

PROFORMA FOR ANNUAL REPORT 2020

1. GENERAL INFORMATION ABOUT THE KVK

Address	Telephone		E mail
	Office	FAX	
Krishi Vigyan Kendra, Bokaro P.O.-Petarwar Pin- 829121	06549-265048 (O) 09431126991 (M)	FAX	kvk_bokaro@yahoo.co.in

1.2 .Name and address of host organization with phone, fax and e-mail

Address	Telephone		E mail
	Office	FAX	
Birsa Agricultural University, Jharkhand, Kanke, Ranchi Pin-834006	(VC) 0651-2450500(O)	0651-2450850	vc@bauranchi.org vc_bau@rediffmail.com
	(DEE) 0651- 2450849 (O)	0651-2450525	deebauranchi@gmail.com

1.3. Name of the Programme Coordinator with phone & mobile No.

Name	Telephone / Contact		
	Residence	Mobile	Email
Sri Uday Kumar Singh	09431595179	9431126991	udaysingh72@gmail.com

1.4. Year of sanction of KVK:

(Reference of Sanction Order)

2004. Vide letter No. of ICAR- F.No. 6-5/2000-AE-1 dated 24-6-2004

1.5. Staff Position (as on 31st March, 2020)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale with present basic	Date of joining	Permanent /Temporary	Category (SC/ST/OBC/Others)
1	Sr. Scientist & Head	-	-	-	-	-	-	-
2	Scientist	Sri Uday Kumar	I/C Head & Scientist	Agronomy	PB(15600 - 39100) GP- Rs.6000.00 Basic- Rs. 31780.00	19-07-04	Permanent	Others
3	Scientist	Dr. Anil Kumar	Scientist	Horticulture	PB(15600 - 39100) GP- Rs.6000.00 Basic- Rs. 34490.00	19-07-04	Permanent	Others
4	Scientist	Sri Vinay Kumar	Scientist	Agril. Engg.	PB(15600 - 39100) GP- Rs.6000.00 Basic- Rs. 31780.00	20-07-04	Permanent	Others
5	Scientist	MrsNeena Bharti	Scientist	Plant Protection	PB(15600 - 39100) GP- Rs.6000.00 Basic- Rs. 31780.00	20-07-04	Permanent	ST
6	Scientist	Dr. NandanaKumari	Scientist	Home Science	PB(15600 - 39100) GP- Rs.6000.00 Basic- Rs. 31780.00	19-07-04	Permanent	Others
7	Programme Assistant	Dr. Rupa Rani	Programme Assistant	Horticulture	PB (9300-34800) GP-Rs. 4200.00 Basic- Rs.21250.00	16-03-05	Permanent	Others
8	Computer Programmer	NamanKandulna	Computer Assistant	-	PB (9300-34800) GP-Rs. 4200.00 Basic- Rs.20300.00	20-07-04	Permanent	ST
9	Farm Manager	-	-	-	-	-	-	-
10		Sunil Kr. Pandey	Audio Visual Aid	-	PB (9300-34800) GP-Rs. 4200.00 Basic- Rs.20300.00		Permanent	Others
11	Accountant / Superintendent	Sri Abhay Kumar Singh	O.S.cum Accountant	-	9300.00		Contractual Staff	Others
12	Stenographer	Sri Ratnesh Kumar Mishra	Stenographer	-	5200.00		Contractual Staff	Others
13.	Driver	Sri	Driver	-	5200.00		Contractual	ST

		RanchandraLo har					Staff	
14.	Driver	Sri PanchanandM ahto		-	5200.00		Contractual Staff	Others
15.	Supporting staff	Sri RuplalMarandi		-	4440.00		Contractual Staff	ST
16.	Supporting staff	Sri Durga Prasad Mahto		-	4440.00		Contractual Staff	Others

1.6. **Total land with KVK (in ha)**

S. No.	Item	Area (ha)
1	Under Buildings & Demonstration units and other encroachment	2.0
2.	Under Crops	6
3.	Orchard/Agro-forestry (Mother plant nursery)	1
4.	Technology park	0.4
5.	Pond	0.2
	Unutilized land due to undulating	0.4
	Total	10

Total area should be matched with breakup

1.7. **Infrastructure Development:**A) **Buildings and others**

S. No.	Name of building	Not yet started	Completed up to plinth level	Completed up to lintel level	Completed up to roof level	Totally completed	Plinth area (sq.m)	Under use or not*	Source of funding
1.	Administrative Building					Completed	500		I.C.A.R.
2.	Farmers Hostel					Completed	300		I.C.A.R.
3.	Staff Quarters (6)			Completed up to lintel level		Incomplete	400		I.C.A.R.
4.	Piggery unit	Not yet started							
5	Fencing					Completed			District Administration
6	Rain Water harvesting structure					Incomplete (Micro irrigation system is not installed)	120x120x10 ft pond		I.C.A.R.
7	Threshing floor					Completed			I.C.A.R.
8	Farm godown					Completed			I.C.A.R.
9.	Farm godown					Completed			District Administration
10.	Preservation unit					Completed			I.C.A.R.
11.	Dairy unit	Not started							
12.	Poultry unit	Not							

		started							
13.	Goatary unit	Not started							
14.	Mushroom Lab	Not started							
15.	Mushroom production unit								
16.	Shade house	Not started							
17.	Soil test Lab					Completed			District Administration
18.	ATIC centre					Completed			District Administration
19.	IT Infrastructure					Completed			I.C.A.R.
20.	Plant diagnostic lab	Not started							I.C.A.R.
21.	Irrigation channel	Not started							I.C.A.R.
22.	Deep boring	Failed							I.C.A.R.
	Others, Please Specify								

* If not in use then since when and reason for non-use

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total km. Run	Present status
Jeep	2005	431129.00	365000 K.M.	Required to be replaced
Tractor	2006	361200.00	1500 hr	Time to time repairing is needed

C) Equipment & AV aids

Name of equipment	Year of purchase	Cost (Rs.)	Present status	Source of fund
a. Lab equipment				
Refrigerator	2007	11990.00	Good	I.C.A.R.
Food processor	2007	4995.00	Good	I.C.A.R.
Commercial gas cylinder	2008	3000.00	Good	I.C.A.R.
Weighing machine	2008	7540.00	Good	I.C.A.R.
Weighing machine	2010	12740.00	Good	I.C.A.R.
Weighing machine	2010	7260.00	Good	I.C.A.R.
Aqua soft dispenser	2012	20000.00	Good	I.C.A.R.
Crown corking machine	2013	19700.00	Good	I.C.A.R.
Tomato Pulpar	2013	29800.00	Good	I.C.A.R.
Screw type Juice Extractor	2013	22000.00	Good	I.C.A.R.
Refractometer	2013	43000.00	Good	I.C.A.R.
b. Farm machinery				
c. AV Aids				

Computer	2006	45000.00	Good	I.C.A.R.
UPS	2006	7000.00	Good	I.C.A.R.
Laser Printer	2006	8000.00	Good	I.C.A.R.
Fax Machine	2006	8000.00	Not installed	I.C.A.R.
Xerox	2007	72000.00	Not functioning	I.C.A.R.
2 KVA Stabilizer	2007	4850.00	Good	I.C.A.R.
Stabilizer 500 VA Manual Auto-cut	2007	1750.00	Good	I.C.A.R.
Camera	2005	12650.00	Good	
Camera	2007	14512.50	Not functioning properly	I.C.A.R.
LCD Projector	2007	51989.00	Good	I.C.A.R.
HAKIM Audio Visual Trolley	2007	8534.00	Good	I.C.A.R.
Projector Screen 8'x6'	2007	7550.00	Good	I.C.A.R.
15Mtrs special imported moulded VGA cable	2007	7500.00	Good	I.C.A.R.
Laser pointer torch with duel effect	2007	2200.00	Good	I.C.A.R.
AHUJA Medium Power Amplified -120 Watt	2013	8847.36	Good	I.C.A.R.
AHUJA 2 way compact PA wall Speaker	2013	8694.72	Good	I.C.A.R.
AHUJA Reflex Horn-WFA-21" Bell Dia	2013	986.84	Good	I.C.A.R.
AHUJA Driver unit -Model- AU40XT	2013	1408.77	Good	I.C.A.R.
AHUJA PA Microphone- Model AUD 101XLR	2013	1693.85	Good	I.C.A.R.

D) Farm implements

Name of equipment	Year of purchase	Cost (Rs.)	Present status	Source of fund
Seed drill cum fertilizer drill	2005	775.00	Good	I.C.A.R.
Birsaridger plough	2005	485.00	Good	I.C.A.R.
Japanese paddy weeder	2005	525.00	Good	I.C.A.R.
Drylandweeder	2005	300.00	Good	I.C.A.R.
Birsa potato digger	2005	625.00	Good	I.C.A.R.
Paddy transplanter	2006	-	Good	
Cultivator 9 tine	2006	14200.00	Good	I.C.A.R.
Land leveler	2006	8080.00	Good	I.C.A.R.
Offset disk	2006	28020.00	Good	I.C.A.R.
Trailer 4 wheel with tyre tube	2006	76500.00	Good	I.C.A.R.
Disc plough 2 furrow	2007	26995.00	Good	I.C.A.R.
Grass cutter	2007	38500	Good	I.C.A.R.
M.B. Plough	2007	26993.00	Good	I.C.A.R.
Rottary tiller	2007	88585.00	Good	I.C.A.R.
Power sprayer	2007	48500.00	Good	I.C.A.R.
Cage wheel nut bolt type	2007	5250.00	Good	I.C.A.R.
Zero till fertilizer drill	2010	-	Good	I.C.A.R.
Power Tiller	2011		Good	I.C.A.R.
Field king laser Guided Land Leveler Machine	2012		Good	I.C.A.R.

1.8. A). Details SAC meeting* conducted in the year :

2. District level data on agriculture, livestock and farming situation (2020)

Sl. no.	Item	Information
1	Major Farming system/enterprise	1. Agriculture + Horticulture (Vegetable) + Animal Husbandry 2. Agriculture + Horticulture (Vegetable) 3. Agriculture + Animal Husbandry 4. Agriculture + Horticulture (Vegetable) + Animal Husbandry+ Fishery 5. Agriculture + Horticulture (Vegetable) + Animal Husbandry+ Lac culture 6. Agriculture + Animal Husbandry+ Lac culture 7. Agriculture + Labour
2	Agro-climatic Zone	IV- Central North Eastern Plateau Zone Characteristics: Geographical area of Zone = 41293 K.m ² Mining dominates in central part. Damodar, Barakar, More and Ajay are the main rivers of this zone. Damodar basin is famous for coal. This zone is characterized by having humid & sub humid tropical monsoon type of climate. Average rainfall of the zone is 1320 m.m. Monsoon breaks in the second week of June. In normal years pre monsoon rains are received in the month of May about 60 m.m. Apart from this winter rain during December- February is sparse. Soil developed on Rajmahal traps are dark, heavy textured, neutral in reaction and moderately well drained to poorly drained and moderately rich in N but poor in P&K. Soils of Dhanbad&Giridih areas are light textured, moderately to slightly acidic and moderately well drained and poor in N & P and moderate to fairly rich in K. Upland Soils of Ranchi and Hazaribagh areas are gravely to sandy, shallow, acidic and of very poor fertility status where as medium land soil are yellow coloured, slightly to moderate acidic, some what poorly drained & moderately fertile where as the soils of Koderma side are light textured, silty in nature, yellowish to reddish in colour& neutral to moderately acidic in reaction. These are poor to moderate in N, poor in available P and rich to very rich in K. Very limited irrigation potential has been exploited in this zone. Although it is claimed that 8-9% area is irrigated. Larger part of agricultural land is rainfed. Less than 55% area comes under net cultivated area. Good forest is available on 12-13 percent land. Rice, maize, wheat, potato, linseed, rapseed and mustard, til, niger, ground nut and vegetables are major crops of the region.

		<p>Climate of the Bokaro district is sub humid with water deficiency in winter. Temperature ranges from 2⁰C in winter to 45⁰C in hot summer. The main drainage system is Damodar&Swarnrekha rivers. Only 5-8% of net sown area is irrigated. The average annual rainfall of the district is 1275 mm. Upland soils are red to brownish red in colour, light textured, well drained, acidic in reaction and poor in organic carbon, N, Ca, Mg., P & S. Medium land soils are yellow, yellowish in colour, light to medium texture, moderately acidic and poor in N, Ca, Mg and organic matter. Whereas the low land soils are gray to grayish in colour, heavy textured, neutral to slightly alkaline in reaction, poorly drained and medium in N and organic matter. The major crops of the district are rice, maize, wheat, potato, lentil, linseed, rapseed& mustard, groundnut, potato and vegetables like ladys finger, tomato, brinjal, 8rench bean, raddish, cauliflower, cabbage & cucurbits.</p>
3	Agro ecological situation	<ol style="list-style-type: none"> 1. Red sandy loam, gravely undulating topography with mines and forests: Undulating topography, having red sandy loam soil, full of gravels, covered with perennial forests, having mines 2. Sandy loam rainfed: Upland sandy loam soil, no irrigation facility, agriculture only depend on rain water 3. Sandy loam irrigated: Medium land, sandy loam soil, having irrigation facility 4. Clay loam rainfed :Low land, clay loam soil, agriculture depend only rain water
4	Soil type	<ol style="list-style-type: none"> 1. Stony and gravely soil: Found in the foot hill prone to intensive erosion low water holding capacity highly acidic low in fertility status and organic matter content only suitable for pasture and recreation purpose. 2. Light texture soil (Sandy soil) : Found in upland, coarse texture soil, highly acidic in reaction, low water holding capacity, low in organic matter content and poor in fertility status, rich in micronutrient except Boron and Molybdenum, prone to erosion. 3. Medium texture soil (Loamy soil): Found in medium land, soil texture is mainly sandy loam to sandy clay loam, soils are moderately acidic, poor in fertility status and low in organic matter content and water holding capacity is moderate. 4. Fine textured soil (Clayey soil) : Heavy texture soil , found in low land, soils are fairly acidic to neutral in reaction, water holding capacity is high, organic matter content is medium and moderate in fertility status.

5	Productivity of major 2-3 crops under cereals, pulses, oilseeds, vegetables, fruits and others	Crop		Productivity (q /ha)
		Paddy (Hybrid)		40.00
		Paddy(HYV)		28.00
		Wheat		17.10
		Maiz		16.00
		Arhar		07.20
		Gram		08.25
		Mustad		6.2
		Groundnut		7.5
		Niger		2.1
		Brinjal		259.0
		Tomato		281.0
		Cauliflower		274.0
Cucurbitaceous		160-200		
6	Mean yearly temperature, rainfall, humidity of the district	Mean yearly rainfall- 1130 mm		
7	Production of major livestock products like milk, egg, meat etc.			

2.6 (a) Details of operational area / villages (2019)

Sl. No.	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified(Crop wise)	Identified Thrust Area
1.	Bermo	Petarwar	Ambadih, Chargi, Jaruatn, Bundu, Lukaiya, Koh, Jaradih, Itke, Chanpi, Angwali, Kojram, Rukam etc.	Paddy Maize Groundnut Vegetables Potato Sweet potato Onion Mustard Poultry Goatry	1. Low productivity in cereals & pulses 2. Low profitability in vegetable cultivation 3. Low productivity in poultry & goatry	1. Introduction of high yielding and hybrid varieties of paddy 2. INM & IPM in paddy 3. Introduction of disease resistant variety of vegetable specially in tomato & brinjal
2.	Bermo	Kasmar	Durgapur, Raghunathpur, Madhukarpur, Mayapur, Kurko, Chandipur, Baraikala, Ranitanr, Manjura, Rangamati, Hisim, Kedla.	Paddy Maize Wheat Arhar Gram Niger Mustard Groundnut Vegetable Potato Sweet potato Lac Poultry	1. Low productivity in cereals & pulses 2. Low profitability in vegetable crops 3. Low productivity in poultry & goatry 4. Low productivity in oilseed crops 5. Low productivity in lac	4. Introduction high yielding variety of Arhar gram, groundnut, mustard and Niger 5. Management of soil acidity through furrow application of lime and sweet potato cultivation

				Goatry		with integrated nutrient management
3.	Bermo	Gomia	Saram, Dhedhe, Tulbul, Mahuatanr, Lalpaniya, Kander	Paddy Vegetable Maize Wheat Arhar Niger Mustard Sweet potato Poultry Goatry Lac	1. Low productivity in cereals & pulses 2. Low profitability in vegetable crops 3. Low productivity in poultry & goatry 4. Low productivity in oilseed crops 5. Low productivity in lac	6. Income generation activity for rural youth & farm women 7. Rain water harvesting. 8. INM & IPM 9. Post harvest management, marketing & value addition 10. Farm mechanization
4.	Bermo	Bermo	Jaridih, Govindpur	Paddy Maize Arhar Niger Vegetable Potato Lac Goatry	1. Low productivity in cereals & pulses 2. Low profitability in vegetable crops 3. Low productivity in poultry & goatry 4. Low productivity in lac	11. Introduction of high yielding variety of maize and wheat with integrated crop management 12. Moisture conservation and micro irrigation system 13. Breed improvement in goatry and piggery
5.	Bermo	Chandrapura	Taranari, Narra, Telo, Jarua, Kurumba, Paranga	Paddy Maize Arhar Vegetable Potato Lac Poultry Goatry	1. Low productivity in cereals & pulses 2. Low profitability in vegetable crops 3. Low productivity in poultry & goatry 4. Low productivity in lac	14. Disease and feed management in poultry and goatry 15. Organic vegetable cultivation 16. Popularization of sweet corn and baby corn
6.	Bermo	Nawadih	Alargo, Bhalmara, Chapri, Narayanpur, Penk, Kothi	Paddy Maize Arhar Niger Vegetable Potato Lac Poultry Goatry Piggery	1. Low productivity in cereals & pulses 2. Low profitability in vegetable crops 3. Low productivity in poultry, goatry & piggery 4. Low productivity in oilseed crops 5. Low productivity in lac	17. Popularization of low volume high value vegetable crops such as broccoli, colour d capsicum, 18. Popularization of mushroom production
7.	Chas	Chas	Dharpura,	Paddy	1. Low	

			Pokhanna, Jhopro, Ulgoda, Pindrajora, KasiJharia,	Maize Wheat Arhar Gram Mustard Vegetable Poultry Goatry Lac	productivity in cereals & pulses 2. Low profitability in vegetable crops 3. Low productivity in poultry & goatry 4. Low productivity in oilseed crops 5. Low productivity in lac
8.	Chas	Chandankiyari	Chandankiyari, Bansgari, Lanka, Machatanr, Siyaljori, Bermo	Paddy Maize Groundnut Vegetables Potato Poultry Goatry	1. Low productivity in cereals & pulses 2. Low profitability in vegetable crops 3. Low productivity in poultry & goatry 4. Low productivity in oilseed crops 5. Low productivity in lac
9.		Jaridih	Tilaiya, Bhaski, Beldih, Araju, Gangjori, Pichri	Paddy Maize Wheat Arhar Gram Mustard Vegetable Poultry Goatry	1. Low productivity in cereals & pulses 2. Low profitability in vegetable crops 3. Low productivity in poultry & goatry 4. Low productivity in oilseed crops 5. Low productivity in lac

(b) Details of village adoption programme:

Name of the villages adopted by Sr. Scientist & Head and Scientist in 2019 for its development and action plan

Name of village	Block	Action taken for development
Raghunathpur	Kasmar	Base line survey is completed for knowing the existing condition of the village. Problems have been identified and accordingly some steps have been taken through our
Chandipur	Kasmar	
NauajaraJaruanr	Petarwar	
Manjura	Kasmar	
Koh	Petarwar	

Ambadih	Petarwar	mandated activities. Scientists are regularly visiting these adopted villages and providing timely advice for crops related problems.
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(c) SansadAdarsh Gram Yojona

- i) Name of the village under SansadAdarsha Gram Yojona:
Kochakuli, Panchayat- Pichri, Block- Petarwar

2.7 Priority thrust areas

S. No	Thrust area
1.	Popularization of Soil and water conservation techniques
2.	Intensification in crop production system
3.	Development of seed production system.
4.	Value addition of locally available fruits & vegetables.
5.	Improvement of indigenous poor breeds of livestock.
6.	Soil Fertility Management
7.	Insect pest and disease management of major crops
8.	Entrepreneurship development through mushroom, vermi compost production.
9.	Farm Mechanization

Seed production (q)		Planting material (in Lakh)	
Target	Achievement	Target	Achievement
1000 (Seed Hub)	640	3400	1000 (Marigold)
116	37.80		

Livestock strains and fish fingerlings produced (in lakh)*		Soil, water, plant, manures samples tested (in lakh)	
Target	Achievement	Target	Achievement

* Give no. only in case of fish fingerlings

Publication by KVKs							
Item	Number	No. circulated	No. of Research papers in NAAS rated Journals	Highest NAAS rating of any publication	Average NAAS rating of the publications	Details of awarded publication, if any	Details of Award given to the publication
Research paper							
Seminar/conference/symposia papers							
Books							
Bulletins							
News letter							
Popular Articles							
Book Chapter							
Extension Pamphlets/literature							
Technical reports							
Electronic Publication (CD/DVD etc)							
TOTAL							

1 Achievements on technologies assessed and refined

OFT-1 Home Science**Standing crop**

1.	Title of On farm Trial	Assessment of different kind of papaya based jam.
2.	Problem diagnosed	Low profitability due to sale at very low rate in peak season.
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	F.P. :- Consumption as bhujia by local people T.O.1:- Development of raw papaya jam T.O. 2:- Development of raw papaya & guava jam
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	IARI/ Technical Bulletin of GBPUAT, Pantnagar.
5.	Production system and thematic area	Post harvest technology
6.	Performance of the Technology with performance indicators	Standing crop
7.	Final recommendation for micro level situation	
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	

OFT-2 Home Science

1.	Title of On farm Trial	Assessment of preparation methods of squash from ripe jack fruit.
2.	Problem diagnosed	Jack fruit is heavily produced in local area of Bokaro district but not properly utilized due to lack of processing knowledge.
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	F.P. :Local people consume ripe jack fruit as such as ripe. T.O.1: Preparation of squash from ripe jack fruit. Formulation - Ingredients Jack fruit juice- 250 ml, Sugar – 340g, Citric acid 11.5g, Water- 385 ml, KMS- 0.6g T.O. 2: Preparation of squash from ripe jack fruit and mango juice. Formulation - Ingredients Well ripened jack fruit juice – 250 ml, Mango juice - 250 ml, sugar - 500g, water - 300ml, Citric acid- 10g.
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	Technical Bulletin No-41 “ A Guide on Jack Fruit: Value Addition and Cultivation” ICAR, Research Complex of Goa, India
5.	Production system and thematic area	Rainfed Upland and Value Addition
6.	Performance of the Technology with performance indicators	Given in table
7.	Final recommendation for micro level situation	Technological option-II found best in taste, colour, flavor and appearance whereas Technological option-I found cost effective.
8.	Constraints identified and feedback for research	Preservatives needed are not available in rural areas.
9.	Process of farmers participation and their reaction	Their reaction were very good and cooperative.

Thematic area: Value Addition

Problem definition: Jack fruit is heavily produced in local area of Bokaro district but not properly utilized due to lack of processing knowledge.

Technology assessed: Assessed

Table: Nutritive value of all three food produced per 100 unit belonging to all three treatments

Result: Technology option-II is found best in taste, colour, flavor and appearance and overall acceptability. But Technological option-I found cost effective.

Table: 1 - Sensory evaluation of jack fruit based squash by score card method on the date of preparation

Technology Option	Appearance	Colour	Flavor	Taste	Overall acceptability	Overall grading	Remarks
Farmers practice(ripe jack fruit bulbs)	6.00	6.37	6.77	5.87	5.87	III	Shelf life few hours
Technological option-I(Squash made up of ripe jack fruit	7.55	7.88	8.62	7.75	7.77	II	In good condition even upto 3 months at room temp.
Technological option-II(Squash made up of ripe jack fruit and	8.87	8.75	8.87	8.77	8.75	I	In good condition even after 3 months at

ripe mango							room temp.
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Scale of score card method

1-2 Very poor, 3-4 Poor, 5-6 Good, 7-8 very Good, 9-10 Excellent

Table: 2 – Economics Involved in Jack Fruit based Squash Preparation

Technology Option	Cost of produce per kg or per litre(in Rs)	Market price of squash per litre(ripe jack fruit bulb per kg)	Net profit/ per kg/litre	B:C ratio
Farmers practice(ripe jack fruit bulbs)	20.40(Rs/kg)	50 (Rs/kg)	29.60	2.45
Technological option-I(Squash made up of ripe jack fruit)	62.91(Rs/litre)	184.28 Rs/litre	121.37	2.92
Technological option-II(Squash made up of ripe jack fruit and ripe mango)	81.56(Rs/litre)	212.85 Rs/litre	131.29	2.60

OFT-3 Agril. Engg

Standing Crop

1.	Title of On farm Trial	Assessment of different sowing methods on wheat yield.
2.	Problem diagnosed	Low yield of wheat due to improper sowing method.
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	F.P. :-Conventional method (wheat sowing behind the plough) T.O.1 :- Sowing with seed drill. T.O.2 :- Sowing with zero tillage machine.
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	BAU, Ranchi
5.	Production system and thematic area	Irrigated Mediumland and Farm Mechanization
6.	Performance of the Technology with performance indicators	Given in table
7.	Final recommendation for micro level situation	Technology option -2 Sowing with zero tillage machine was found most effective in different sowing method in wheat yield.
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	

Thematic area: Farm Mechanization

Problem definition: Low yield of wheat due to improper sowing method.

Table: 1 – Effect of different sowing method in wheat yield.

Technology option	Moisture content of soil before sowing	Plant Population after 21 days	Effective tiller/m ²	No. of grain/ear head	Yield q/ha	Cost of cultivation Rs./ha	Gross income Rs./ha	Net income Rs./ha	B:C ratio
F.P. :- Conventional method (wheat sowing behind the plough)	12.40	180	270	38.2	26.1	29500	76200	46700	2.37
T.O.1 :- Sowing with conventional seed drill.	12.60	186	281	42.6	28.6	28000	85200	57200	3.04
T.O.2 :- Sowing with zero tillage machine.	16.80	165	289	45.0	33.3	25000	90000	65000	3.6
CD			7.86	4.6	1.72				

Cost of wheat Rs. 20/kg

Results: Technology option -2 Sowing with zero tillage machine was found most effective in different sowing method in wheat yield.

OFT-4 Agril Engg.

Standing Crop

1.	Title of On farm Trial	Assessment of Irrigation methods in single and paired row potato cultivation.
2.	Problem diagnosed	Low irrigation water use efficiency in potato cultivation.
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	F.P. :- Single row potato planting with furrow Irrigation T.O.1 :- Single row potato planting with Skip Irrigation (Alternate skip) T.O.2 :- Double row potato planting with furrow Irrigation
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	IARI, New Delhi
5.	Production system and thematic area	Irrigated Medium land and Water Management
6.	Performance of the Technology with performance indicators	Given in table
7.	Final recommendation for micro level situation	Technology option 1 single row potato planting with skip irrigation is found best treatment with respect to yield, net profit and inform of water saving. Therefore, single row potato planting with alternate furrow (skip) irrigation is recommended.
8.	Constraints identified and feedback for research	Some problems comes to put soil on double row potato planting with furrow irrigation.
9.	Process of farmers participation and their reaction	Personal contact. Farmers are satisfied with single row potato planting with alternate furrow irrigation.

Thematic area: Water Management

Problem definition: Low irrigation water use efficiency in potato cultivation.

Table: 1- Performance of technology with performance indicator.

Technology option	Total water used m ³ /ha	Water saving over FP(%)	Yield q/ha	Cost of cultivation Rs./ha	Gross return Rs./ha	Net return Rs./ha	B:C ratio
F.P. :- Single row with furrow Irrigation	1280	-	155	70000	232500	162500	3.32
T.O.1 :- Single row with Skip Irrigation	832	35	192	70000	288000	218000	4.11
T.O.2 :- Double row planting on raised bed	1024	20	181	70000	271500	201500	3.87

with furrow Irrigation							
CD5%	186.7	9.43					

Results: Technology option 1 single row potato planting with skip irrigation is found best treatment with respect to yield, net profit and B: C ratio. Therefore, single row potato planting with alternate furrow (skip) irrigation is recommended.

OFT-5 – Crop Production

1.	Title of On farm Trial	Assessment of Weed control methods on yield and economics of transplanted rice (<i>Oryza sativa</i>).
2.	Problem diagnosed	Low yield of rice due to heavy weed infestation. Major weeds are identified in rice field, <i>Echinochloa colonum</i> , <i>Echinochloa crusgalli</i> , <i>Cynodactylon</i> under grasses, <i>Eclipta alba</i> , <i>Celosia argentea</i> , <i>Ammanibacifera</i> , <i>Commelina</i> spp, <i>Panicum</i> and <i>Cyperus difformis</i> , <i>C. iria</i> , <i>C. rotundus</i> , <i>Fimbristylis miliacea</i> under Sedges.
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	F P: One hand weeding at 35-40 DAT. TO1- Pretilachlor 50 EC @ 0.75 kg a.i / ha as PE +One hand weeding at 35-40 DAT. TO2- Bispyribac 10 SC @ 25g a.i /ha PoE at 20 DAT +One hand weeding at 35-40 DAT. TO3- Pretilachlor 50 EC @ 0.75 kg a.i / ha as PE + Bispyribac 10 SC @ 25g a.i /ha PoE at 20 DAT
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	BAU, Ranchi
5.	Production system and thematic area	Rainfed Mediumland and Weed Management
6.	Performance of the Technology with performance indicators	Given in table
7.	Final recommendation for micro level situation	
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	

Thematic area: Weed Management

Problem definition: Low yield of rice due to heavy weed infestation.

Table: 1 - Effect of weed management practices on weed control, yield and economic of transplanted rice.

Technology Option	Weed density (No./m ²) at 60DAT	Weed dry wt (g/m ²) at 60 DAT	Effective tillers/m ²	Grains/s pike	Grains weight (g) (1000 seeds)	grain yield(q/ha)	Cost of cultivation (Rs./ha)	Gross Return (Rs./ha)	Net Return (Rs./ha)	B:C Ratio
F P: One hand weeding at 35-40 DAT.	24.5	5.8	202	127.6	21.0	28.2	25600	56400	30800	2.20
TO1- Pretilachlor 50 EC @ 0.75 kg a.i / ha as PE +One hand weeding at 35-40 DAT.	16.2	4.3	214	132.8	21.4	30.90	27000	61800	34800	2.28
TO2- Bispyribac 10 SC @ 25g a.i /ha PoE at 20 DAT +One hand weeding at 35-40 DAT.	11.4	3.5	226.6	135.5	22.0	33.6	28400	67200	38800	2.37
TO3- Pretilachlor 50 EC @ 0.75 kg a.i / ha as PE + Bispyribac 10 SC @ 25g a.i /ha PoE at 20 DAT	6.8	2.3	248	141.5	22.5	37.6	26800	75200	48400	2.80

OFT- 6 Crop Production**Standing crop**

- | | | |
|----|--|---|
| 1. | Title of On Farm Trial | Yield and profitability of mustard as affected by nutrient management under irrigated condition. |
| 2. | Problem Diagnose | Low yield of mustard due to imbalance use of fertilizer. |
| 3. | Details of Technologies selected for assessment/refinement | F.P. - 20-25kgN, 8-10 kg P ₂ O ₅ , 8-10 q FYM/ha
T.O. I - 75% RDF (60:45:30 kg NPK/ha)+ Azotobacter + PSB
T. O. ii - 100% RDF + Sulphur (20kg/ha)
RDF- 80:60:40 kgNPK/ha |
| 4. | Source of Technology | BAU Ranchi |
| 5. | Replication | 10 |
| 6. | Production System & Thematic Area | Irrigated medium land and Nutrient Management |

OFT 7 - Horticulture**Standing Crop**

- | | | |
|----|--|---|
| 1. | Title of On Farm Trial | Effect of micronutrient on yield and quality of Mango |
| 2. | Problem Diagnose | Deficiency of micronutrient like zinc, boron contributing towards poor yield and quality of Mango |
| 3. | Details of Technologies selected for assessment/refinement | <p>Farmers Practice : FYM 10 kg per tree + urea 0.5 kg per plant (06 year old)</p> <p>Technology option-I : RDF (0.6:0.6:0.36 kg NPK/plant) + 100 g zinc sulphate + 50 g copper sulphate + 50 g boric acid (soil application) in basin after harvest + foliar spray of 0.2% zinc sulphate + 0.1% boric acid (2 spray at just before flowering and marble stage)</p> <p>Technology option-II : RDF (0.6:0.6:0.36 kg NPK/plant) + 100 g zinc sulphate + 50 g copper sulphate + 50 g boric acid (soil application) in basin after harvest + foliar spray of 0.2% zinc sulphate + 0.1% copper sulphate + 0.1% boric acid (2 spray at just before flowering and marble stage)</p> <p>Mango- Variety : Amrapali</p> |
| 4. | Source of Technology | ICAR, RCER, Ranchi |
| 5. | Replication | 10 |
| 6. | Production System & Thematic Area | Rainfed Upland and Management of young orchard |

OFT 8 - Horticulture**Standing Crop**

- | | | |
|----|--|--|
| 1. | Title of On Farm Trial | Sustainable Onion production through nutrient management |
| 2. | Problem Diagnose | Unbalanced use of fertilizer results in poor crops yields. |
| 3. | Details of Technologies selected for assessment/refinement | Farmers Practice : 60:20:20 (NPK) + 20 q FYM
Technology option-I : RDF 150:50:80 (NPK), P through SSP
Technology option-II : RDF 50% + 20 q poultry manure |
| 4. | Source of Technology | Directorate of Onion & Garlic research, Pune |
| 5. | Replication | 10 |
| 6. | Production System & Thematic Area | Irrigated medium land and Nutrient Management |

OFT-09 Plant Protection

Standing Crop

1.	Title of On farm Trial	Management of aphid <i>Aphis gossypii</i> in okra in kharif season.
2.	Problem diagnosed	Low productivity of Bhindi due to aphid attack.
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Technology option: Farmers Practice : Foliar spray of Acetamiprid 20% SP @ 1g/lit.water as per appearance of aphid. Technology option-I :3 Foliar spray of NSKE 5 % at 15 days interval from 30DAS Technology option-II :3 spray of Imidachloprid 17.8% SL 1.5 ml/lt water at 15 days interval from 30 DAS +3 Foliar spray of NSKE 5% at 15 days interval from 30DAS.
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	BAU, Ranchi
5.	Production system and thematic area	Irrigated Mediumland and Pest Management
6.	Performance of the Technology with performance indicators	Standing Crop
7.	Final recommendation for micro level situation	
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	

OFT-10 Plant Protection

Standing Crop

1.	Title of On farm Trial	Management of pod borer <i>Helicoverpa armigera</i> (Hubner) in chickpea.
2.	Problem diagnosed	Low productivity of chickpea due to heavy infestation of pod borer.
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Technology option Farmers Practice : 1 spray of Carbryl 50 WP @ 4g/ lit. water as per appearance of larva. Technology option-I : 2 spray of Lambdacyhalothrin 2.5EC @ 2 ml/l water at 7 days interval starting from flowering stage. Technology option-II : Bt var. kurstaki 2g/l water. 1st spray at 50% flowering and 2 nd spray at 15 days after 1 st spraying. + 1spray of Chlorantraniliprole 18.5% SC 1ml/3l water after 2 nd spray of BT.
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	BAU, Ranchi
5.	Production system and thematic area	Rainfed Upland and Integrated Pest Management
6.	Performance of the Technology with performance indicators	
7.	Final recommendation for micro level situation	
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	

In both the Tables, information of same crop should be provided. For example, if in Table 3.2A crops are mentioned as a,b,c,d etc., in the table for Details of farming situation, the same crop should be mentioned in the identical sequence.

Performance of FLD

Oilseeds:

Frontline demonstrations on oilseed crops

Crop	Thematic Area	Name of the technology demonstrated	No. of Farmers	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)				
					Demo	Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
Total																

* Economics to be worked out based on total cost of production per unit area and not on critical inputs alone.

** BCR= GROSS RETURN/GROSS COST

Pulses

Frontline demonstration on pulse crops

Crop	Thematic Area	Name of the technology demonstrated	No. of Farmers	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)				
					Demo	Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
Total																

* Economics to be worked out based on total cost of production per unit area and not on critical inputs alone.

Sheep and goat																		
Duckery																		
Others (pl.specify)																		
Total																		

* Economics to be worked out based on total cost of production per unit area and not on critical inputs alone.

** BCR= GROSS RETURN/GROSS COST

Fisheries

FLD on Milk Processing (Preparation of Malai Chop)

Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	Technical parameter	Check	Demo (Malai Chop)	Net Profit	B:C ratio
Milk	Processing	Secondary Processing	16 OTH	1. Total cost 2. Shelf Life (at Room temp) 3. Mode use 4. Comfort for doing business	Rs. 1230.00 4-5 hors As row ingredients for sweets, deserts, paneer& also for drinking purpose Difficult	112PCs 112 pcsx5= 2800.00 2 days As sweet & Desert Easy in transport	2800-1230 = Rs. 1570	2.27

FLD on Sweet potato based GulabJamun preparation

Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	Technical parameter	Check	Demo (Sweet potato based GulabJanum)	Net Profit	B:C ratio
Sweet Potato	Value addition	Secondary processing	40 OTH	(i) Total cost (ii) Shelf life (at room temp.) (iii) Mode of consumption (iv) Comfort in doing business	3810.00 2-3 month Consumed only just either by roasting or by boiling Difficult that's why sold from farm at very less price i.e Rs. 10/kg	720 pc x Rs. 10/pc= 7200 2-3 days in winter season Consumed as sweet in all occasion Easy in transport & doing business sold at everywhere at least Rs. 600/kg	3390	7200/3810=1.88

Farm implements and machinery

Name of the implement	Crop	Name of the technology demonstrated	No. of Farmer	Area (ha)	Filed observation (output/man hour)		% decrease in major parameter	Labor reduction (man days)				Cost reduction (Rs./ha or Rs./Unit)			
					Demonstration	Check		Demo	Check	Increase in man days		Demo	Check	Cost saving Rs./ha	Cost saving %

Drumseeder	Paddy-Lalat	Use of drum seeder for paddy cultivation	6	4	0.04	0.004	90.0	03	30	90		22300	28100	5800	20.64
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* Economics to be worked out based on total cost of production per unit area and not on critical inputs alone.

** BCR= GROSS RETURN/GROSS COST

Extension and Training activities under FLD

Sl. No.	Activity	Date	No. of activities organized	Number of participants	Remarks
1.	Field days				
2.	Farmers Training				
3.	Media coverage				
4.	Training for extension functionaries				

Performance of the demonstration under CFLD on Pulse and Oilseed Crops during Kharif 2020 and Rabi 2021:

Oilseed

A. Technical Parameters:

Sl. No.	Crop demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	Yield gap (Kg/ha) w.r.to			Name of Variety + Technology demonstrated	Number of farmers	Area in ha	Yield obtained (q/ha)				Yield gap minimized (%)		
				District yield (D)	State yield (S)	Potential yield (P)				Max.	Min.	Av.	% Increase	D	S	P
1	Groundnut	Local Moongfali	11.4	7.5	9.92	20	K-6 , Line Sowing	87	40	17.6	12.4	14.8	30	97	49	(-)26
2	Sesame	Local Til	3.5	3.3	3.76	8.5	RT-346, Line sowing, Seed treatment, Sulphur, Pest & Disease management	70	30	5.9	4.2	5.2	49	57	38	(-) 38.8
3	Niger	Local Surguja	3.4	2.5	3.17	7	Puja-1, Line sowing, Seed treatment	90	30	5.9	4.5	5.4	59	116	70	(-)22.8
4	Mustard	Lotni	5.5	6.0	3.7	12	P-26, Line sowing, Sulphur, pest & disease management	180	100	Standing						
5	Linseed	Local	4.2	3.0	1.2	12	Var- Priyam, Line sowing, Sulphur, pest & disease management	80	30	Standing						

B. Economic parameters

Sl. No.	Crop	Variety	Farmer's Plot						Demonstration Plot					
			Technology demonstrated	Existing (Farmer's) variety name	Gross Cost (Rs/ha)	Gross Return (Rs./ha.)	Net Return (Rs./ha.)	B:C Ratio	Technology demonstrated	Demonstrated Plot (variety name)	Gross Cost (Rs/ha)	Gross Return (Rs./ha.)	Net Return (Rs./ha.)	B:C Ratio
1.	Groundnut	K-6	Seed, fertilizer	Local Moongfali	21500	57200	35700	2.67	K-6 , Line Sowing	K-6	24500	88800	64300	3.6
2.	Sesame	RT-346	Seed, fertilizer	Local Til	10500	25600	15100	2.44	RT-346, Line sowing, Seed treatment, Sulphur, Pest & Disease management	RT-346	13500	42200	30700	3.27
3.	Niger	Puja-1	Seed, fertilizer	Local Sarguja	9000	19250	10250	2.1	Puja-1, Line sowing, Seed treatment	Puja-1	11400	31350	19950	2.75
4.	Mustard	P-26	Seed, fertilizer	Lotni					P-26, Line sowing, Sulphur, pest & disease management			Standing Crop		
5.	Linseed	Priyam	Seed	Local					Var- Priyam, Line sowing, Sulphur, pest & disease management	Priyam		Standing Crop		

Pulses

A. Technical Parameters:

Sl. No.	Crop demonstrated	Existing (Farmer's) variety name	Existing yield (q/ha)	Yield gap (Kg/ha) w.r.to			Name of Variety + Technology demonstrated	Number of farmers	Area in ha	Yield obtained (q/ha)			% Increase	Yield gap minimized (%)			
				District yield (D)	State yield (S)	Potential yield (P)				Max.	Min.	Av.		D	S	P	
1	Pigeon pea	Local		7	7.5	18	Variety- IPA 203, line sowing, intercropping, seed treatment, pest & disease management	28	10	Standing							
2	Horse gram	Local	5.4	4.2	4.5	10	Variety- VLG-19 , seed treatment	21	10	8.8	5.8	8.2	52	95	82	(-)18	
3	Chick pea	Local					Variety- JG-14, Seed, biofertilizer, pest management, seed treatment	26	10	Standing							
4	Green Gram (Summer)									To be done							

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			
empowerment													
Income generation activities for empowerment of rural Women	1	-	32	32	-	-	-	-	-	-	-	32	32
Location specific drudgery reduction technologies													
Rural Crafts													
Capacity building	1	-	18	18	-	-	-	-	12	12		30	30
VI. Agril. Engineering													
Installation and maintenance of micro irrigation systems	3	15	39	54	1		1	24	14	38	40	53	93
Use of Plastics in farming practices													
Production of small tools and implements													
Repair and maintenance of farm machinery and implements	2	13	10	23	48	3	51	9	4	13	70	17	87
Others, if any	2	6	8	14	-	-	-	25	-	-	31	8	39
VII. Plant Protection													
Integrated Pest Management	7	135	-	135	13	-	13	51	-	51	199	-	199
Integrated Disease Management	1	20	5	25	-	-	-	-	2	2	20	7	27
Bio-control of pests and diseases													
Production of bio control agents and bio pesticides													
Others, if any lac cultivation	1	5	-	5	2	-	2	6	-	6	13	-	13
VIII. Fisheries													
Integrated fish farming													
Carp breeding and hatchery management													
Carp fry and fingerling rearing													
IX. Production of Inputs at site													
Organic manures production	1	11	6	17	3	2	5	18	5	23	32	13	45
X. Capacity Building and Group Dynamics													
XII. Others (Pl. Specify)													
TOTAL	26	311	129	440	77	5	82	211	39	225	605	167	772

B) Rural Youth (on campus)

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	2	6	8	-	-	-	-	25	25	2	31	33
Bee-keeping													
Integrated farming	1	21	-	21	5	-	5	8	-	8	34	-	34

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			
Seed production	1	18	-	18	-	-	-	14	-	14	32	-	32
Production of organic inputs	1	18	-	18	5	-	5	7	-	7	30	-	30
Integrated Farming													
Planting material production													
Vermi-culture													
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production	1	13	-	13	-	-	-	12	-	12	25	-	25
Repair and maintenance of farm machinery and implements	1	18	-	18	-	-	-	10	-	10	28	-	28
Nursery Management of Horticulture crops	1	36	-	36	-	-	-	-	-	-	36	-	36
Training and pruning of orchards													
Value addition	1	-	24	24	-	-	-	-	-	-		24	24
Small scale processing	1	-	26	26								26	26
Rural Crafts													
TOTAL	5	26	56	82	10	-	10	51	25	76	95	57	152

C) Extension Personnel (on campus)

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	2	47	-	47	-	-	-	13	9	22	60	9	69
Value addition	1	-	25	25	-	-	-	-	6	6	-	31	31
Integrated Pest Management													
Integrated Nutrient management													
Rejuvenation of old orchards													
Protected cultivation technology	1	20	-	20	-	-	-	-	10	10	20	10	30
Women and Child care	1	-	28	28	-	-	-	-	-	-	-	28	28
TOTAL	4	67	53	20				13	25	38	80	40	120

D) Farmers and farm women (off campus)

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	1	25	-	25	-	-		16	-	16	41		41
Resource Conservation Technologies													
Cropping Systems													
Crop Diversification	1	9	4	13	-	3	3	7	5	12	16	12	28
Integrated Farming	1	23	9	32	3	2	5	8	3	11	34	14	48
Water management													
Seed production													
Nursery management													
Integrated Crop Management	4	101	15	116	11	1	12	48	14	62	160	30	190
Fodder production													
Production of organic inputs													
Others, (cultivation of crops)	1	4	15	19	-	-	-	2	11	13	28	6	34
II. Horticulture													
a) Vegetable Crops													
Integrated nutrient management	1	26	12	38	-	-	-	4	-	4	30	12	42
Water management													
Enterprise development													
Skill development													
Yield increment													
Production of low volume and high value crops													
Off-season vegetables													
Nursery raising	1	24	-	24	-	-	-	9	-	9	33	-	33
Export potential vegetables													
Grading and standardization													
Protective cultivation (Green Houses, Shade Net etc.)													
Others, if any (Cultivation of Vegetable)	3	89	22	111	-	-	-	54	-	54	143	22	165
Training and Pruning													
b) Fruits													
Layout and Management of Orchards													
Cultivation of Fruit	1	26	-	26	-	-	-	15	-	15	41	-	41
c) Ornamental Plants													
d) Plantation crops													
e) Tuber crops													
f) Spices													
g) Medicinal and													

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			
and Group Dynamics													
XII. Others (Pl. Specify)													
TOTAL	38	681	352	1033	20	17	37	302	88	376	1025	418	1443

E) RURAL YOUTH (Off Campus)

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													
Bee-keeping	1	44	-	44	-	-	-	-	6	6	44	6	50
Lac cultivation	1	42	-	42	-	-	-	-	8	8	42	8	50
Others, if any													
TOTAL	2	86		86					14	4	86	14	100

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	1	25	-	25	-	-	-	16	-	16	41		41
Crop Diversification	1	9	4	13		3	3	7	5	12	16	12	28
Integrated farming	1	23	9	32	3	2	5	8	3	11	34	14	48
Seed production	3	32	5	37	4		4	26	2	28	62	7	69
Nursery management													
Integrated Crop Management	5	135	15	150	14	1	15	63	14	77	212	30	242
Fodder production													
Production of organic inputs													
Others, (cultivation of crops)	3	22	15	37				18	11	29	62	6	68
II. Horticulture													
a) Vegetable Crops													
Integrated nutrient management	2	48	18	66	3	-	3	25		25	82	12	94
Nursery raising	1	24	-	24	-	-	-	9	-	9	33	-	33

Cultivation of Vegetable	3	89	22	111				54		54	143	22	165
Training and Pruning													
b) Fruits													
Cultivation of Fruit	1	26	-	26				15	-	15	41	-	41
c) Ornamental Plants													
d) Plantation crops													
e) Tuber crops													
f) Spices													
Others, if any													
g) Medicinal and Aromatic Plants													
III. Soil Health and Fertility Management													
IV. Livestock Production and Management													
V. Home Science/Women empowerment													
Household food security by kitchen gardening and nutrition gardening	1	-	23	23	-	-	-	-	-	-	-	23	23
Design and development of low/minimum cost diet	1	-	16	16	-	-	-	-	-	-	-	16	16
Designing and development for high nutrient efficiency diet	2	26	16	42	-	5	5	16	5	21	42	26	68
Value addition	3	-	71	71	-	-	-	-	14	14	-	85	85
Income generation activities for empowerment of rural Women	1	-	32	32	-	-	-	-	-	-	-	32	32
Location specific drudgery reduction technologies													
Rural Crafts													
Capacity building	1	-	18	18	-	-	-	-	12	12	-	30	30
Others(PHT)	1	-	29	29	-	-	-	-	-	-	-	29	29
VI.Agril. Engineering													
Installation and maintenance of micro irrigation systems	5	65	68	133	1		1	55	21	76	121	89	210
Use of Plastics in farming practices													
Production of small tools and implements													
Small scale processing and value addition	1	1		1	4		4	7	10	17	12	10	22
Repair and maintenance of farm machinery and implements	4	48	40	88	48	3	51	16	4	13	112	47	159

Others, if any (PHT)	4	35	36	71		6	6	44	12	31	79	42	121
VII. Plant Protection													
Integrated Pest Management	10	206		206	13		13	79		79	298		298
Integrated Disease Management	3	78	14	92				4	2	6	82	16	98
Bio-control of pests and diseases	1	20	12	32	2	-	2	-	-	-	22	12	34
Production of bio control agents and bio pesticides	1	15	-	15	-	-	-	-	-	-	15	-	15
Others, if any(Lac cultivation)	2	31	12	43	2		2	18		18	51	12	63
VIII. Fisheries													
Integrated fish farming													
Carp breeding and hatchery management													
Carp fry and fingerling rearing													
IX. Production of Inputs at site													
Small tools and implements	1	23	-	23	-	-	-	15	-	15	38	-	38
Organic manures production	1	11	6	17	3	2	5	18	5	23	32	13	45
X. Capacity Building and Group Dynamics													
XII. Others (Pl. Specify)													
TOTAL	64	992	481	1473	97	22	119	513	120	601	1630	585	2215

Consolidated table

B) Rural Youth (on and off campus)

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	2	6	8	-	-	-	-	25	25	2	31	33
Bee-keeping	1	44	-	44	-	-	-	-	6	6	44	6	50
Integrated farming	1	21	-	21	5	-	5	8	-	8	34	-	34
Seed production	1	18	-	18	-	-	-	14	-	14	32	-	32
Production of organic inputs	1	18	-	18	5	-	5	7	-	7	30	-	30
Integrated Farming													
Planting material production													
Vermi-culture													
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production	1	13	-	13	-	-	-	12	-	12	25	-	25
Repair and maintenance of farm machinery and implements	1	18	-	18	-	-	-	10	-	10	28	-	28

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				
Nursery Management of Horticulture crops	1	36	-	36	-	-	-	-	-	-	36	-	36	
Training and pruning of orchards														
Value addition	1	-	24	24	-	-	-	-	-			24	24	
Small scale processing	1	-	26	26								26	26	
Lac cultivation	1	42	-	42	-	-	-	-	8	8	42	8	50	
TOTAL	11	212	56	268	10			10	51	39	90	273	95	368

Consolidated table

C) Extension Personnel (on and off campus)

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	2	47	-	47	-	-	-	13	9	22	60	9	69
Value addition	1	-	25	25	-	-	-	-	6	6	-	31	31
Integrated Pest Management													
Integrated Nutrient management													
Rejuvenation of old orchards													
Protected cultivation technology	1	20	-	20	-	-	-	-	10	10	20	10	30
Women and Child care	1	-	28	28	-	-	-	-	-	-	-	28	28
TOTAL	4	67	53	20				13	25	38	80	40	120

Artificial Insemination (11.09.2020)										
Live Webcast on PM Samman Nidhi (25.12.2020)	01									108
Swachhta Pakhwada (16-31 December 2020)	8									408
Samvidhan Diwas (16-11-2020)	1									18
Satarkta Jagrukta Saptah (27-10-2020 to 02-11-2020)	1									20
Any Other (Specify)	1									
Total	2213									11005

B. Other Extension activities

Nature of Extension Activity	No. of activities
Newspaper coverage	45
Radio talks	02
TV talks	0
Popular articles	
Extension Literature	10
Other, if any	

KVK farm

Crop	Variety	Quantity of seed (q)	Value (Rs)	Number of farmers to whom seed provided			
				SC	ST	Other	Total
Rice	R Masuri	15.0					
	Lalat	12.5					
	IR-64DRT	9.0					
Blackgram	WBU-109	0.5					
Niger	Puja-1	0.8					
Mustard	P-30	5.5					
Linseed	Priyam	0.7					
Grand Total		44.00					

Production of planting materials by the KVKs

Crop	Variety	No. of planting materials	Value (Rs)	Number of farmers to whom planting material provided
------	---------	---------------------------	------------	--

				SC	ST	Other	Total
Ornamental plants	Marigold (Hybrid)	1000	5000			02	02
Total							

3.5. b. Seed Hub Programme-“Creation of Seed Hubs for Increasing Indigenous Production of Pulses in India”

i) Name of Seed Hub Centre:

Name of Nodal Officer :	Uday Kumar Singh
Address :	KrishiVigyan Kendra, Bokaro
e-mail :	Kvk_bokaro@yahoo.co.in
Phone No. : Mobile :	9431126991

ii) Quality Seed Production Reports

Season	Crop	Variety	Production (q)			Category of Seed (F/S, C/S)
			Target	Area sown (ha)	Production	
Kharif 2018	Pigeon pea	IPA-203	400	16.00	190	C/S
		TJT-501		10.00	100	C/S
	Black gram	PU-31	200	05	40	F/S
	Horse gram	Birsa Kulthi-1	200	10	70	C/S
Rabi 2019	Chick pea	JG-14	-	4	40	C/S
Summer/Spring 2019	Green gram	HUM-16	200	17	200	C/S
Total			1000	62	640	
Kharif 2019	Pigeon pea	IPA-203	300	10	120	
		Rajeev Lochan		10	80	
		TJT-501		03	30	
	Black gram	WBU-109 (Sulata)	80	10	80	
	Horse gram	VLG-19	50	03	18	
Rabi 2020	Chick pea	JG-14	100	10	150	
Summer/Spring 2020	Green gram	HUM-16	200	12	110	
Total			730	58	588	
Kharif 2020	Pigeon pea	TJT-501	250	04	35	
		IPA-203		10	100	

		Rajeev Lochan		10	100	
	Black gram	WBU-109 (Sulata)	200	20	160	
	Green gram	HUM-16	100	10	80	
Rabi 2020-21	Chick pea	PG-3043	200	20	200 Expected	
Summer/Spring 2021	Green gram	HUM-16	150	15	To be conducted	
Total			900	89	675	
Total						

iii) Financial Progress

Fund received (2016-17, 2017-18 and 2019)	Expenditure (Rs. in lakhs)		Unspent balance (Rs. in lakhs)	Remarks
	Infrastructure	Revolving fund		
2016-17	50.00	40.00	37.52954	
2017-18	-	36.00	32.96939	
2019	-	24.00	18.71225	
Total	50	100.00		

iv) Infrastructure Development

Item	Progress
Seed processing unit	Top roof of seed godown is casted and plastering of wall is completed, GI sheet is also fitted on top remaining roof. Fitting of windows are incomplete (only iron grill is fitted), whitewashing and electricity work is not completed; Platform for unloading of seed is constructed.
Seed storage structure	

3.6. (A) Literature Developed/Published (with full title, author & reference)

Item	Title	Authors name	Number	Circulation
Extension literature				
	dsapqvk [kkn iz;ksx ,oa cukus dh fof/k]Jh mn; dqekj flag]Mk-vfuy dqekj]]Jherh uhuk Hkkjrh	1000	1000
	Jh /kku mRiknu rduhd	Jhmn; dqekj flag Mk- vfuy dqekj]]Jherh uhuk Hkkjrh]Jhfou; dqekj	1000	1000
	xsgw; dh mUur	Jh mn; dqekj flag] Mk-	1000	1000

	[ksrh	vfuy dqekj] Jhfou; dqekj]Jherh uhuk Hkkjrh		
	Ek'k:e mRiknu rduhd	Mk- vfuy dqekj]Jherh uhuk Hkkjrh] Jh mn; dqekj flag] Jh fou; dqekj]	1000	1000
	mjn dh mRiknu rduhd	Jherh uhuk Hkkjrh] Jh mn; dqekj flag] Mk- vfuy dqekj]] Jh fou; dqekj]	1000	1000
	ewix dh mRiknu rduhd	Jherh uhuk Hkkjrh] Jh mn; dqekj flag] Mk- vfuy dqekj]] Jh fou; dqekj]	1000	1000
	vjgj dh mRiknu rduhd	Jherh uhuk Hkkjrh] Jh mn; dqekj flag] Mk- vfuy dqekj]] Jh fou; dqekj]	1000	1000
	dqYFkh dh mRiknu rduhd	Jherh uhuk Hkkjrh] Jh mn; dqekj flag] Mk- vfuy dqekj]] Jh fou; dqekj]	1000	1000
	ljksa dh mRiknu rduhd	Jh mn; dqekj flag] Mk- vfuy dqekj]Jherh uhuk Hkkjrh] Jh fou; dqekj	1000	1000
	puk dh mRiknu rduhd	Jherh uhuk Hkkjrh] Jh mn; dqekj flag]Mk- vfuy dqekj] Jh fou; dqekj	1000	1000
	frlh dh mRiknu rduhd	Jherh uhuk Hkkjrh] Jh mn; dqekj flag]Mk- vfuy dqekj] Jh fou; dqekj	1000	1000
	yRrj okyh lfCt;ksa dh mUur [ksrh	Mk- vfuy dqekj] Jh mn; dqekj flag] Jherh uhuk Hkkjrh] Jh fou; dqekj]]	1000	1000
	Lkw{e flapkbZ iz.kkyh	Jh fou; dqekj] mn; dqekj flag] Mk- vfuy dqekj]Jherh uhuk Hkkjrh	1000	1000
	vnjd vk/kkfjr fefJr [ksrh	Mk- vfuy dqekj] Jh mn; dqekj flag] Jherh uhuk Hkkjrh] Jhfou; dqekj]	1000	1000
TOTAL			14000	14000

3.11. a. Details of equipment available in Soil and Water Testing Laboratory

Sl. No	Name of the Equipment	Qty.
--------	-----------------------	------

1.	Flame photo meter	1
2.	Spectrophoto meter	1
3.	Incubator	1
4.	Hot plate	1
5.	P.H .meter	1
6.	E/C meter	1
7.	Distillation unit	1
8.	Mechanical shaker	1
9.	Electronic balance	1
10.	Mini Soil Testing Kit (Mridaparikshak)	2

3.11.b. Details of samples analyzed so far :

Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized
Soil sample analyzed through Mridaparikshak Kit.	440	440	06	
Total	440			

3.11.c. Details on World Soil Day

Sl. No.	Activity	No. of Participants	No. of VIPs	Name (s) of VIP(s)	Number of Soil Health Cards distributed	No. of farmers benefitted
	Training programme on Soil Health Management	150	0	Sri Umesh Kumar, Deputy Director Horticulture, Hazaribag	150	150

3.12. Activities of rain water harvesting structure and micro irrigation system

No of training programme	No of demonstrations	No of plant material produced	Visit by the farmers	Visit by the officials
05	02	-	01	02

3.14. RAWE/ FETprogramme - is KVK involved? (Y/N)

No of student trained	No of days stayed
3	3 Month

ARS trainees trained	No of days stayed

5. LINKAGES

5.1. Functional linkage with different organizations

SI No.	Name of organization	Nature of linkage
1	ZRS, Dumka	Participation in meeting
2	DMR (ICAR) New Delhi	conducting training programmes and demonstration
3	DRMR (ICAR) Bharatpur, Rajasthan	Conducting training programmes and demonstration
4	IINRG, Namkum, Ranchi	Participation in meeting, conducting training programme& demonstration programme
5	HARP, Plandu Ranchi	Participation in meeting, conducting training programme& demonstration programme
6	KVKs of Other district	Participation in meeting
7	District Agriculture Office, Bokaro	Joint diagnostic survey, joint implementation, participation in meeting, conducting training programme& demonstration programme
8	District Horticulture Office, Bokaro	Joint diagnostic survey, joint implementation, participation in meeting, conducting training programme& demonstration programme
9	ATMA Bokaro	Joint diagnostic survey, joint implementation, participation in meeting, conducting training programme& demonstration programme
10	District Soil Survey & Soil Conservation Office, Bokaro	Joint implementation, participation in meeting, conducting training programme& demonstration programme
11	Line Dept. State Govt.	Joint diagnostic survey, joint implementation, participation in meeting, conducting training programme& demonstration programme
12	NABARD/COMMERCIAL BANK	Participation in meeting, conducting training programme
13	LDM, Bokaro	Participation in meeting, conducting training programme
14	R.K. Mission Ranchi	Participation in meeting, conducting training programme& demonstration programme
15	CURRS, Hazaribagh	Participation in meeting, conducting training programme& demonstration programme
16.	JSLPS, Sanjivini Project, Bokaro	Participation in meeting, conducting training programme& demonstration programme
17.	NGO (Pradan, Support, Raj Development SHADOW, Sanjeevnietc)	Joint diagnostic survey, participation in meeting, conducting training programme& demonstration programme
18.	Agriculture Skill Council of India, New Delhi	Skill Development Training
19.	IIPR, Kanpur	Implementation of Seed Hub Programme
20.	Regional Centre of Organic Farming, Patna	Training programme and Monitoring of KKA programme
21.	District Forest Office, Bokaro	Training



***KRISHI VIGYAN KENDRA
BOKARO***



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