KRISHI VIGYAN KENDRA

BOKARO

ACTION PLAN

(2019-20)

BIRSA AGRICULTURAL UNIVERSITY
KANKE, RANCHI

Krishi Vigyan Kendra, Bokaro , AT+ P.O.- Petarwar, Dist- Bokaro,
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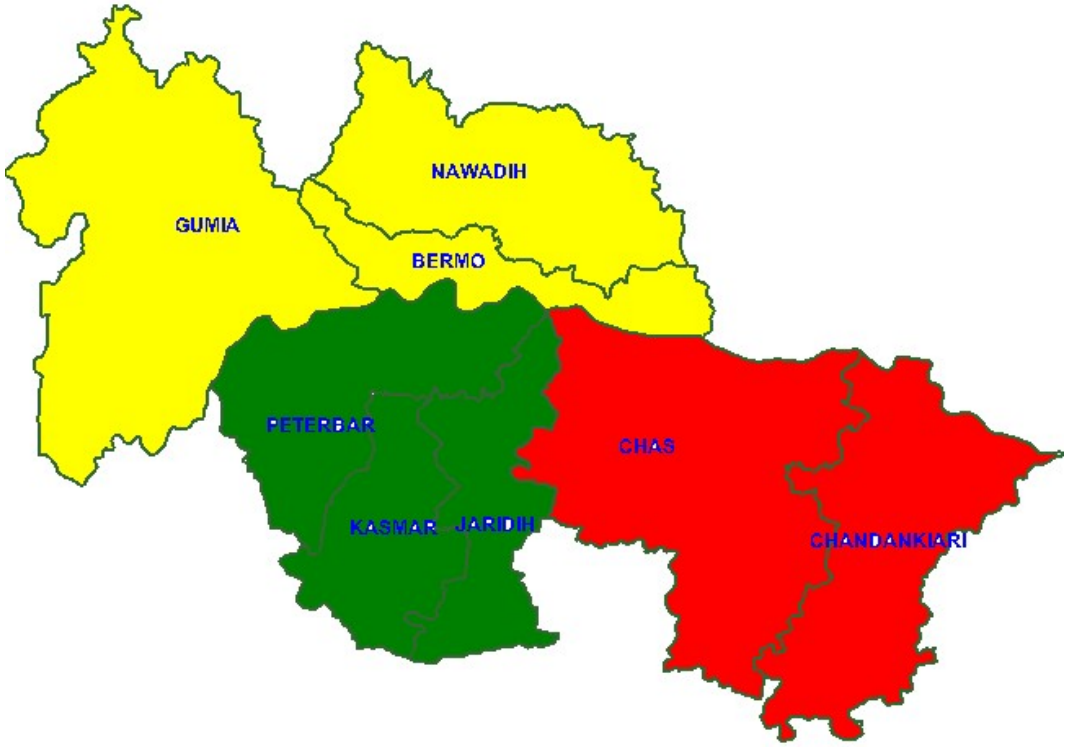
1- Introduction

Krishi Vigyan Kendra Bokaro established in 2004 is located on National Highway No.23 about 35 KM of district headquarter of Bokaro (Jharkhand). There are 2 subdivision (Bermo & Chas) 9 blocks, 200 panchayats and 733 villages in Bokaro district, Total population of the district is 17,75,961. Total geographical area of the district is 2,88,970 ha out of which only 25840 ha is under crop having cropping intensity of 116 %.



2 District Profile

Land holding pattern.

1. Number of Holding (000)	:	116.41
2. Average Size of Holding (Hectare/holding)	:	1.18
3. Marginal farmer's holding (No. in ,000)	:	81.49
4.Small & Medium farmer (No. in 000)	:	30.64
5. Large farmer, holding (No. in 000)	:	4.28

District profile

1.	**Location**		
	Latitude	:	$23^0$24'34" N to $23^0$59'05"N
	Longitude	:	$85^0$35'00" E to $86^0$38'47"E
2.	**Average Annual Rainfall**	:	**1130 mm**
3.	**Administrative Units**		
	3.1 No. of Subdivision	:	2 (Bermo, Chas)
	3.2 No. of Blocks	:	9
	3.3 No. of Panchyets	:	200
	3.4 No. of Villages	:	733
4.	**Land use (000ha)**		
	4.1 Total geographical	:	288.97
	4.2 Total Forest area	:	72.23
	4.3 land Barren and uncultivated	:	25.01
	4.4 Cultivated waste land	:	119.29
	4.5 Net Sown area	:	15.81
	4.6 Total cropped area	:	25.84
	4.7 Irrigated area	:	0.90
	4.8 Cropping Intensity	:	116%
5.	**Population 2001**		
	5.1 Total population (in lakh)	:	17.75
	5.2 Total Rural population (in lakh)	:	9.71
	5.3 Population Density (Number/ Sq Km)	:	621
	5.4 Literacy (%)	:	62.90
	5.5 Male Literacy (%)	:	76.99
	5.6 Female(%)	:	47.17
	5.7 Total ST Population (lakh)	:	2.19
	5.8 Total Sc Population (lakh)	:	2.36
6.	**Working population**		
	6.1 Total working population (in lakh)	:	5.10
	6.2 Total cultivators (lakh)	:	1.19
	6.3 Total agricultural laborer (lakh)	:	1.09
	6.4 Total labours engaged in cottage industry(lakh)	:	0.20
	6.5 Other workers(lakh)	:	2.62
7.	**Operational holding**		

	7.1 Number of Holding (000)			:	116.41
	7.2 Average Size of Holding (Hectare/holding)			:	1.18
	7.3 Marginal farmer's holding (No. in ,000)			:	81.49
	7.4 Small & Medium farmer (No. in 000)			:	30.64
	7.5 Large farmer, holding (No. in 000)			:	4.28
8.	**Livestock (in, 000)**				
	8.1 Total Population			:	673.47
	8.2 Total Cattle			:	327.23
	8.3 Total Buffalow			:	61.30
	8.4 Total sheep			:	34.49
	8.5 Total Goat			:	207.16
	8.6 Total pig			:	43.21
	8.7 Total Poultry			:	600.14
9.	**Fishery**				
	9.1 Government Ponds Number Total Area Average Size				 1710 1621 ha 0.95 ha
	9.2 Private Ponds Number Total Area Average Size				 745 402 ha 0.54 ha
	9.3 Total Number Total Area				 2455 2023 ha
	9.4 Annual Fish Production				2000 Tons
	9.5 Average Productivity			:	0.81 Tons/ha
10	**Information on credit**				
	10.1 No. of Commercial Banks			:	77
	10.2 No. of RRB			:	08
	10.3 No. of Co-operative Banks			:	05
	10.4 No. of Land development Banks			:	92
11.	**Total No. of Hat /Bazar**			:	97
12.	**Crop Production**				
	Name of crop	**Area (ha)**	**Production (ton)**		**Productivity (kg/ha)**
	Total Cereals	19121	22084		1155
	Total Pulses	1129	823		729
	Total Oilseeds	115	77		670
	Total Vegetable	5551	83972		1513
	Total Fruits	952	11240		1181

13.	Productivity of major 2-3 crops under cereals, pulses, oilseeds, vegetables, fruits	**Crop**	**Area (ha)**	**Production (MT)**	**Productivity (q /ha)**
		Paddy (Hybrid)	3075	12300	40.00
		Paddy	26113	40088	15.50
		Wheat	1300	1272	10.00
		Maiz	4746	7595	16.00

	and others	Arhar	2130	1374	6.50
		Gram	1309	1149	8.25
		Mustad	1615	388	6.00
		Pea	325	387	12.00
		Mustard	1540	847	5.5
		Brinjal	497	12860	2558.75
		Tomato	1011	28380	280.71
		Cauliflower	1303	35660	273.7
		Bottle gourd	480	8000	166.6

Priority Thrust Areas of Bokaro District

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 fruits & vegetables.
5.	Improvement of indigenous poor breeds of livestock.
6.	Promotion of lac cultivation
7.	Insect pest and disease management of major crops
8.	Entrepreneurship development through mushroom, vermi compost production.
9.	Balance use of nutrient and Soil fertility management.
10.	Farm Mechanization

Rainfall Recorded at KVK Bokaro Year : 2018

Month	Average Normal Rainfall	Rainfall (mm)	No. of rainy days	Rainfall %
January 2018	16.3	0.0	0	(-)100
February 2018	12.7	9.4	2	(-)30
March 2018	13.7	0.0	0	(-) 100
April 2018	16.3	97	10	(+) 495
May 2018	53.3	82.8	10	(+) 60
June 2018	184.8	233.4	13	(+) 30
July 2018	286.8	242.4	20	(-) 20
August 2018	329.9	167.2	15	(-) 163
September 2018	230.02	121.6	14	(-) 50
October 2018	89.6	47.2	4	(-) 47
November 2018	10.3	0.0	0	(-) 100
December 2018	8.9	78.0	5	(+) 766
Total	**1252.62**	**1079**	**93**	

Action Plan 2019-20

1. **Name of the KVK : Krishi Vigyan Kendra Bokaro**
2. **Name of host organization : Birsa Agricultural University, Ranchi**
3. **Training programme to be organized: (April 2019 to March 2020)**

A. Farmers and farmwomen – On Campus

Thematic Area*	Title	No. of course	Duration	No. of participants
Crop production				
Seed production technology	Seed production technology of rice and pulses	2	2	60
Production and Management Technology	Cultivation practice of rabi oilseed- and pulses	2	2	60
	Cultivation practice of kharif oilseed- and pulses	2	2	60
	Management practices of maize / sweet corn	1	2	30
	Management practices of Wheat	1	2	30
	Soil moisture conservation technique	2	2	60
Total		**10**	**12**	**300**
Soil health & fertility management				
Integrated nutrient management	Integrated nutrient management in major cereal crops	1	2	30
Soil fertility management	Plant nutrient and soil fertility management	1	2	30
Production and use of organic inputs	Preparation of vermi composting	1	2	30
Total		**3**	**6**	**90**
Horticulture				
Production and management technology of spices	Cultivation practice of spices in kharif season	1	2	30
Tuber crops	Cultivation practice of elephant yam	2	2	60
Production and Management Technology	Cultivation practice of leguminous & cucurbitaceous vegetables	2	2	60
Organic farming	Organic vegetable production technology	2	2	60
Off season vegetable	Off season vegetable production techniques	1	2	30
Tuber crop	Cultivation practice of Exotic vagetable	1	2	30
Fruit crop	Mango plantation	1	2	30
Tuber crop	Cultivation practice of Potato	2	2	60
Total		**12**	**16**	**360**
Plant Protection				
Integrated Pest Management	Integrated pest & disease management in cereals crops	2	2	60

	Technique for healthy and disease free seedling of vegetables	2	2	60
	Bee keeping	2	2	60
Lac cultivation	Production technology of kusmi lac	1	2	30
IPM & IDM	IPM & IDM in vegetable production in rabi season	5	2	150
Total		**12**	**10**	**360**
Agril. Engg.				
Installation & maintenance of micro irrigation system	Micro irrigation and mulching in vegetable cultivation	2	2	60
Farm Mechanization	Use of farm machinery in rice	2	2	60
Soil and Water Conservation	Water harvesting technique	3	2	90
	Soil moisture conservation technique	3	2	90
Repair and maintenance of farm machinery and implements	Repair and maintenance of farm implements	2	2	60
Total		**12**	**10**	**360**
Home Science/ women empowerment				
	Value addition of local vegetables	2	2	60
Capacity building	Drafting and stitching of female garments	2	2	60
	Income generation through various type of badi & papad	2	2	60
	Doubling farmer Income through various types of pickles	2	2	60
PHT	Post harvest management of local seasonal fruits	2	2	60
Total		**10**	**10**	**300**
Live stock				
Disease and feed management	Disease and feed management in poultry & Goatry	1	2	30
Total		**1**	**2**	**30**
Fisheries				
Fish farming	Composite fish farming	2	2	30
Total		**2**	**2**	**60**
Grand total		**62**	**68**	**1860**

B. Farmers and farmwomen – Off Campus

Thematic Area*	Title	No. of course	Duration	No. of participants
Crop production				
	Soil moisture conservation technique	1	1	30
	Suitable intercropping system in upland condition	1	1	30
Integrated crop management	Production technology of SRI	2	1	60

	technology			
	Cultivation practice of rabi oilseed & pulses	2	1	60
Production and Management Technology	Cultivation practice of groundnut and Niger	1	1	30
	Cultivation practice of kharif oilseed- and pulses	2	1	60
	Management practices of maize/sweet corn	1	1	30
Total		**10**	**7**	**300**
Soil health & fertility management				
Soil & water testing	Importance of soil testing and method of soil sampling	1	1	30
Management of Problematic soils	Acid soil management	1	1	30
Production and use of organic inputs	Use of waste discomposure and compost making technique	1	1	30
Integrated nutrient management	Use of bio fertilizer in pulses	1	1	30
Total		**4**	**4**	**120**
Horticulture				
Integrated crop management	Cultivation practice of cucurbits & leguminous vegetable	2	1	60
Integrated crop management	Cultivation practice potato	1	1	30
Integrated crop management	Cultivation practice bulbus crop	1	1	30
Integrated crop management	Cultivation practice fruit vegetable	1	1	30
Integrated crop management	Cultivation practice root vegetable	1	1	30
Nursery management	Nursery management of vegetable & fruit crops	2	1	60
Organic vegetable production	Organic vegetable production	2	1	60
Fruit crops	Papaya cultivation	2	1	60
Total		**12**	**9**	**360**
Plant Protection				
Integrated pest management	Integrated pest & disease management of vegetables	2	1	60
	Integrated pest management of kharif pulses	3	1	90
IPM	Integrated pest & disease management of cereals crops	2	1	60
IPM AND INM	Integrated pest & disease management oil seeds crop	2	1	60
IPMAND INM	Integrated pest & disease management wheat	1	1	30
IPM	Integrated pest management of Rabi pulses	1	1	30

Total		**11**	**9**	**330**
Agril. Engg.				
Farm mechanization	Farm mechanization in rice & wheat cultivation	2	1	60
	Mechanical weeding in upland crops	2	1	60
Installation and maintenance of micro irrigation systems	Mulching and drip irrigation in vegetable production	2	1	60
Use of Plastics in farming practices	Use of plastic in crop production	1	1	30
Soil and moisture conservation	Soil moisture conservation technologies	2	1	60
PHT	Post harvest management of cereal and pulses	3	1	90
Total		**12**	**6**	**360**
Home Science/ women empowerment				
	Income generation through pickle, badi and papad	2	1	60
	Processing of turmeric and spices powder	2	1	60
	Value addition of mushroom (pickle and powder)	2	1	60
	Preparation method of fish pickle	2	1	60
Nutrition security	Development of Kitchen Garden	2	1	60
Women & child care	Use of local resources to combat Anaemia, Diarrhoea and Malnutrition	2	1	60
Total		**12**	**6**	**360**
Grand total		**61**	**41**	**1830**

(C) Rural youths/Skill development

Thematic Area*	Title	No. of course	Duration	No. of participants
Seed production	Seed production technology of rice and pulses	2	5	60
Commercial fruit production	Establishment of nursery and mali training	3	5	90
Mushroom Production	Production technology of Mushroom	3	5	90
Drafting and stitching of female garment	Income generation through processing of local seasonal fruits & vegetable	3	5	90
Bee keeping	Cultivation of bee keeping	2	5	60
Production of organic inputs/ Vermi culture	Vermi compost and enriched composting	2	5	60
	Repair and maintenance of farm implement	3	5	90
	Plantation of mango and papaya	2	5	60
Total		**20**	**40**	**600**

(D) Extension functionaries

Thematic Area*	Title	No. of course	Duration	No. of participants
Installation and maintenance of micro irrigation systems	Importance of Mulching techniques in vegetable production	2	1	60
Value addition	Income generation through Value addition of locally available fruit and vegetable	2	1	6
Drudgery reduction	Use of new drudgery reduction technologies for farm women	1	1	30
Production of organic inputs	Promotion of organic farming	2	1	60
	Use of Bio-Pesticides in vegetable production	2	1	60
	Role of Bio-fertilizer in pulse production	2	1	60
	Role of farm mechanization in increasing productivity	2	1	60

	and profitibity			
	Role of SHG in Women empowerment	1	1	30
	Use of waste decomposer composting	1	1	30
ICM	Use of micronutrient in rabi vegetable	1	1	30
Seed production	Doubling farmer income through Seed production of pulses	2	1	60
	Importance of Soil moisture conservation technique	2	1	60
Total		**20**	**12**	**600**

Abstract of Training for 2019-20

Clientele	**On campus**		**Off campus**		**Total**	
	No. of course	**Participants**	**No. of course**	**Participants**	**No. of course**	**Participants**
Practicing farmers	**62**	**1860**	**61**	**1830**	**123**	**3690**
Rural Youths	**20**	**600**	**-**	**-**	**20**	**600**
Extension functionaries	**20**	**600**	**-**	**-**	**20**	**600**
Total	**102**	**3060**	**61**	**1830**	**163**	**4890**

4. Frontline demonstration

Season	Crop	Variety	No. of area (ha)	No. of demo.
Kharif	**Cereals**			
	Rice	Sahbhagi Dhan	5	15
	Rice	Arize Tez Gold	5	20
	Maize (Sweet corn)	Sugar-75	1	10
Rabi	**Vegetable**			
	Onion	Topaz	1	10
	Ladies finger	1001 (NS)	1	10
	Total		**13**	**65**

5. Other Technologies

Season	Other technology	Variety	No. of area (ha)	No. of demo.
Kharif	Paddy harvesting by self propeller reaper		5	15
	Fertilizer broadcaster machine		5	10
	Mulching in cucurbitaceous crops with silver colour polythene		2	10
	IPM kit in vegetable production /traps		50 unit	50
	Processing of sweet potato as flour		-	10
	Milk processing		-	10
	Poultry	Jharsim	20 unit	05
	Bee Keeping		20 unit	20
	Use of bio fertilizer	PSB, Azotobacto and Rhizobium culture	5 ha	20
	Green manuring	Dhaincha	2 ha	10
	Total		**19 ha & 90 Unit**	**160**

6. Seed and planting material production

Crop	Variety	Area(ha)	Category of seed
Kharif			
Cereals			
Rice	Rajendra Masuri	1.0	F/S
	Lalat	2.5	F/S
	Shahabhagi Dhan	0.5	F/S
Pulse			
Black gram	WBU-109	0.4	F/S
Pigeon pea	TGT 501	0.4	F/S
Dhaincha	Local	0.2	T/L
Total Area		**5 ha**	
Rabi			
Mustard	P-30	2	F/S
Planting material			
Mango	Amrapali	200 Nos.	
	Malika	500 Nos.	
Guava	L-49 /Allahabad Safeda	500 Nos.	
Papaya		2000 Nos.	
Vegetable seedling	Cauliflower/ Cabbage	5000 Nos.	
Total		**8200**	

7. Participatory Seed Production programme 2019-20

Sl. No.	Crop	Variety	Area (ha)	Category of seed
1.	Rice	R. Mansuri	40	C/S
2.		Lalat	60	C/S
3.		Sahbhagi Dhan	20	C/S
	Total		**120**	

8. Extension Activities

Activities	No.	Participants
Field Day	10	600
Kisan Mela	4	4000
Kisan Ghosthi	5	500
Exhibition	5	500
Film Show	25	1000
Method Demonstrations	5	100
Farmers Seminar	0	0
Workshop	0	0
Group meetings	1	100
Lectures delivered as resource persons	50	
Newspaper coverage	10	
Radio talks	5	
TV talks	10	
Popular articles	4	
Extension Literature	10	
Advisory Services	60	60
Scientific visit to farmers field	150	1000
Farmers visit to KVK	1200	1200
Diagnostic visits	24	240
Exposure visits	2	60
Ex-trainees Sammelan	1	100
Soil health Camp	2	200
Animal Health Camp		
Agri mobile clinic	0	0
Soil test campaigns (Analysis)		
Farm Science Club Conveners meet		
Self Help Group Conveners meetings	2	100
Mahila Mandals Conveners meetings	0	0
Celebration of important days (specify)	2	200
Help line service	2000	2000
Any Other (Technology Week)	1	500
Total	**3588**	**12460**

7. Revolving Fund

Open balance	Amount to be invested	Return

8**. Expected fund utilization**

Project	Source	Amount to be received (Rs. in lakh)

9. On-farm trials to be conducted **Home Science 1**

1) Thematic Area:- Nutrition security

2) Title:- Assessment of blanching methods for shelled peas.

3) Problem:- Low profitability due to sale at very low price in peak season.

4) Details of Technologies selected for assessment/refinement

F.P. :- Use sundried shelled peas.

T.O.1:- Steam blanching of shelled peas for 3-4 minutes and after keeping in 0.5% KMS solution for 10 minutes, sun drying is done.

T.O. 2:- Blanching of shelled peas in boiling water for 2-3 minutes containing 0.5% KMS solution, 0.1% sodium bicarbonate and 0.1% Magnesium Oxide.

5) Source of Technology:- IARI, New Delhi

6) Performance indicators:- .

1. Output
2. Drying ratio
3. Economics
4. B:C ratio

7) No. of replication:- 10

8) Season:- Rabi

9) Year:- 2019-20

Incharge Scientist	Co-ordinating Scientist	Head
Dr. Nandana Kumari	Dr Anil Kumar	Krishi Vigyan Kendra,
Home Science	Horticulture	Bokaro

1) Thematic Area:- Value Addition **Home Science 2**

2) Title:- Assessment of preparation methods of squash from ripe jack fruit.

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

4) Details of Technologies selected for assessment/refinement

F.P. : Local people consume jack fruit as pickle and vegetable.

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.

5) Source of Technology:- Technical Bulletin No. 41 of ICAR, Research Complex of Goa

6) Performance indicators:- .

1. Nutritive value
2. Sensory evaluation
3. Economics
4. B:C ratio

7) No. of replication:- 10

8) Season:- Kharif

9) Year:- 2019

Incharge Scientist	Co-ordinating Scientist	Head
Dr. Nandana Kumari	Dr Anil Kumar	Krishi Vigyan Kendra,
Home Science	Horticulture	Bokaro

1) Thematic Area:- Management of young orchard **Horticulture 3**

2) Title:- Mango based intercropping in newly established orchard in kharif season.

3) Problem:- No income from newly established orchard in kharif season.

4) Details of Technologies selected for assessment/refinement

F.P. :- Mango sole (Spacing- 5 m)

T.O.1:- Mango + Horse gram (1:10)

T.O. 2:- Mango+ Black gram(1:10)

T.O.3:- Mango+ Green gram (1:10

Mango- Variety : Amrapali

5) Source of Technology:- ICAR, RCER, Ranchi

6) Performance indicators:- .

1.Plant height of mango (cm)

2.Girth of plant (cm)

3.Canopy of plant (cm)

4. Yield attribute of crops

5.Yield of intercrop (q/ha)

6. Economics

5. B:C ratio

7) No. of replication:- 10

8) Season:- Kharif

9) Year:- 2019

Incharge Scientist	Co-ordinating Scientist	Head
Dr. Anil Kumar	Sri Uday Kumar Singh	Krishi Vigyan Kendra,
Horticulture	Agronomy	Bokaro

1) Thematic Area:-Protected cultivation

2) Title:- Low cost poly tunnel for cucumber cultivation in off season.

3) Problem:- Low profitability due to low selling price of cucumber in peak season

4) Details of Technologies selected for assessment/refinement

F.P. :- Cucumber sowing in March-April

T.O.1:- Cucumber in the month of January, sowing in ditch covered with plastic upto 7-10 days after germination.

T.O. 2 :- Cucumber in the month of December with low cost poly tunnel upto 20-25 days

Plastic: 25 micron

5) Source of Technology:- ICAR, RCER, Ranchi

6) Performance indicators:-

1.Yield and attributing characters
2. Economics
3. B:C ratio

7) No. of replication:- 08

8) Season:-Rabi

9) Year:- 2019-20

Incharge Scientist	Co-ordinating Scientist	Head
Dr. Anil Kumar	Sri Uday Kumar Singh	Krishi Vigyan Kendra,
Horticulture	Agronomy	Bokaro

1) Thematic Area:- Cropping system **Agronomy** **5**

2) Title:- Productivity of pigeon pea (*Cajnus Cajan*) based intercropping system.

3) Problem:- Production in uplands is how hence, intercropping of crops will enhance productivity/land area.

4) Details of Technologies selected for assessment/refinement

F.P. :- Pigeon pea (Sole) 60 cm

T.O.1 :- Pigeon pea + Maize (1:1)

T.O. 2 :- Pigeon pea + Lady's finger (1:1)

T.O. 3 :- Pigeon pea + Soybean (1:1)

5) Source of Technology:- BAU, Ranchi

6) Performance indicators:-

1. Grain yield (q/ha)
2. Pigeon pea equivalent yield (q/ha)
3. Weed biomass (g/m^2)
4. Economics

7) No. of replication:- 10

8) Season:-Kharif

9) Year:- 2019

Incharge Scientist	Co-ordinating Scientist	Head
Sri Uday Kumar Singh	Mrs. Neena Bharti	Krishi Vigyan Kendra,
Agronomy	Plant Protection	Bokaro

1) Thematic Area:-Nutrient Management **Agronomy** **6**

2) Title:- Effect of nutrient management on productivity of onion.

3) Problem:- Low yield of onion due to imbalance use of nutrient.

4) Details of Technologies selected for assessment/refinement

F.P. :- 40 kg N+ 20 kg P_2O_5

T.O.1:- Farmers practice + 50% recommended dose of K (30 kg K_2O/ha)

T.O. 2 :- 100% RDF (100:60:60 kg NPK/ha) + 20 kg Sulpher/ha

5) Source of Technology:- BAU, Ranchi

6) Performance indicators:-

1.Plant height (cm)
2. Bulb wt. (g)
3. Bulb yield (q/ha.)
4. Economics

7) No. of replication:- 10

8) Season:- Rabi

9) Year:- 2019-20

Incharge Scientist	Co-ordinating Scientist	Head
Sri Uday Kumar Singh	Dr. Anil Kumar	Krishi Vigyan Kendra,
Agronomy	Horticulture	Bokaro

1) Thematic Area:- Weed Management **Agronomy** **7**

2) Title:- Effect of weed control methods on weeds of yield and economics of transplanted rice (*Oriza sativa*).

3) Problem:- Low yield of rice due to heavy weed infestation.

4) Details of Technologies selected for assessment/refinement

F.P. :- No weeding (Weedy check)

T.O.1:- Pretilachlor 50 EC @ 0.75 kg a.i / ha as PE

T.O. 2:- Bispyribac 10 SC @ 25g a.i /ha PoE at 25 DAT

T.O. 3:- Pretilachlor 50 EC @ 0.75 kg a.i / ha as PE + Bispyribac 10 SC @ 25g a.i /ha PoE at 25 DAT

5) Source of Technology:- BAU, Ranchi

6) Performance indicators:-

1. Plant growth and yield attributes
2. Weed biomas (g/m^2)
3. Yield (q/ha)
4. Economics

7) No. of replication:- 10

8) Season:- Kharif

9) Year:- 2019

Incharge Scientist	Co-ordinating Scientist	Head
Sri Uday Kumar Singh	Mrs. Neena Bharti	Krishi Vigyan Kendra,
Agronomy	Plant Protection	Bokaro

1) Thematic Area:- Farm Mechanization **Agril.Engg.** **8**

2) Title:- Assessment of different sowing methods wheat yield.

3) Problem:- Low yield of wheat due to improper sowing method.

4) Details of Technologies selected for assessment/refinement

F.P. :- Conventional method (wheat sowing behind the plough)

T.O.1 :- Sowing with conventional seed drill.

T.O.2 :- Sowing with zero tillage machine.

5) Source of Technology:- BAU, Ranchi

6) Performance indicators:-

1. Moisture content before & after ploughing
2. Plant population per sq. m. after 15 days
3. Field capacity
4. Weeds biomass per sqm after 45 days
5. Yield attributing character
6. Yield (q/ ha)
7. Economics and B:C ratio

7) No. of replication:- 10

8) Season:- Rabi

9) Year:- 2019-20

Incharge Scientist	Co-ordinating Scientist	Head
Er. Vinay Kumar	Sri Uday Kumar Singh	Krishi Vigyan Kendra,
Agril. Engg.	Agronomy	Bokaro

1) Thematic Area:- Water Management **Agril. Engg.** **9**

2) Title:- Assessment of Irrigation methods single and paired row potato cultivation

3) Problem:- Low water use efficiency in potato cultivation

4) Details of Technologies selected for assessment/refinement

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

5) Source of Technology:- IARI, New Delhi

6) Performance indicators:-

1. Irrigation water use efficiency
2. Yield attributing characters (Fruit size, fruit weight, no. of fruit/ plant)
3. Yield (q/ ha)
4. Economics and B:C ratio

7) No. of replication:- 07

8) Season:- Rabi

9) Year:- 2019-20

Incharge Scientist	Co-ordinating Scientist	Head
Er. Vinay Kumar	Dr. Anil Kumar	Krishi Vigyan Kendra,
Agril. Engg.	Horticulture	Bokaro

1) Thematic Area:- Diseases Management

2) Title:- Management of late blight of potato in rabi season.

3) Problem:- Low productivity of potato due to late blight disease

4) Details of Technologies selected for assessment/refinement

F P: Foliar spray of Mancozeb75% @ 2g/l water after initiation of symptom.

TO1- Mancozeb+ Carbendazin @ 2g/l water at 25 DAS

TO2- 2 spray of Metalaxyl 81% + Mancozeb 72% wp @ 2g/l water at 15 days interval from 30th day of planting.

5) Source of Technology:- BAU, Ranchi

6) Performance indicators:-

1. Yield (q/ha)
2. % disease intensity
3. Net return (Rs./ha)
4. B:C ratio

7) No. of replication:- 10

8) Season:- Rabi

9) Year:- 2019-20

Incharge Scientist		
Mrs. Neena Bharti	Co-ordinating Scientist	Head
Plant Protection	Dr. Anil Kumar	Krishi Vigyan Kendra,
	Horticulture	Bokaro

1) Thematic Area:-Integrated Pest Management

2) Title:- Management of pod borer in pigeon pea in kharif season

3) Problem:- Low productivity of pigeon pea due to heavy infestation of pod borer.

4) Details of Technologies selected for assessment/refinement

F P: Use of Chlorpyriphos 20 EC 1.5ml/l water as per appearance of larva.

TO1- 2 spray of Indoxacarb 15.8% EC @ 0.5 ml/l water 1st spray at 50% flowering and 2nd spray at 15-20 days after 1st spraying.

TO2 -2 spray of Chlorantraniliprole 18.5% SC 1ml/3l water + Bt var. kurstaki 2g/l water. 1st spray at 50% flowering and 2nd spray at 15-20 days after 1st spraying.

5) Source of Technology:- BAU, Ranchi

6) Performance indicators:-

1. Pod borer infestation (%)
2.Yield (q/ha)
3.Net return (Rs./ha)
4.B:C ratio

7) No. of replication:- 10

8) Season:- Kharif

9) Year:- 2019

Incharge Scientist	Co-ordinating Scientist	Head
Mrs. Neena Bharti	Sri Uday Kumar Singh	Krishi Vigyan Kendra,
Plant Protection	Agronomy	Bokaro

9. SEED HUB programme 2019-20

S.N.	Crop	Variety	Type of seed	Total area covered (ha)	Target (q)
1.	Pigeon pea	IPA203/ TJT 501	C/S /FS	30	300
2.	Black gram	WBU-109	C/S /FS	10	100
3.	Horse gram	Indra Kulthi-1/ Birsa Kulthi 1	C/S	10	50
4.	Green gram (Summer)	Hum-16	C/S	20	200
	Total			**70**	**650**

10. Cluster Frontline Demonstration

Season	Crop	Variety	No. of area (ha)	No. of Demo.
Kharif	**Pulse**			
	Black gram	WBU-109	20	50
	Green Gram	HUM-16	30	75
	Pigeon pea	TJT 501/ IPA 203	40	100
	Horse gram	Birsa Kulthi-1	20	50
Rabi	Chick pea	JG-14	20	50
Summer	**Pulse**			
	Green Gram	HUM-16	20	50
		Total	**150**	**375**
Kharif	**Oilseed**			
	Groundnut	TG-38 /K-6/ Thagarnar-3	30	75
	Sesame	GT-9	20	50
	Niger	Puja-1	20	50
Rabi	**Oilseed**			
	Rapeseed & Mustard	P-26/ P-30	40	100
	Linseed	Divya/Priyam	20	50
		Total	**130**	**325**
		Grand Total	**280**	**700**

11. List of Projects to be implemented

Name of the project	Fund expected (Rs. In lakh)
Assessment & refinement of technology, ATMA, Bokaro	2.0
Capacity building , ATMA, Bokaro	5.0
Total	7.0

12. No. of success stories to be developed - **2 nos**

13. Scientific Advisory Committee

Date of SAC meeting held during 2017-18	Proposed date
10th March 2018	

14. Soil and water testing

	No. of samples to be analyzed
Soil	**2000**
Plant	-
Manure	-

15. Staff position

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale with present basic	Date of joining	Permanent /Temporary
1	Sr. Scientist & Head	-	-	-	-	-	-
2	Scientist	Sri Uday Kumar	Sr. Scientist & Head	Agronomy	PB(15600 - 39100) GP- Rs.6000.00 Basic- Rs. 31780.00	19-07-04	Permanent
3	Scientist	Dr. Anil Kumar	Scientist	Horticulture	PB(15600 - 39100) GP- Rs.6000.00 Basic- Rs. 34490.00	19-07-04	Permanent
4	Scientist	Sri Vinay Kumar	Scientist	Agril. Engg.	PB(15600 - 39100) GP- Rs.6000.00 Basic- Rs. 29950.00	20-07-04	Permanent
5	Scientist	Mrs Neena Bharti	Scientist	Plant Protection	PB(15600 - 39100) GP- Rs.6000.00 Basic- Rs. 31780.00	20-07-04	Permanent
6	Scientist	Mrs. Nandana Kumari	Scientist	Home Science	PB(15600 - 39100) GP- Rs.6000.00 Basic- Rs. 31780.00	19-07-04	Permanent
7	Programme Assistant	Dr. Rupa Rani	Programme Assistant	Horticulture	PB (9300-34800) GP-Rs. 4200.00 Basic- Rs.21250.00	16-03-05	Permanent
8	Assistant	Sri T.N. Tiwari	Assistant		PB (9300-34800) GP-Rs. 4800.00 Basic- Rs. 27600.00		Permanent
9.	Computer Programmer	Naman Kandulna	Computer Assistant		PB (9300-34800) GP-Rs. 4200.00 Basic- Rs. 20300.00	20-07-04	Permanent
10.	Audio Visual Aid	Sumil Kr. Pandey	Audio Visual Aid				Permanent
9	Farm Manager	-	-	-	-	-	-
10	Accountant / Superintendent	Sri Abhay Kumar Singh	O.S.cum Accountant	-	9300.00		Contractual Staff
11	Stenographer	Sri Ratnesh Kumar Mishra	Stenographer	-	5200.00		Contractual Staff
12	Driver	Sri Ranchandra Lohar	Driver	-	5200.00		Contractual Staff
13.	Driver	Sri Panchanand Mahto	Driver	-	5200.00		Contractual Staff
14.	Supporting staff	Sri Ruplal Marandi	Supporting Staff	-	4440.00		Contractual Staff
15.	Supporting staff	Sri Durga Prasad Mahto	Supporting Staff	-	4440.00		Contractual Staff

16. Status of infrastructure

Total land with KVK (in ha) :

S. No.	Item	Area (ha)
1	Under Buildings & Demonstration units	1.6
2.	Under Crops	6.0
3.	Orchard/Agro-forestry (Mother plant nursery)	1.0
4.	Technology park	0.4
5.	Pond	0.2
6.	Encroached and unutilized land	0.8
	Total	**10.0**

Provided by ICAR

(A) Buildings and others

S. No.	Name of building	Plinth area (sq.m)	Source of funding	Status
1.	Administrative Building	500	I.C.A.R.	Completed & Functioning
2.	Farmers Hostel	300	I.C.A.R.	Completed & Functioning
3.	Staff Quarters (6)	400	I.C.A.R.	Incomplete (Only wall constructed up to lintel level)
5	Fencing		District Administration	Completed
6	Rain Water harvesting structure	120x120x10 ft pond	I.C.A.R.	Incomplete (Micro irrigation system is not installed)
7	Threshing floor		I.C.A.R.	Completed & Functioning
8	Farm godown		I.C.A.R.	Completed & Functioning
9.	Preservation unit		I.C.A.R.	Incomplete
10.	Soil test Lab		District Administration	Functioning
11.	ATIC centre		District Administration	Only building is completed
12.	IT Infrastructure (E-extension system)		I.C.A.R.	Completed but presently V-SAT not working properly
13.	Plant diagnostic lab		I.C.A.R.	Not established
14.	Irrigation channel		I.C.A.R.	Not established
15.	Deep boring		I.C.A.R.	Failed and not functioning
16.	Soil Testing kit		I.C.A.R.	functioning
17.	Soil Testing Lab		District Administration	Functioning

17. Fund requirement and expenditure (Rs.)

	Expenditure (last year) (Rs.)	Expected requirement (Rs. in lakh)
Recurring Pay & allowance		
Contingency		
TA		
Non-recurring (specify) – Repairing and Maintenance of building and other infrastructure		

CONTENT