BIHAR AGRICULTURAL UNIVERSITY, SABOUR (BHAGALPUR)

KRISHI VIGYAN KENDRA, MUNGER

ANNUAL ACTION PLAN

(January 2022 To December 2022)

Post – Shankarpur, Distt. – Munger, PIN Code – 811201 (Bihar)

Email :mungerkvk@gmail.com, www.bausabour.ac.in

ACTION PLAN 2021

1. **Name of the KVK:** Krishi Vigyan Kendra Munger.

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2.Name of host organization :

Address	Telephone		E mail
	Office	FAX	
Bihar Agricultural University Sabour (Bhagalpur), Bihar PIN Code – 813210			vcbausabour@gmail.com www.bausabour.ac.in

3.Training programme to be organized (January 2022 to December 2022)

(a) Farmers and farmwomen

Thematic area	Title of Training	No.	Dur.	Venue On/Off	Tentative Date	No. of Participants								
						SC		ST		Other		Total		
						M	F	M	F	M	F	M	F	T
Soil fertility management	Importance of bio-fertilizer and its application method.	1	2	OFF	07.1.22	2	1	2	1	22	2	26	4	30
IDM/ IPM	Seed treatment of field crops	1	2	OFF	21.1.22	2	1	3	1	25	3	30	5	35
IDM/ IPM	IPM in pulses	1	2	OFF	4.2.22	2	1	3	1	25	3	30	5	35
Cropping system	Scientific cultivation of mungbean	1	2	OFF	22.02.22	2	1	2	1	22	2	26	4	30
Production of organic inputs.	Importance of organic farming	1	2	OFF	03.03.22	2	1	2	1	22	2	26	4	30

Integrated Nutrient Management. (INM)	Balance fertilizer management in paddy crop	1	2	OFF	17.03.22	2	1	2	1	22	2	26	4	30
Resource Conservation Technology	Importance and prospect of Direct seeded Rice	1	2	OFF	07.04.22	2	1	2	1	22	2	26	4	30
Cropping system	Scientific production technology for hybrid rice.	1	2	OFF	28.04.22	2	1	2	1	22	2	26	4	30
Integrated farming system	Importance and prospect of IFS model	1	2	OFF	05.05.22	2	1	2	1	22	2	26	4	30
Fodder Production	Scientific Production technology for kharif green fodder crop	1	2	OFF	24.05.22	2	1	2	1	22	2	26	4	30
Weed Management	Integrated Weed management in paddy	1	2	ON	02.06.22	2	1	2	1	22	2	26	4	30
Reclamation of problematic soil.	Reclamation of problematic soil.	1	2	OFF	18.06.22	2	1	2	1	22	2	26	4	30
Reclamation of problematic soil.	Method of soil sampling and its importance	1	2	OFF	8.07.22	2	1	2	1	22	2	26	4	30
Cropping System	Constraints and their remedies for oilseed crops	1	2	OFF	28.07.22	2	1	2	1	22	2	26	4	30
Cropping System	Constraints and their remedies for pulse crops	1	2	OFF	04.08.22	2	1	2	1	22	2	26	4	30

Cropping System	Scientific method for rabi oilseed production	1	2	ON	25.08.22	2	1	2	1	22	2	26	4	30
Cropping System	Improved production technology for Rabi pulse crops	1	2	OFF	03.09.22	2	1	2	1	22	2	26	4	30
Cropping System	Seed production techniques for different crops	1	2	OFF	23.09.22	2	1	2	1	22	2	26	4	30
Cropping system	Agronomic practices in rabi fodder	1	2	OFF	6.10.22	2	1	2	1	22	2	26	4	30
Cropping system	Agronomic practices in rabi maize	1	2	OFF	28.10.22	2	1	2	1	22	2	26	4	30
Cropping system	Scientific management of late sown wheat crop	1	2	ON	02.11.22	2	1	2	1	22	2	26	4	30
INM	Balance fertilizer application in rabi crop	1	2	OFF	24.11.22	2	1	2	1	22	2	26	4	30
IWM	Weed management in Wheat crop	1	2	OFF	09.12.22	2	1	2	1	22	2	26	4	30
INM	Waste decomposer & its application	1	2	OFF	21.12.22	2	1	2	1	22	2	26	4	30
Medicinal and aromatic plants	Production and management technology	1	1	OFF	5.01.22	5	0	0	0	15	0	20	0	20
Vegetable cultivation	Scientific cultivation of onion	1	1	ON	8.01.22	5	0	0	0	15	0	20	0	20
Off season	Cultivation of	1	1	ON	24.02.22	5	0	0	0	15	0	20	0	20

vegetables	vegetables in summer season													
Layout and management of orchard	Establishment of guava orchard & its management	1	1	OFF	25.02.22	5	0	0	0	15	0	20	0	20
Vegetable cultivation	Scientific cultivation of kharif vegetable	1	1	OFF	25.03.22	5	0	0	0	15	0	20	0	20
Cultivation of fruits	Planting material preparation method through grafting and air layering	1	1	ON	22.04.22	5	0	0	0	15	0	20	0	20
Layout and management of orchard	Establishment of guava orchard & its management	1	1	OFF	26.04.22	5	0	0	0	15	0	20	0	20
Nursery raising	Nursery raising methods of cauliflower, tomato and chilli	1	1	ON	18.05.22	5	0	0	0	15	0	20	0	20
Cultivation of fruits	Management of young plants or orchards	1	1	ON	24.05.22	5	0	0	0	15	0	20	0	20
Tuber crops	Production and management technology	1	1	OFF	04.06.22	5	0	0	0	15	0	20	0	20
Nursery raising	Nursery raising methods of cauliflower, tomato and chilli	1	1	ON	22.06.22	5	0	0	0	15	0	20	0	20
Vegetable cultivation	Scientific method of green pea cultivation	1	1	OFF	06.07.22	5	0	0	0	15	0	20	0	20
Nursery raising	Nursery raising methods of cauliflower, tomato and chilli	1	1	OFF	13.07.22	5	0	0	0	15	0	20	0	20

Spices	Production and management technology	1	1	ON	04.08.22	5	0	0	0	15	0	20	0	20
Nursery raising	Nursery raising methods of cauliflower, tomato and chilli	1	1	OFF	24.08.22	5	0	0	0	15	0	20	0	20
Production of organic input	Scientific method of vermin-compost production	1	1	ON	07.09.22	5	0	0	0	15	0	20	0	20
IFS Model	IFS MODEL for income generation	1	1	OFF	20.09.22	5	0	0	0	15	0	20	0	20
Vegetable cultivation	Rabi vegetable cultivation method	1	1	OFF	12.10.22	5	0	0	0	15	0	20	0	20
Spices cultivation	Rabi spices cultivation method	1	1	ON	19.10.22	5	0	0	0	15	0	20	0	20
Pest management	IPM in vegetable cultivation	1	1	OFF	09.11.22	5	0	0	0	15	0	20	0	20
Waste discomposure	Uses of Waste discomposure in vegetable cultivation	1	1	ON	23.11.22	5	0	0	0	15	0	20	0	20
Vermicompost production	Uses of Vermicompost in fruit cultivation	1	1	OFF	14.12.22	5	0	0	0	15	0	20	0	20
IPM	Disease Management in Potato	1	1	ON	21.12.22	5	0	0	0	15	0	20	0	20
Repair and maintenance of farm machinery implements	Detail knowledge about sprayer machine	1	1	OFF	6.01.22	10	2	0	0	15	3	25	5	30
Water	Water management in	1	1	OFF	28.01.22	8	2	0	0	15	5	23	7	30

management	Rabi Maize													
Water management	Water management in Garma vegetable	1	1	OFF	03.02.22	8	2	0	0	15	5	23	7	30
Repair and maintenance of farm machinery implements	Operation methods of reaper and its care maintenance	1	1	OFF	28.02.22	7	2	0	0	18	3	25	5	30
Repair and maintenance of farm machinery implements	Detail knowledge about combine harvester	1	1	OFF	03.03.22	10	2	0	0	15	3	25	5	30
Repair and maintenance of farm machinery implements	Detail knowledge about paddy wheat brush cutter	1	1	OFF	28.03.22	10	2	0	0	15	3	25	5	30
Protected cultivation	Importance of plastic mulch and its benefits in summer vegetable cultivation	1	2	OFF	7.04.22	8	2	0	0	15	5	23	7	30
Mechanization	Calibration method of zero tillage for moong sowing	1	1	OFF	27.04.22	10	0	0	0	20	0	30	0	30
Water management	Installation and Maintenance of drip irrigation	1	1	ON	04.05.22	8	0	0	0	20	2	28	2	30
Use of Plastic in farming Practices	Different types of shednet house	1	1	OFF	18.05.22	10	2	0	0	20	0	30	0	30
Water management	Installation and Maintenance of sprinkler irrigation in vegetable cultivation	1	1	ON	8.06.22	5	1	0	0	18	1	23	2	25
maintenance of farm machinery implements	Importance and benefits of summer dip ploughing	1	1	ON	24.06.22	10	0	0	0	20	0	30	0	30

maintenance of farm machinery implements	Detail knowledge about paddy seeder and its calibration for DSR	1	1	ON	06.07.22	10	0	0	0	20	0	30	0	30
Repair and maintenance of farm machinery implements	Benefits of mechanical transplanting of paddy	1	1	OFF	27.07.22	12	0	0	0	18	0	30	0	30
Water Management	Water Management in paddy cultivation	1	1	ON	10.08.22	10	5	0	0	15	0	25	5	30
Repair and maintenance of farm machinery implements	Mechanical method of weed control in paddy cultivation	1	1	ON	12.08.22	8	2	0	0	20	2	28	4	32
Farm energy	Design, construction & utility of Biogas plant	1	1	ON	03.09.22	12	3	0	0	15	5	27	8	35
Farm energy	Detail knowledge about solar energy and its application in agriculture	1	1	ON	21.09.22	12	3	0	0	15	5	27	8	35
Repair and maintenance of farm machinery implements	Benefits of zero tillage application for sowing of different crops	1	1	ON	29.9.22	10	2	0	0	18	2	28	4	32
Repair and maintenance of farm machinery implements	Detail knowledge about land laser leveler machine and its application	1	1	ON	07.10.22	10	2	0	0	18	2	28	4	32
Repair and maintenance of farm machinery implements	Detail knowledge about Implements for Seed bed preparation	1	1	OFF	20.10.22	8	2	0	0	19	2	27	4	31

Farm Energy	Detail knowledge about fuel saving in farm tractor	1	1	ON	09.11.22	9	3	0	0	18	2	27	5	32
Repair and maintenance of farm machinery implements	Benefits of zero tillage application for sowing of different crops	1	1	ON	24.11.22	10	2	0	0	18	2	28	4	32
Repair and maintenance of farm machinery implements	Detail Knowledge about solar pump	1	1	OFF	09.12.22	8	2	0	0	15	5	23	7	30
Use of Plastic in Agril.	Construction & utility of poly-tunnel	1	1	ON	16.12.22	9	0	0	0	20	0	29	0	29
Water Management	Water Management in Wheat cultivation	1	1	ON	30.12.22	9	2	0	0	15	4	24	6	30
Mushroom production	Scientific method of mushroom cultivation	1	2	OFF	18-19.01.22	0	4	0	3	0	23	0	30	30
Value Addition	Scientific method of tomato preservation	1	2	ON	27-28.01.22	0	14	0	0	0	16	0	30	30
Woman and Child care	Formulation of balanced diet for infant mother	1	1	OFF	15.02.22	0	8	0	4	0	18	0	30	30
Mushroom production	Scientific method of mushroom cultivation	1	2	OFF	24-25.02.22	0	4	0	3	0	23	0	30	30
Woman and Child care	Formulation of balanced diet for infant mother	1	2	OFF	8-9.03.22	0	5	0	3	0	22	0	30	30
Storage Loss minimization technique	Improved method of grain storage	1	1	OFF	13.04.24	0	8	0	4	0	18	0	30	30
Rural Craft	Knitting and embroidery	1	2	ON	24-25.04.22	0	5	0	3	0	22	0	30	30

Value Addition	Scientific method of mango fruit preservation	1	2	OFF	11-12.05.22	0	14	0	0	0	16	0	30	30
Household food security by kitchen gardening and nutritional gardening	Establishment of Nutritional Garden	1	1	OFF	15.06.22	0	8	0	4	0	18	0	30	30
Value Addition	Scientific method of Ripe mango jam preparation	1	1	OFF	13.07.22	0	14	0	0	0	16	0	30	30
Value Addition	Scientific method of Guava jelly preparation	1	2	OFF	14-15.09.22	0	14	0	0	0	16	0	30	30
Mushroom production	Scientific method of mushroom cultivation	1	2	OFF	25-26.10.22	0	4	0	3	0	23	0	30	30
Woman and Child care	Formulation of balanced diet for infant mother	1	1	OFF	16.11.22	0	5	0	3	0	22	0	30	30
Mushroom production	Scientific method of mushroom cultivation	1	2	OFF	1-2.12.22	0	4	0	3	0	23	0	30	30
	Total	87	121			404	180	50	57	1329	387	1783	622	2405

(b) Rural youths

Thematic area	**Title of Training**	**No.**	**Duration**	**Venue On/Off**	**Tentative Date**	**No. of Participants**								
						SC		**ST**		**Other**		**Total**		
						M	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**T**
Organic farming	Importance & future prospectus of Organic farming	1	5	ON	12.01.22 to 17.01.22	5	-	5	-	10	-	20	0	20
Management of organic	vermi-compost	1	5	ON	18.05.22 to	5	-	5	-	10	-	20	0	20

input	production, application method& its importance .				23.05.22									
Quality seed Production	Quality seed Production of Rabi pulses	1	5	ON	7.09.22 to 12.09.22	5	-	5	-	10	-	20	0	20
Integrated farming system	Prospectus and Importance of integrated farming system	1	5	ON	14.12.22 to 19.12.22	5	-	5	-	10	-	20	0	20
Skill Development	Plant propagation methods in fruit plants	1	5	ON	08.02.22 to 14.02.22	5	0	0	0	20	0	25	0	25
Skill Development	Plant propagation methods in fruit plants	1	5	ON	18.05.22 to 25.05.22	5	0	0	0	20	0	25	0	25
Off season vegetables	Integrated Farming System	1	5	ON	06.07.22 to 12.07.22	5	0	0	0	20	0	25	0	25
Layout and management of orchards	Establishment of Horticultural Nursery	1	5	ON	12.09.22 to 16.09.22	5	0	0	0	20	0	25	0	25
Skill Development	Plant propagation methods in fruit plants	1	5	ON	14.11.22 to 18.11.22	5	0	0	0	20	0	25	0	25
Repair and maintenance of farm machinery implements	Detail knowledge about different types of irrigation pumps	1	7	ON	14-23.02.21	6	0	0	0	18	5	24	5	29

Use of Plastic in Agril.	Construction & utility of polyhouse, shednet house and poly-tunnel	1	7	ON	21–28.06.22	5	0	0	0	17	3	22	3	25
Repair and maintenance of different types of agril. machineries	Operation, Care & maintenance of agril. implements	1	6	ON	23-30.08.22	6	0	0	0	20	4	26	4	30
Installation and maintenance of micro irrigation	Installation methods of drip irrigation with its detail knowledge	1	7	ON	10-17.10.22	9	0	0	0	16	0	25	0	25
Mushroom production	Scientific method of mushroom cultivation	1	5	**ON**	04-10.01.22	0	4	0	2	0	24	0	30	30
Value Addition	Fruit & Vegetable preservation	1	5	**ON**	04-08.04.22	0	8	0	4	0	18	0	30	30
Income generation for empowerment of rural women	Nutritional garden	1	5	**ON**	06-10.06.22	0	4	0	2	0	24	0	30	30
Income generation for empowerment of rural women	Tailoring	1	10	**ON**	02-12.8.22	0	4	0	2	0	24	0	30	30
Mushroom production	Scientific method of mushroom cultivation	1	5	**ON**	17-21.10.22	0	4	0	3	0	23	0	30	30

Mushroom production	Scientific method of mushroom cultivation	1	5	**ON**	21-25.11.22	0	4	0	3	0	23	0	30	30
Rural Craft	Knitting and embroidery	1	5	**ON**	05-09.12.22	0	5	0	3	0	22	0	30	30
Total		**20**	**112**			**71**	**33**	**20**	**19**	**211**	**170**	**302**	**222**	**524**

(c) Extension functionaries

Thrust area/ Thematic area	**Title of Training**	**No.**	**Duration**	**Venue**	**Tentative**	**No. of Participants**								
				On/Off	**Date**	**SC**		**ST**		**Other**		**Total**		
						M	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**T**
Integrated nutrient management in kharif crop	To increase the productivity of rice for doubling farmers' income.	1	1	ON	15.02.22	3	-	3	-	24	-	30	0	30
Production of organic inputs	for doubling farmers' income.	1	1	OFF	13.06.22	3	-	3	-	24	-	30	0	30
Management of intercropping in rabi pulses with cereals	To increase the utility of land for doubling farmers' income.	1	2	ON	01.09.22 to 02.09.22	3	-	3	-	24	-	30	0	30

Improved techniques for late sown wheat	To save inputs & productivity & profitability for doubling farmers' income.	1	1	OFF	23.11.22	3	-	3	-	24	-	30	0	30
Protected cultivation technology	Cultivation method of high valued vegetable crop in poly-house	1	1	ON	08.04.2022	3	2	0	0	10	5	13	7	20
Layout and management of orchards	Establishment of Horticultural Nursery	1	1	OFF	19.05.2022	3	2	0	0	10	5	13	7	20
Production of organic input	Scientific method of vermin-compost production	1	1	OFF	13.07.2022	3	2	0	0	10	5	13	7	20
Vegetable cultivation	Rabi Season Vegetable Cultivation	1	1	ON	22.09.2022	3	2	0	0	10	5	13	7	20
Integrated Farming	Integrated Farming system	1	1	OFF	16.11.2022	3	2	0	0	10	5	13	7	20
Installation and maintenance of micro irrigation	Utility & importance of Drip irrigation system	1	1	OFF	12.01.22	10	5	0	0	12	3	22	8	30

Repair and maintenance of farm machinery implements.	Detail Knowledge about solar pump	1	1	OFF	06.04.22	12	3	0	0	15	5	27	8	35
Repair and maintenance of farm machinery implements	IPM through mechanical method	1	1	OFF	13.7.22	12	3	0	0	15	5	27	8	35
Repair and maintenance of farm machinery implements	Impart Knowledge about innovative farm machinery	1	1	OFF	30.11.22	10	5	0	0	10	5	20	10	30
Income generation for empowerment of rural women	Nutritional garden	1	2	**ON**	02-03.02.22	0	4	0	2	0	24	0	30	30
Woman and Child care	Formulation of balanced diet for infant mother	1	1	**OFF**	07-08.04.22	0	8	0	4	0	18	0	30	30

Value Addition	Scientific method of fruit and vegetable preservation	1	2	**OFF**	14-15.07.22	0	4	0	3	0	23	0	30	30
Mushroom production	Scientific method of mushroom cultivation	1	2	**OFF**	20-21.12.22	0	4	0	3	0	23	0	30	30
Total		**17**	**21**	**0**	**0**	**71**	**46**	**12**	**12**	**198**	**131**	**281**	**189**	**470**

1. **On Farm Trial to be conduct:** (Each SMS and P.C. has to conduct 2 OFT and 1 FLD respectively in Rabi Season)

Title of OFT	Treatment/Tech. Option	Replication
Assessment of Integrated nutrient management in Paddy	4	7
Assessment of weed management practices in Chickpea	4	7
Performance of gladiolous genotypes under Bihar Agro climatic conditions.	3	7
Pest Management in tomato by using leaf extract of cynodondactylon	3	7
Assessment of sowing methods of wheat	3	9
Assessment of irrigation water applied in paddy cultivation.	3	9
Assessment of Quality Protein Maize (QPM) based weaning/enriched food for child health	3	20

2. **Front Line Demonstration :**

FLD (2022)

DESCIPLINE	THEMATIC AREA	TECHNOLOGY TO BE DEMONSTRATED	Area (ha.)	NO. OF FARMERS
Agronomy	Cropping System			
		Pigeonpea (CFLD)	20	50
	Cropping System	Lentil(CFLD)	20	50
	Cropping System	Chickpea(CFLD)	20	50
	Cropping System	Linseed (CFLD)	10	25
	Cropping System	Mustard(CFLD)	30	75
Horticulture	IPM	Pheromone Trap(Mango)	6	20
	Aromatic plants	Lemon grass (Krishna)	0.6	8
Agricultural Engineering	Farm machinery	Drip Irrigation in Vegetable	2	10
Agricultural Engineering	Water Management	Water management in paddy cultivation	4	20
Home Science	Nutritional garden	Nutritional gardening	-	20
Home Science	Muhroom Production	Oyster Mushroom	-	30

On-farm trials to be conducted*

Assessment of Integrated nutrient management in Paddy

Thematic area: INM

Problem identified : Higher cost of cultivation and harmful impact on soil health.

Background: Higher dose of Urea application

Hypothesis: RDF75 % (75:30:20) NPK Kg per ha + Blue green algae 10Kg /ha is recommended in paddy for saving of Nitrogen fertilizer.

Details of technology selected:

Farmers Practice: 150:60:40 NPK Kg /ha

Technology Option 1: RDF 100:40:20 NPK Kg /ha

Technology Option 2: RDF 75 :30:20 NPK Kg per ha + Blue green algae 10Kg /ha

Technology Option 3: RDF 50:20:10 NPK Kg per ha + Azolla 10 Ton /ha

Source of Technology: BAU, Sabour

No. of replication/farmers : 7

Performance Indicator: No. of tiller, plant height, no. of grain per panicle, grain and extra yield.

Economic Indicator:

1. Cost of cultivation (Rs./ha)
2. Gross return (Rs/ha)
3. Increase in yield (%)
4. B.C- ratio

Critical input: Azolla, BGA,Seed, chemical, nutrient etc.

Cost of Input : Rs 15,000/=

Lesson learn: Integrated application of NPK fertilizer with azolla / BGA in paddy for more yield.

Assessment of weed management practices in Chickpea

Thematic area: Integrated weed management

Problem identified Low profitability and productivity of Chickpea crop due to heavy infestation of weeds.

Background: cultivation of Chickpea crop find less profitable due to heavy infestation of weed broad and grassy leaves weed.

Hypothesis: Application of different weedicides in Chickpea crop can enhance profitability.

Details of technology selected:

Farmers Practice: Hand weeding /uprooting weeds at 25-30 DAS
Technology Option 1: Pendimethalin @1.0 kg a.i. / ha as pre emergence(2-3 DAS)

Technology Option 2: Imazethapyr 10% SL@ 30g a.i. / ha (post emergence25-30 DAS)
Technology Option 3: Topramezone 33.6% SC@ 30g a.i. / ha (post emergence25-30 DAS)
Characteristic of technology: GCP105, duration 125-130 days, yield potential 20-25 q/ha.

Pendimethalin @1.0 kg a.i. / ha as pre emergence to reduce non grassy and grassy weeds

Imazethaypr @ 30 g a.i. / ha and Topramezone 33.6% SC@ 30g a.i. / ha (post emergence25-30 DAS) to reduce non grassy and grassy weeds .
Source of Technology: IIPR, Kanpur and ARS Jodhpur

No. of replication/farmers :07

Performance Indicator: Identification of weed flora, weed population, weed counts, weeds dry matter ($g/m^{2)}$, Phytotoxcity, yield and yield attributes and HI(Harvest Index)

Economic Indicator:
1. Cost of cultivation (Rs./ha)
2. Gross return (Rs/ha)
3. Increase in yield (%)
4. B.C- ratio

Critical input: Seed, labour, weedicide etc.

Cost of Input: Rs 15,000/=

Lesson learn: Imazethapyr 10% SL@ 30g a.i. / ha (post emergence25-30 DAS) and Topramezone 33.6% SC@ 30g a.i. / ha (post emergence25-30 DAS) in chickpea can be enhance the productivity & income.

Performance of gladiolous genotypes under Bihar Agro climatic conditions

Thematic area: Flower cultivation

Problem identified : Farmers cultivating only cereals. There is no cash crop. To boost the income cash crop required.

Background : Cereal crop is long duration crop. There is very less income/acre.

Hypothesis: Gladiolus cultivation will increase the new avenues for farmers to catch the demand of cut flowers in local market.

Details of technology selected:

Farmers Practice – Wheat
T.O.1– Arka Naveen
T.O.2– Arka Manorma

Source of Technology: *RPCAU,PUSA, Samastipur,Bihar*

No. of replication/farmers : 7

Economic Indicator: Plant height , days to flowering, spike length, vase life

Performance indicator: B:C ratio

Plot size : 1 acre

Critical input: corm , Bavistin

Cost of Input : Rs 15000

Lesson learn:

Pest Management in tomato by using leaf extract of cynodondactylon

Thematic area: Pest Management

Problem identified : Pest causes heavy loss in tomato crop.

Background : There is large area under tomato cultivation in Munger district. To check out the losses due to Pest in tomato will be very helpful for farmer's net income.

Hypothesis: Reducing Pest infestation in tomato using leaf extract of cynodondactylon, waste decomposer.

Details of technology selected:

Farmers Practice – Using Chloropyrifos 20 e.c. @2-3ml/litre of water
T.O.1– Using leaf extract of cynodondactylon@1:1 (cynodondactylon : water)
T.O.2– Using waste decomposer (1:3)

Characteristic of technology: Organic control of fruit borer in tomato

Source of Technology: "***Traditional Knowledge in Agriculture***" book by ATARI, New Delhi.

No. of replication/farmers : 7

Economic Indicator: 1.% of wilt plant 2.No.of fruit per plant 3. Av. fruit weight (g) 4. Fruit yield (t/ha)

5. Benifit Cost Ratio

Plot size : 1 acre

Critical input: Cynodondactylon and waste decomposers

Cost of Input : Rs 7000/=

Lesson learn:

Assessment of sowing methods of wheat

Thematic area: Farm Machinery

Problem identified : Less yield with high inputs & crop residue burning creates environment pollution along with soil fertility deterioration.

Background : Farmer sows wheat late by traditional methods by investing more seeds & land preparation cost. They burn paddy crop residue after harvesting of paddy by combine harvester which is hazardous for both environment and soil.

Hypothesis: Sowing of wheat by happy seeder saves seeds, time, labour, check environment pollution, increase soil fertility and yields more. It manages crop residues by cutting into pieces and spread over surface as organic mulch. In future, the organic mulch enriches carbon content in soil.

Details of technology selected:

Farmer practice : Traditional method (Ploughing by M.B, cultivator & sowing by broad casting & soil turning or mixing by cultivator)

Technical option1 : Sowing of wheat by zero tillage

Technical option2 : Sowing of wheat by happy seeder machine

Characteristic of technology: wheat sown by happy seeder is a RCT which saves agril. Inpust(Seed, fertilizer, water, labour) and yields more eco friendly by proper crop residue management.

Source of Technology: Indian institute of wheat & Barly Research Karnal Haryana, India. Choolar R.S et all (2016-17)

No. of replication/farmers : 09

Performance Indicator: Saving of seed(kg/ha), germination in field(%), Saving of land preparation & sowing cost(Rs/ha) or diesel saving lit/ha, increased yield(q/ha), saving of input cost (Rs/ha)

Economic Indicator:

1. Yield (q./ha)
2. Cost of cultivation (Rs/ha)
3. Gross Return (Rs/ha)
4. B.C- ratio

Plot size= 1000 m^2 (Total OFT area 2.7 ha)

Critical input: sowing cost/diesel for sowing & labour charge or other inputs.

Cost of Input : Rs20,000/=

Lesson learn: Save burning of crop residue to save environment and achieve more crop yield with less input cost.

Assessment of irrigation water applied in paddy cultivation

Thematic area: Water Management (Agril. Engg)

Problem identified : less yield with deteriorated quality by investing large quantity water

Background : Farmers stand water in paddy field during whole crop span or stands water according to rainfall.

Hypothesis: Alternate wetting and drying method of irrigation in paddy will yield more with the best quality by investing less quantity of water.

Details of technology selected:

Farmer practice : **R**ainfed

Technical option1 : Standing water in paddy field throughout crop span

Technical option2 : Alternate wetting and drying method of irrigation

Characteristic of technology: Alternate wetting and drying methods of irrigation yields more with best quality by investing less quantity of water. It retards emission of green house gases like CH_4, N_2O & others, Less logging of crops occurs due to more root length its nutrient uptake capacity is also more with less infestation of pest occurs in AWD irrigated plot.

Source of Technology: IRRI, Cuttak, Rejesus R.M Palics F.G et all (2011)

No. of replication/farmers : 09

Performance Indicator: Water requirement (mm),Water use efficiency (q/ha mm), Saving of water (%), increased yield(q/ha,)

Economic Indicator:

1. Yield (q./ha)
2. Cost of cultivation (Rs/ha)
3. Gross Return (Rs/ha)
4. B.C- ratio

Plot size=1000m^2 (Total OFT's Area : 2.7 ha)

Critical input: Diesel**/** conveyance irrigation pipe

Cost of Input : Rs20,000/=

Lesson learn: High returns eco-friendly with less agril. Inputs.

Assessment of Quality Protein Maize (QPM) based weaning/enriched food for child health

Thematic area : Value addition

Problem identified: Lack of dietary knowledge which leads poor choice of food leads to poor health of children.

Background : Quality Protein Maize contains good amount of lysine and tryptophan than normal maize. The two amino acid are essential for protein synthesis in human which greatly enhances its nutritive value.

Technology Assessed :

Technical Option /Technology-

Farmers practice : Inadequate dietary pattern unbalanced intake of nutrients and no weaning / healthy food practice

T.O.1 : Roasted maize flour 60 gm + roasted chana flour 20 gm +sugar 20 gm + with 1/2 cup milk.

T.O.2 : QPM (malted roasted) 50 gm, sprouted & roasted green gram 25 gm, Til/groundnut roasted 10 gm +sugar 15 gm, 1/2 cup milk.

Technical observation to be taken:

- ✓ Organoleptic assessment on 5 point acceptability scale.
- ✓ Nutritional content of enriched products per 100gm.
- ✓ Frequency of feeding of weaning food (in No.)
- ✓ Change in processing practices
- ✓ Adaption of QPM variety in food practices (in Kg/day)
- ✓ Change in anthropometrics measurement in selected children

Source of Technology : AICRP Directorate of maize research, ICAR

(Quality Protein Maize products for human nutrition by Usha Singh, DRRPCAU)

Economic indicator: B-C ratio

Replication : 20

Cost of input conduct OFT : 15,000/-