea for income generation of farm women

Thrust Area: Drudgery reduction through use of farm implements.

Thematic Area: Location specific drudgery reduction technologies.

Season: Kharif-2020

Farming Situation: Home stead

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	Demonstration of Akola mini dal mill	5	Use of Akola mini dal mill	Energy expenditure rate (KJ/min), WHR (beats/min), % reduction in drudgery, % increase in efficiency, Field capacity (kg/hr), Labour (MDs/q), Damaged / Broken (%), recovery (%), Husk(%)	Akola mini dal mill	5,000	-										5	5

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue	No. of Participants												
						SC		ST		Other		Total						
						M	F	M	F	M	F	M	F	T				
Field day	Demonstration of Akola mini dal mill for processing of pigeon pea for income generation of farm women	1	Farm women	1	Off												30	30
Training	Demonstration of Akola mini dal mill for processing of pigeon pea for income generation of farm women	1	Farm women	1	Off												25	25

Crop/Enterprise: Demonstration On Jackfruit wafers to minimize wastage in Peak season

Thrust Area: Value addition

Thematic Area:

Season: Rabi-2021

Farming Situation: Home stead

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	Enterprise	10 nos.	Preparation of Jackfruit wafers(Preparation of jackfruit wafers in solar dryer by dipping the slices in brine solution for 5 mins for color retention and keep inside the solar dryer for 24 -30 hrs	Sensory Evaluation Keeping quality (Month) B:C Ratio Additional income (%)	Solar dryer	2,000	-									10	10

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/ Off	No. of Participants											
						SC		ST		Other		Total					
						M	F	M	F	M	F	M	F	T			
Field day	Field day On Jackfruit wafers to minimize wastage in Peak season	1	Farm women	1	Off											30	30
Training	Demonstration On Jackfruit wafers to minimize wastage in Peak season	1	Farm women	1	Off											25	25

Crop/Enterprise: Demonstration on sweet potato and pulse flour fortified noodles

Thrust Area: Value addition

Thematic Area: Value addition

Season: Rabi-2021

Farming Situation: Home stead

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	Enterprise	10 nos.	Sweet potato and pulse flour fortified noodles. (Mixing + steaming + cooling + drying + addition of salt and water+ kneading+ extrusion+ steaming + drying 60 ⁰ c for 2hrs)	Sensory Evaluation Keeping quality (Month) B:C Ratio Additional income (%)	Noodles making machine (manual)	10,000	1,500									10	10

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/ Off	No. of Participants											
						SC		ST		Other		Total					
						M	F	M	F	M	F	M	F	T			
Field day	Sweet potato and pulse flour fortified noodles	1	Farm women	1	Off											30	30
Training	Demonstration on sweet potato and pulse flour fortified noodles	1	Farm women	1	Off											25	25

Crop: Poultry

Thrust Area: To solve the problem of poor weight gain in local poultry varieties

Thematic Area: Poultry management

Season: Rabi-2020-21

Farming Situation: Poultry based homestead

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 variety 'Kadakhath'	10 no (200 birds)	Demonstration on improved backyard poultry breed Kadakhath: Kadakhath birds body weight at 20 weeks 1170 gms, average annual egg production 190, production parameters show tolerance to acute stress conditions	Body weight at 1 month, 2 months, 4 month and at start of laying, egg production per annum	Kadakhath chicks	2500/unit	1500/unit	2	1	1	1	5		8	2	10

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/ Off	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Training	Backyard poultry farming with improved managerial practices	1	F/FW	1 day	Off	2	15	-	-	6	2	8	17	25
Training	Complete documentation and record keeping in poultry farming	1	F/FW	1 day	Off	2		1		22		25		25
Field Day	Demonstration on improved backyard poultry breed Kadakhath	1	F/FW	1 day	Off	2	15	-	-	6	2	8	17	25

Enterprise: Poultry

Thrust Area: Reduction in mortality of chicks during brooding by proper brooding management.

Thematic Area: Poultry Management

Season: Rabi, 2020-21

Farming Situation: Poultry based homestead

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	5 no	Demonstration on artificial brooding management in chicks (Brooding management for 21 days with floor space of 0.3 sqft/bird with help of chick guards, artificial heat @ 1-3 watt per chick , feeders and drinkers @ 1 each per 50 chicks, vaccination against RD on 7th day, 28th day, IBD on 14th day . Use of electrolytes, preventive antibiotics during brooding.)	Chick mortality rate during brooding period, body weight at 21 days, survivability of birds till start of laying.	Brooder	8920/ unit	8320/ unit	1		1		3		5		5

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/Off	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Training	Management of heat and cold stress in poultry	1	F/FW	1 day	Off	2		1		22		25		25

Enterprise: Dairy

Thrust Area: Improve milk production and quality of milk

Thematic Area: Feed management

Season: Kharif, 2020-21

Farming Situation: Semi intensive dairy farming

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
13	Dairy	5 no	Demonstration on bypass fat feeding for increasing milk production in dairy cows (Bypass fat feeding @ 15-20gm/kg of milk production + 60 gm Mineral mixture/day/cow during first 3 months of lactation to compensate for negative energy balance and high mineral drain via milk)	Average Milk price (in Rs) and Milk yield in lt. during first period of bypass fat feeding Milk price	Bypass fat and mineral mixture	8954/ cow	7600/cow	1		1		3		5	5

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/Off	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Training	New trends of feeding in dairy animals	1	F/FW	1 day	Off	2		1		22		25		25

Enterprise: Goatery

Thrust Area: Reduction in kid mortality by providing supplementary feeding

Thematic Area: Goat farming

Season: Rabi, 2020-21

Farming Situation: Semi intensive goat rearing

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	Goat	5 no	Demonstration on concentrate feeding in mother goats (Does) for reducing kid mortality: Rearing of mother goats (Does) in last month of pregnancy and early lactation (during the period scarcity of green fodder i.e. lean season) by use of concentrate (Crude protein 16% -18 %) + gram straw ad libitum in the ratio of 50:50.	Kid mortality rate (at weaning), body weight of kids at birth and at weaning	Feed concentrate (Crude protein 16% -18 %) + gram straw	2520/unit	1800/unit	1		1		3		5		5

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/Off	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Training	Feeding and health management in goats	1	F/FW	1 day	Off	2		1		22		25		25

Crop: IMC and Amur carp

Thrust Area: To adopt Diversified Pisciculture practices through replacement of slow-growing Mrigal with genetically improved common carp for increasing the avg. yield

Thematic Area: Production Management

Season: Kharif, 2020

Farming Situation: Low land- Kharif & Rabi - Pond Based

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	IMC and Amur carp	05 no. / 0.4 ha.	Stocking density- 10000 fingerlings per ha with species ratio- catla: rohu: Amur carp :: 2.5:6:1.5	Growth parameters- Length (mm) & Weight (gm), growth rate (%)	Fish fingerlings, feed, Lime, cow dung, urea, SSP, CIFAX	30,000	26,000							5		5		5

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/ Off	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Field Day	Culture of Amur Carp with IMC & its scientific management	1	-	1	Off					20	30	20	30	50
Training	Culture of Amur Carp with IMC & its scientific management	1	F/FW	1	Off	1	2	1	1	7	13	9	16	25

Crop: IMC

Thrust Area: To Adopt fingerling raising technique as short term income generating activity for utilization of seasonal ponds

Thematic Area: Production Management

Season: Kharif, 2020

Farming Situation: Low land- Kharif - Pond Based

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
16	IMC	05 no./ 0.1 ha.	Stocking of 1,00,000 IMC fry, feeding @ 8% of biomass (1 st month) & 6% (rest 2 months), liming @ 80-100 kg/ac in seasonal water bodies for fingerling production	Growth parameters- Length (mm) & Weight (gm), growth rate (%)	Fish fry, feed, Lime, cow dung, urea, SSP, CIFAX	34,000	30,000			2		3		5		5

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/ Off	No. of Participants									
						SC		ST		Other		Total			
						M	F	M	F	M	F	M	F	T	
Field Day	Carp fingerling production in seasonal ponds	1	-	1	Off					40	10	40	10	50	
Training	Carp fingerling production in seasonal ponds	1	F/FW	1	Off	1	2	1	1	7	13	9	16	25	

Crop: Farm made Fish feed mixture

Thrust Area: To use farm made pellet feed using locally available feed ingredients for enhancement of plankton quantity & pond productivity

Thematic Area: Feed Management

Season: Rabi, 2020-21

Farming Situation: Low land- Kharif & Rabi - Pond Based

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
17	Farm made Fish feed mixture	05 no./0.4 ha.	Preparation of sinking pellet feed using locally available feed ingredients GNOC: MOC : Soya badi powder: dry fish and prawn powder :vitamin mineral mixture: RB (1:2:1:1:5) by small scale feed grinder (20-30 kg/hr) and small scale feed pelletizer (20-30 kg/hr) and feeding @ 5-2% of body weight daily	Growth parameters- Length (mm) & Weight (gm), growth rate (%), FCR	Fish fingerlings, farm made feed mixture, Lime, cow dung, urea, SSP, CIFAX	28,000	22,000			2		3		5		5

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/ Off	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Training	Low cost fish feed preparation methods and its use	1	VT	5	On	-	-	-	-	5	5	5	5	10

Crop: IMC & Floating feed

Thrust Area: To Include floating feed in IMC Yearling production for more growth, yield & income

Thematic Area: Production Management

Season: Rabi, 2020-21

Farming Situation: Low land Rabi-Pond Based

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
18	Rabi, 2020-21	05 no./ 0.4 ha.	Stocking of IMC fingerlings @ 50000 no./ ha, fed with floating feeds of 2 mm size @ 5 % of their body weight and culture for 10-12 months	Growth parameters- Length (mm) & Weight (gm), growth rate (%)	Fish fry, Floating feed, Lime, cow dung, urea, SSP, CIFAX & probiotic	50,000	30,000					5		5		5

Extension and Training activities under FLD:

Activity	Title of Activity	No.	Clientele	Duration	Venue On/ Off	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Training	Production of stunted yearlings	1	F/FW	1	Off	1	2	1	1	7	13	9	16	25

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

Case Study-1 [Agril.Extension]

TITLE: CONSUMER PREFERENCE STUDY FOR VARIOUS VEGETABLES IN THE DISTRICT

Expected output: Result of the study will help the farmers to plan market led production for better price and will enable the KVK for utilizing farmers' preference in selection of varieties for KVK intervention.

Identified vegetables: Brinjal, Chilli, Cucumber, Bittergourd, Okra

Sl.No.	Name of the Vegetable	Parameters to be studied	Highly preferred	Moderately preferred	Less preferred
1	Brinjal	Colour: (Green/Black/Purple/ White)			
		Size: (Large/ Medium/ Small)			
		Shape: (Elongated/ Round/ Oval/ Oblong)			
		With thorn/ thorn less			
		Preference for specific production pockets			
2	Chilli	Colour: (Green/Black/White)			
		Size:(Large/ Medium/ Small)			
		Shape: (Round/Slender/ Medium robust)			
		Pungency			
		Aroma			
		Preference for specific production pockets			
3	Cucumber	Colour: (Green/ White)			
		Size: (Large/ Medium/Small)			
		Texture: (Smooth/Fine)			
		Preference for specific production pockets			
4	Bittergourd	Colour: (Dark green/ Green/ White)			
		Size: (Large/ Medium/Small)			
		Firm spine/ smooth spine			
		Preference for specific production pockets			
5	Okra	Colour: (Green/ Dark green/ Violet)			
		Size: (Large/ Medium/Small)			
		Soft/Hard			
		Preference for specific production pockets			

Any other suitable parameters can be taken keeping in view the consumer preferences in a specific district.

Case Study:2

STUDY ON PERFORMANCE OF POULTRY SUPPLY CHAIN FOR SUSTAINABILITY

Problems and prospects of small scale poultry (Broiler) production system: A supply chain analysis

Objectives:

1. To evaluate the performance (problems as well as prospects) of poultry supply chain
2. Suggesting strategies in order to enable the smallholders for better decision making in future

Parameters to be studied

1. Grading
2. Transport
3. Cold logistics
4. Damage during transit
5. Delay in delivery
6. Price realization
7. Lost sales
8. Relationship with all
9. Input procurement
10. Packaging cost

Output: Creation of sustainable model

Poultry producers and stakeholders can achieve the future behavior of particular inputs and outputs which is the key to making decisions for better profitability and sustainability

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

Name of the Crop / Enterprise	Variety / Type	Period From 1.4.2020 to 31.3.2021	Area (ha.)	Details of Production				
				Type of Produce	Expected Production (quintals)	Cost of inputs (Rs.)	Expected Gross income (Rs.)	Expected Net Income (Rs.)
Arhar	PRG 176	Kharif	0.4	C	4			
Greengram	IPM 02-14	Rabi	0.4	C	3			
Tomato	Arka Rakshak	July 20 to March 21			10,000 nos.	15,000	20,000	5,000
Brinjal	Akshita 30	July 20 to March 21			10,000 nos.	15,000	20,000	5,000
Chilly	Arka Harit	July 20 to March 21			5,000 nos.	7,500	10,000	2,500
Cabbage	Sigra	Sep. 20- Dec. 20			2,000 nos.	3,000	4,000	1,000
Cauliflower	Kamya	Sep. 20- Dec. 20			2,000 nos.	3,000	4,000	1,000
Broccoli	F1 hyb.	Sep. 20- Dec. 20			500 nos.	750	1,000	250
Papaya	Ranchi dwarf	July 20 to March 21			1,000 nos.	12,000	15,000	3,000
Drumstick	Bhagya	July 20 to March 21			1,000 nos.	12,000	15,000	3,000
Onion	Bhima Dark Red	July 20 to March 21			50,000 nos.	2,000	3,000	1,000
Marigold	Seracole	Sep. 20- Dec. 20			2,000 nos.	3,500	4,000	500
Capsicum	Swarna Athulya	Sep. 20- Dec. 20			500 nos.	1,500	2,000	500
Guava Gootee	VNR Bihi	July 20 to Sep 20			500 nos.	10,000	25,000	15,000
Mango grafts	Amrapalli	July 20 to Sep 20			200 nos.	4,000	8,000	4,000
Medicinal plants	Mixed as per demand	July 20 to Sep 20			100 nos.	1,100	1,500	400
Advanced fry & fingerlings	Catla, Jayanti Rohu, Mrigal, Amur Carp	Round the year			1,00,000 nos.	30,000	1,10,000	80,000
Ornamental fish young ones	Molly, Guppy, Platy, Swordtail & Goldfish	July 20 to March 21			1,500 nos.	600	1,800	1,200
Poultry	Pallishree, Kadaknath, Aseel	Round the year			2,800 nos.	92,000	1,40,000	48,000
Duckery	Khaki Campbell	Round the year			100 nos.	2500		
Vermicompost	<i>Eisinia foetida</i>	Round the year			10.0 q	8,000	10,000	2,000
Azolla	<i>Azolla caroliniana</i>	Round the year			100 kg			
Honey	<i>Apis cerena indica</i>	Round the year			12 kg	500	4,200	3,700
Mushroom spawn	<i>V.volvaceae, OSM-11, P.sajocaju, Hypsizygous ulmarius</i>	Round the year			5,000 bottles	60,000	70,000	10,000

Name of the Crop / Enterprise	Variety / Type	Period From 1.4.2020 to 31.3.2021	Area (ha.)	Details of Production				
				Type of Produce	Expected Production (quintals)	Cost of inputs (Rs.)	Expected Gross income (Rs.)	Expected Net Income (Rs.)
Mushroom	<i>V.volvaceae, OSM-11, P.sajocaju, Hypsizygous ulmarius</i>	Round the year			2.0 q	6,800	10,000	3,200
Mango, vegetables		March 21			1.0 q	1,000	2,000	1,000

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.)

11. Extension Activities

Sl. No.	Activities/ Sub-activities	No. of activities proposed	Farmers				Extension Officials			Total		
			M	F	T	SC/ ST (% of total)	Male	Female	Total	Male	Female	Total
1.	Field Day	9	255	103	358	1.37	14	6	20	269	109	378
2.	Kisan Mela	3	346	144	490	1.2	34	16	50	380	160	540
3.	Kisan Ghosthi	2	45	20	65	0.8	2	3	5	47	23	70
4.	Exhibition	4	1884	264	2148	10	22	6	28	1884	270	2176
5.	Film Show	13	300	100	400	1.6	2	4	6	302	104	406
6.	Method Demonstrations	12	166	64	230	2.2	2	2	4	118	66	234
7.	Farmers Seminar											
8.	Workshop											
9.	Group meetings	18	288	124	412	0.8	1	1	2	289	125	414
10.	Lectures delivered as resource persons	15	384	89	473	3.2	22	5	27	406	94	500
11.	Advisory Services	54										Mass
12.	Scientific visit to farmers field	163	2409	456	2865	5.6	2	5	7	2411	461	2872

Sl. No.	Activities/ Sub-activities	No. of activities proposed	Farmers				Extension Officials			Total		
			M	F	T	SC/ ST (% of total)	Male	Female	Total	Male	Female	Total
13.	Farmers visit to KVK	1	1892	39	1931	1.6				1892	39	1931
14.	Diagnostic visits	14	237	56	293	0.7	2	5	7	239	61	300
15.	Exposure visits	7	72	13	85	0.3	1	4	5	73	17	90
16.	Ex-trainees Sammelan	1	23	5	28		2	5	7	25	10	35
17.	Soil health Camp											
18.	Animal Health Camp	1	36	10	46	0.1	2	2	4	38	12	50
19.	Agri mobile clinic											
20.	Soil test campaigns											
21.	Farm Science Club Conveners meet	10	232	61	293	5.6	4	3	7	236	64	300
22.	Self Help Group Conveners meetings	1		22	22	3		3	3		25	25
23.	Mahila Mandals Conveners meetings											
24.	Celebration of important days (Agril. Education Day, Jai Kisan Jai Vigyan, Mahila Kisan Divas, Women in Agriculture Day, World Food Day, World Meteorological Day, World Soil Day, National Fish Farmers Day)	7	817	249	1066	7	18	10	28	735	259	1094
25.	Sankalp Se Siddhi											
26.	Swatchta Hi Sewa	4	32	24	56	0.5				32	24	56
27.	Mahila Kisan Diwas	1		29	29	0.5		1	1	0	30	30
28.	Any Other (Specify)											
	Total	340	9418	1872	11118		130	81	211	9376	1953	11500

12. Revolving Fund (in Rs.)

Opening balance of 2020-2021 (As on 01.04.2020)	Amount proposed to be invested during 2020-2021	Expected Return
3,34,400.91	2,00,000	4,00,000

13. Expected fund from other sources and its proposed utilization

Project	Source	Amount to be received (Rs. in lakh)
Mission Sakti Capacity building	State Govt.	3.5

9. On-farm trials to be conducted*

i.	Season:	Kharif 2020
ii.	Title of the OFT:	Assessment of IDM practice for management of root rot in greengram during Kharif season
iii.	Thematic Area:	Integrated Disease Management
iv.	Problem diagnosed:	Lack of awareness on IDM practices for pulses
v.	Important Cause:	Root rot is a major problem found in greengram
vi.	Production system:	
vii.	Micro farming system:	Rainfed medium land
viii.	Technology for Testing:	Assessment of IDM practice for management of root rot in greengram during Kharif season
ix.	Existing Practice:	No treatment or repeated spraying of carbendazim indiscriminately
x.	Hypothesis:	Spraying of new molecules can control the disease in seedling stage
xi.	Objective(s):	To check the spread of root rot in greengram and have more profit
xii.	Treatments:	
	Farmers Practice (FP):	Repeated spraying of mancozeb @ 2gm/lit of water during vegetative stage
	Technology option-I (TO-I):	Spraying of cymoxanil 8% + mancozeb 64% @ 2gm / lit of water
	Technology option-II (TO-II): and so on	Spraying of Azoxystrobin @ 1ml/lit. of water during seedling stage
xiii.	Critical Inputs:	Cymoxanil 8% + mancozeb 64% and Azoxystrobin
xiv.	Unit Size:	0.06 ha
xv.	No of Replications:	10
xvi.	Unit Cost:	1,000
xvii.	Total Cost:	5,000
xviii.	Monitoring Indicator:	% of disease incidence Cost of intervention. Additional income over additional investment, Yield (q/ha), B:C ratio
xix.	Source of Technology (ICAR/ AICRP/ SAU/ Other, please specify):	IIPR, 2010

i.	Season:	Rabi 2021
ii.	Title of the OFT:	Assessment of integrated pest management for serpentine leaf miner in rabi tomato
iii.	Thematic Area:	Integrated pest Management
iv.	Problem diagnosed:	Suitable chemical control measure is not practised
v.	Important Cause:	Severe incidence of serpentine leaf minor
vi.	Production system:	IPM
vii.	Micro farming system:	Rainfed medium land
viii.	Technology for Testing:	Assessment of integrated pest management for serpentine leaf miner in rabi tomato
ix.	Existing Practice:	Indiscriminate repeated spraying of pesticides
x.	Hypothesis:	Need based spraying of chemical control along with cultural practices as a component of IPM can check the infestation of serpentine leaf minor
xi.	Objective(s):	Control of Surpentine leaf minor with different tools of IPM practice
xii.	Treatments:	
	Farmers Practice (FP):	Repeated Spraying of immidacloprid @ 0.4ml/lit
	Technology option-I (TO-I):	Removal of alternate host, growing of seedlings in protected condition, pruning of affected leaves from the beginning, placing of plastic trays@10-12/ha at the base of the plant for monitoring and alternate spraying of Abamectin @ 1.4ml/lit & Cyramazine 50WP @ 2gm/ltr at 10 days interval
	Technology option-II (TO-II): and so on	Removal of alternate host, growing of seedlings in protected cultivation, pruning of affected leaves from the beginning, placing of plastic trays @10-12/ha at the base of the plant for monitoring and alternate spraying of Cartap hydrochloride 50 SP @ 2gm/ ltr of water & Spinosad 45 SC @ 1ml/ 3 ltr of water at 10 days interval
xiii.	Critical Inputs:	Abamectin, Cyramazine, Cartap hydrochloride and Spinosad
xiv.	Unit Size:	0.06ha
xv.	No of Replications:	10
xvi.	Unit Cost:	1,000
xvii.	Total Cost:	5,000
xviii.	Monitoring Indicator:	Yield (q/ha), Economics, Cost of intervention. Additional income over additional investment (q/ha), B:C ratio
xix.	Source of Technology (ICAR/ AICRP/ SAU/ Other, please specify):	Kerla Agriculture Univ., 2015

i.	Season:	Kharif 2020
ii.	Title of the OFT:	Assessment on Rice Transplanters for drudgery reduction of farm women
iii.	Thematic Area:	Drudgery reduction
iv.	Problem diagnosed:	Decreased work efficiency and more drudgery during manual transplanting,
v.	Important Cause:	Bending posture leads to musculoskeletal discomfort and lack of knowledge and skill on improved technologies.
vi.	Production system:	Rice-vegetable-pulse
vii.	Micro farming system:	Rice-vegetable-pulse
viii.	Technology for Testing:	Assessment on Rice Transplanters for drudgery reduction of farm women
ix.	Existing Practice:	Manual Transplanting
x.	Hypothesis:	Farm women by using rice transplanter will reduce drugery
xi.	Objective(s):	To reduce drudgery of farm women To increase work efficiency of farm women.
xii.	Treatments:	
	Farmers Practice (FP):	Manual Transplanting
	Technology option-I (TO-I):	Transplanting of rice seedling by three row rice transplanter
	Technology option-II (TO-II): and so on	Transplanting of rice by Root wash type two row Rice ransplanter
xiii.	Critical Inputs:	Root wash type two row Rice ransplanter, three row rice transplanter
xiv.	Unit Size:	0.4 ha
xv.	No of Replications:	10
xvi.	Unit Cost:	2,000
xvii.	Total Cost:	6,000
xviii.	Monitoring Indicator:	Capacity- (ha/hr), Working heart rate (Beats/min), Energy consumption (KJ/Min)
xix.	Source of Technology (ICAR/ AICRP/ SAU/ Other, please specify):	1-OUAT,2012 2- ESA,BSKKV, Maharastra,2018-19

i.	Season:	Rabi 2020-21
ii.	Title of the OFT:	Assessment of different substrates for oyster mushroom cultivation
iii.	Thematic Area:	Income generation
iv.	Problem diagnosed:	Non availability of paddy straw bundles and non utilization of waste farm residues
v.	Important Cause:	Farm mechanization
vi.	Production system:	Rice-vegetable
vii.	Micro farming system:	Rice-vegetable
viii.	Technology for Testing:	Oyster mushroom <i>P.sajarcaju</i> cultivation with different substrate
ix.	Existing Practice:	Cultivation of <i>P. sajarcaju</i> by using paddy straw as substrate
x.	Hypothesis:	Cultivation of oyster mushroom by use of different substrates
xi.	Objective(s):	Optimum utilization of waste farm residues. Diversification of substrate to supplement income of farm women.
xii.	Treatments:	
	Farmers Practice (FP):	Cultivation of <i>P. sajarcaju</i> by using paddy straw as substrate
	Technology option-I (TO-I):	Cultivation of <i>P. sajarcaju</i> by using Paddy straw as substrate + pasteurized sesame stalk in (50:50 basis)
	Technology option-II (TO-II): and so on	Cultivation of <i>P. sajarcaju</i> by using paddy straw as substrate + pasturised banana stem and leaves in (50:50 basis)
xiii.	Critical Inputs:	Mushroom spawn and polythene bag
xiv.	Unit Size:	10 Mushroom Beds
xv.	No of Replications:	10
xvi.	Unit Cost:	170
xvii.	Total Cost:	1,700
xviii.	Monitoring Indicator:	Yield/bed, fruit weight, pin head appearance in days, aroma
xix.	Source of Technology (ICAR/ AICRP/ SAU/ Other, please specify):	CTMRT, OUAT, 2012

i.	Season:	Rabi-2020-21
ii.	Title of the OFT:	Assessment of multi-enzyme mixture and probiotics on growth performance of chickens
iii.	Thematic Area:	Poultry production and management
iv.	Problem diagnosed:	High feed consumption in chicken farming. High cost of feeding and unfeasibility of poultry rearing. Low FCR
v.	Important Cause:	Under utilization of fibres in feed, improper gut health management and digestion
vi.	Production system:	Poultry based
vii.	Micro farming system:	Semi-intensive poultry farming
viii.	Technology for Testing:	Assessment of multi-enzyme mixture and probiotics on growth performance of chickens
ix.	Existing Practice:	Farmers rearing birds under semi-intensive system with vaccination up to one month age without any extra nutritional supplement
x.	Hypothesis:	Increasing digestibility, improvement of gut health leading to more weight gain performance
xi.	Objective(s):	To increase weight gain in birds reared under semi-intensive system
xii.	Treatments:	
	Farmers Practice (FP):	No supplement feeding
	Technology option-I (TO-I):	Feeding of commercial broiler feed (added with probiotics mixture @ 0.05%) @50% of daily requirement and free range feeding for improved gut health and nutrient utilization
	Technology option-II (TO-II): and so on	Feeding of commercial broiler feed (added with multi-enzyme mixture @ 0.05%) @50% of daily requirement and free range feeding and free range feeding improved nutrient utilization
xiii.	Critical Inputs:	Probiotics and multienzyme mixture
xiv.	Unit Size:	100 birds/unit
xv.	No of Replications:	15
xvi.	Unit Cost:	Rs.500/ unit
xvii.	Total Cost:	Rs. 7500/-
xviii.	Monitoring Indicator:	Body weight at 1.5, 2, 2.5, 3 month, Cost of intervention, additional income over additional investment, B:C ratio
xix.	Source of Technology (ICAR/ AICRP/ SAU/ Other, please specify):	CARI 2017-18

i.	Season:	Round the year, 2020-21
ii.	Title of the OFT:	Assessment of two different teat dip formulations for prevention and control of mastitis in dairy cattle
iii.	Thematic Area:	Disease management
iv.	Problem diagnosed:	Occurrences of mastitis leading to yield loss in cows during post partum period
v.	Important Cause:	Un hygienic milking practice
vi.	Production system:	Livestock based
vii.	Micro farming system:	Semi-intensive dairy farming
viii.	Technology for Testing:	Assessment of two different teat dip formulations for prevention and control of mastitis in dairy cattle
ix.	Existing Practice:	Farmers mostly clean the udder with plain water before milking
x.	Hypothesis:	Cleaning of udder with teat dip liquid prevents entry of microbes into udder leading to decreased incidence of mastitis
xi.	Objective(s):	To decrease occurrences of mastitis in cows
xii.	Treatments:	
	Farmers Practice (FP):	Clean the udder with plain water before milking
	Technology option-I (TO-I):	Cleaning of udder with povidone iodine solution (0.5%), wiping the udder with clean cloth. Dipping the teats in povidone iodine solution after milking
	Technology option-II (TO-II): and so on	Cleaning of udder with KMnO ₄ solution (3%), wiping the udder with clean cloth, Dipping the teats in KMnO ₄ solution after milking
xiii.	Critical Inputs:	Povidone Iodine solution, KMnO ₄ solution
xiv.	Unit Size:	5 cows/unit
xv.	No of Replications:	15
xvi.	Unit Cost:	Rs.770/-
xvii.	Total Cost:	Rs.11,550/-
xviii.	Monitoring Indicator:	Cost of intervention, additional income over additional investment, B:C ratio
xix.	Source of Technology (ICAR/ AICRP/ SAU/ Other, please specify):	Annual report NDRI, 2015 Annual report TANUVAS, 2016

i.	Season:	Kharif
ii.	Title of the OFT:	Assessment of different Probiotics on the growth performance of IMC fingerlings
iii.	Thematic Area:	Feed Management
iv.	Problem diagnosed:	<ul style="list-style-type: none"> • Lower yield and income due to poor growth & survivability status of fish seed • Unscientific Feed Management
v.	Important Cause:	Poor growth & survivability status of fish seed
vi.	Production system:	Intensive culture method
vii.	Micro farming system:	Low land- Kharif - Pond Based
viii.	Technology for Testing:	Effect of probiotic dose on fish seed growth
ix.	Existing Practice:	Non use of probiotics with feed
x.	Hypothesis:	Better growth & increased survivability of fingerlings through plankton production due to addition of probiotic in fish feed
xi.	Objective(s):	To test the growth of fingerlings due to use of feed additives or probiotics
xii.	Treatments:	2 no.
	Farmers Practice (FP):	Non use of probiotics with feed
	Technology option-I (TO-I):	Use of feed probiotics as additive @ 5 gm/kg feed twice daily at the time of feed application for rearing of fingerlings
	Technology option-II (TO-II): and so on.....	Use of water probiotics as additive @ 15 gm/kg feed twice daily at the time of feed application for rearing of fingerlings
xiii.	Critical Inputs:	Probiotics
xiv.	Unit Size:	0.2 ha.
xv.	No of Replications:	03
xvi.	Unit Cost:	16,000
xvii.	Total Cost:	80,000
xviii.	Monitoring Indicator:	Fish Yield in (no./ha.), % change in yield and B:C ratio
xix.	Source of Technology (ICAR/ AICRP/ SAU/ Other, please specify):	ICAR,CIFA,2004

i.	Season:	Kharif
ii.	Title of the OFT:	Assessment of stocking density of <i>Labeo bata</i> in composite fish culture system
iii.	Thematic Area:	Production Management
iv.	Problem diagnosed:	<ul style="list-style-type: none"> • Lack of knowledge on proper stocking density resulting disease susceptibility • Improper utilization of pond biotic potential. • Extensive method of culture practice resulting low yield
v.	Important Cause:	Improper utilization of pond biotic potential
vi.	Production system:	Composite fish culture system in semi-intensive method
vii.	Micro farming system:	Low land- Kharif & Rabi - Pond Based
viii.	Technology for Testing:	Management of stocking density of minor Carps in Composite fish culture system
ix.	Existing Practice:	Indian Major Carp (IMC), Single Stocking @ 10,000 fingerlings / ha harvesting once after 12 months
x.	Hypothesis:	More yield & income due to proper utilization of pond biotic potential through management of stocking density
xi.	Objective(s):	To verify the increased yield due to incorporation of minor carps in Composite fish culture with optimum stocking density
xii.	Treatments:	2 no.
	Farmers Practice (FP):	Indian Major Carp (IMC), Single Stocking @ 10,000 fingerlings / ha harvesting once after 12 months
	Technology option-I (TO-I):	Incorporation of <i>Labeo bata</i> @ 15 % or 1500 no./ha in the Major Carp system i.e. (Catla:Rohu :Mrigal) @ 10000 no. /ha and culture for 6 months
	Technology option-II (TO-II): and so on.....	Incorporation of <i>Labeo bata</i> @ 30 % or 3000 no./ha in the Major Carp system i.e. (Catla:Rohu :Mrigal) @ 10000 no. /ha and culture for 6 months
xiii.	Critical Inputs:	IMC & <i>Labeo bata</i> fingerlings
xiv.	Unit Size:	0.2 ha.
xv.	No of Replications:	03
xvi.	Unit Cost:	18,000
xvii.	Total Cost:	90,000
xviii.	Monitoring Indicator:	Fish Yield in (no./ha.), % change in yield and B:C ratio
xix.	Source of Technology (ICAR/ AICRP/ SAU/ Other, please specify):	CIFA, Kausalyaganga, Bhubaneswar, 2004 www.cifa.nic.in/products

*Repeat the same format for EACH OFT being proposed.

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.	Mission Shakti	3.5 lakhs

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

- A successful Bee entrepreneur
- Optimum utilization of waste farm residues for enhancing income of farm women
- Profitable goat farming
- Kadaknath poultry farming: A new approach in backyard poultry
- Stunted yearling production: A Technique for successful Entrepreneurship development
- Fry & fingerling production technique resulting improvement of livelihood and Rural Economy
- Amur Carp rearing Technique: A great success towards sustainable Aquaculture

12. Scientific Advisory Committee

Date of SAC meeting held during 2019-20	Proposed date during 2020-2021
02.11.2019	06.11.2020

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	100	25		10		340		375	25	400	20	340
Water Samples												
Other												
Total	100	25		10		340		375	25	400	20	340

14. Fund requirement and expenditure (Rs.)*

Heads	Expenditure (last year) (Rs.) up to 31.03.2020	Expected fund requirement (Rs.)
<u>Recurring</u>		
i. Pay & allowance	To be provided by Comptroller, OUAT	1,20,00,000
ii. Contingency	12,18,000	13,00,000
iii. TA	1,40,000	1,50,000
iv. HRD	16,500	20,000
<u>Non-recurring (specify)</u>		
i. Works		8,00,000
ii. Furniture & Equipment		
iii. Vehicle and tractor		10,00,000
iv. Library	10,000	
Total	13,84,500	1,52,70,000

* Any additional requirement may be suitably justified.

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

Cultivation of Drought Tolerant Groundnut variety “Dharani”

Groundnut is a major oilseed crop in an Angul district. It is grown in 8730 ha land in kharif season and 2400 ha in rabi season. The soil type is very much favorable for groundnut cultivation. Last year Dharani variety was introduced in 65 ha of land in two villages of Angul district i.e Barsingha of Angul block and Kushkila of Chhendipada block under sustainable agriculture practices of Cluster front line demonstration programme. The farmers from both the villages are very much satisfied with this variety as it is not only giving them higher yield but also it is infested by very less number of pests and diseases as compared to other varieties they were used to grow earlier. Besides the variety farmers were provided and educated with timely application of pesticides with all safety measures along with cultural practices which leads to higher yield.

Dharani is a drought tolerant variety with attractive pods. It gave around 22-25pods/plant and about 22q/ha yield. The duration of this variety is 90-110days.

Yield	Gross Cost (Rs/ha)	Gross Return (Rs./ha.)	Net Return (Rs./ha.)	B:C Ratio
15.8	40000	63200	23200	1.58
20.8	45000	83200	38200	1.84

Farmers were very much satisfied with the variety and they have promised to cultivate Dharani variety for coming kharif season as this variety can be grown in both rabi and kharif season.



Paddy Straw Mushroom Cultivation for Income Generation

Cultivation of Paddy straw mushroom var. OSM-11 with quality spawn ,scientific method of mushroom bed preparation, treatment of straw with Bavistin @2gm/lit of water. Raising technique of mushroom bed with size 2x2 ft, Use of additives. Watering technique. Plucking technique/ harvesting technique and grading and packaging of mushroom. In temperature range between 25-38°C- Mushrooms are egg shaped and fleshy with excellent taste. Pin head appearance at 7-8 days. Shelf life 12-24 hours at 25-30°C and 4-5 days at 4°C. Farmers preferred the better taste and prolific fruiting. After improving the cultivation techniques; they are cultivated as widely and as cheaply as other common vegetables, which will thus be beneficial to the general public. In view of the pleasing flavour, high protein level and tonic and medicinal values; Paddy straw mushrooms clearly represent one of the district's greatest untapped resources of nutritious and palatable food for our current generation and for future generations to come

CROP	YR	Farming system	Problem	Farmers practice	Technology option	Result	Feed back
Mushroom	2016-17	Home stead/ Backyard	Low yield potential of paddy straw mushroom <i>Volvariella volvacea</i> (0.7 kg/bed)	Cultivation of paddy straw mushroom <i>Volvariella volvacea</i>	T2: Cultivation paddy straw mushroom OSM-11 T3: Cultivation paddy straw mushroom OSM-12	107 0g/ bed, Saving in Rs.42/-	Yield potential of high yielding strain OSM 11 is more than OSM 12 with high biological efficiency



Semi Intensive Poultry farming with improved breeds of chicken

Secondary agriculture plays a vital role in the economic development of the farming community of the district. In this sector mostly enterprises like Poultry, Dairy, Goatery, Mushroom, and Fishery in particular serve as an additional livelihood option for the rural community in all the blocks of the district. Backyard farming has over the years contributed to a great extent to the agrarian economy of different countries. In the same way, rural backyard poultry production plays a vital role in the rapidly growing economy. It provides livelihood security to the family in addition to securing the availability of food. Unemployed youth and women can also earn an income through poultry farming. However, back yard poultry farming is the cornerstone of poultry farming in the district but its growth is limited due to high seasonal mortality, low productivity and suboptimal management. Hence, Krishi Vigyan Kendra, Angul is promoting backyard poultry farming in semi intensive system with improved rural type birds. The performances of different breeds of chicken in the district were given below.

Sl. no	Breed	Avg. wt. of birds in 16 wks /bird(Kg)	Avg. Annual Egg Production/bird(Nos.)	Net return/bird (Rs)
1	Vanaraja	1.4 ±0.017	152	275
2	RIR	1.6 ±0.023	194	856
3	BlackRock	1.6± 0.013	110	172
4	Pallishree	3.09± 0.027	85	338
5	Aseel	0.81± 0.03	110	750
6	Kadaknath	0.70± 0.011	130	952

In past years, it was found that the backyard poultry production system in Angul district was traditional and poorly remunerative due to desi birds. Therefore, the technology of improved dual purpose breeds (Vanaraja, RIR), improved desi type breed (Aseel, Kadaknath) and colour synthetic broiler birds (Blackrock, Pallishree) under balanced feeding management lay more eggs and meat production in turn which improves the livelihood security among the marginal and small farmer. It may be concluded that backyard poultry farming is an effective tool to strengthen the livelihood of resource poor farmers and landless labourers in rural area with low-cost initial investment. It provides eggs and meat for family consumption and additional income to the rural households.





Fingerling raising in seasonal ponds

Fish being a source of cheap animal protein, is an important source of diet for a large section of economically backward population of the country. Fisheries are the only sector that offers cheap and good animal protein to the people, particularly to the economically weaker sections of the society. Thereby, it serves as a means for ensuring national food security. It is also a major contributor towards foreign exchange earnings for the country through export of fish and fish products.

The availability of quality seed is prerequisite for rapid expansion and growth of aquaculture. However, uncertainty in timely seed supply, lack of knowledge regarding fish seed rearing in intensive manner, improper utilization of seasonal water bodies are the major constraints. Ponds in Angul District are typically homestead ponds of less than 1.0 ha in size & are endowed with large number of unutilized water bodies like derelict canals, drains and seasonal ponds. Most of these seasonal water bodies retain water for a short duration, mostly during rainy season & even low level of investment in these seasonal water bodies could yield handsome income within a short span of time. Because Farmers practicing only the **Traditional method of Carp culture** i.e. (Catla 40 :Rohu 30 :Mrigal 30) @ 5000 no. /ha, and culture for 10-12 months **resulting lower yield i.e. 17 q/ha. with net income of Rs. 1, 04,000 & BC ratio of 2.04** as compared to **seed production technique** i.e. (Stocking of 1, 00,000 IMC fry in 0.3 ha. area, feeding @ 8 % of biomass (1st month) & 6% (rest 2 months), liming @80-100 kg/ac. & with other management practices leading to production of 72,000 fingerlings / 2 crops /3 months with **net income of Rs.2,28,000 & BC ratio of 4.8**. So this Fingerling production technique in seasonal fallow ponds, as an added livelihood activity may diversify the farmer's portfolio, thus increasing options and reducing risk of economic loss & widely accepted among farming community of the district. Angul, one of the Industrial districts of the state, contributes **16230 MT of fish from 3478.35 ha.** of water area in terms of pond and tanks, supplies **100 million fish seed** where as the **demand is more than 250 million seeds annually**. So the utilization of unutilized seasonal ponds, to some extent, could solve the scarcity of seed production for rural aquaculture in the district. By this advanced technology, the rural farmers can aware about scientific carp seed rearing practices in their village ponds resulting in increase of fish production and productivity status from their ponds along with production and supply of quality seed in the locality and adoption of better management practices (BMPs) for enhancement of production in a sustainable way.

Wider adoption of this technology has open doors to:

- Fill the gap in fish seed production and make the district self sufficient in fish production.
- Create **employment (141 no. farmers** of Angul district) and income generating opportunities for the rural poor and enhance their food and livelihood security.
- Increase returns on available resources & **spread to 40.4 ha. area comprising 48 villages.**
- Reduce poverty through Entrepreneurship development (**93 no. Entrepreneurs**).
- Empower **women (09 SHG's)** and potentially contribute to the conservation of native fishes as well.
- Generate interest among perspective farmers to adopt fish seed production as a lucrative Enterprise



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