

Scientific Advisory Committee (SAC) MEETING

01-03 May 2023



Presented By

Toshan Kumar Thakur

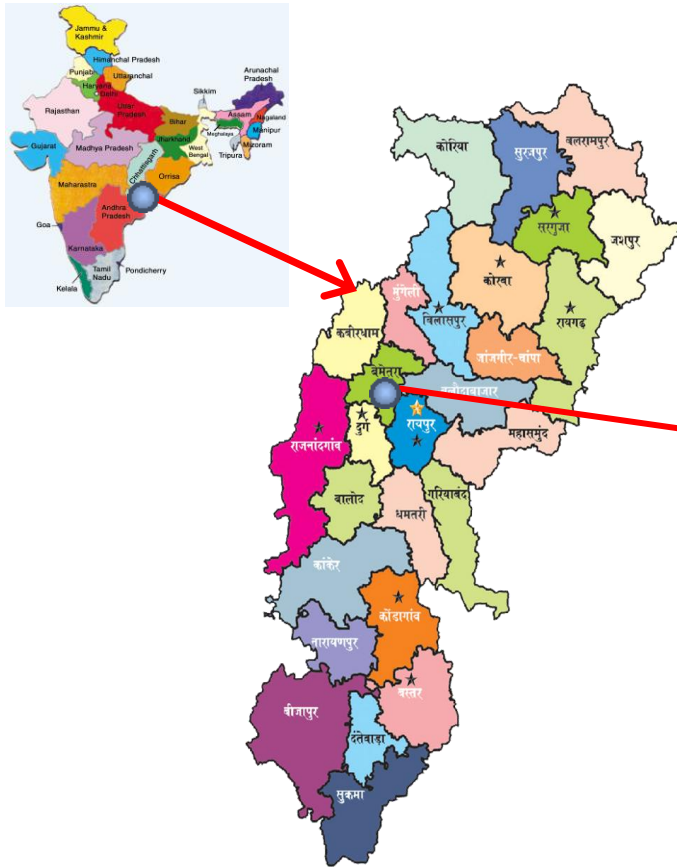
SMS (Fisheries), I/c SS&H







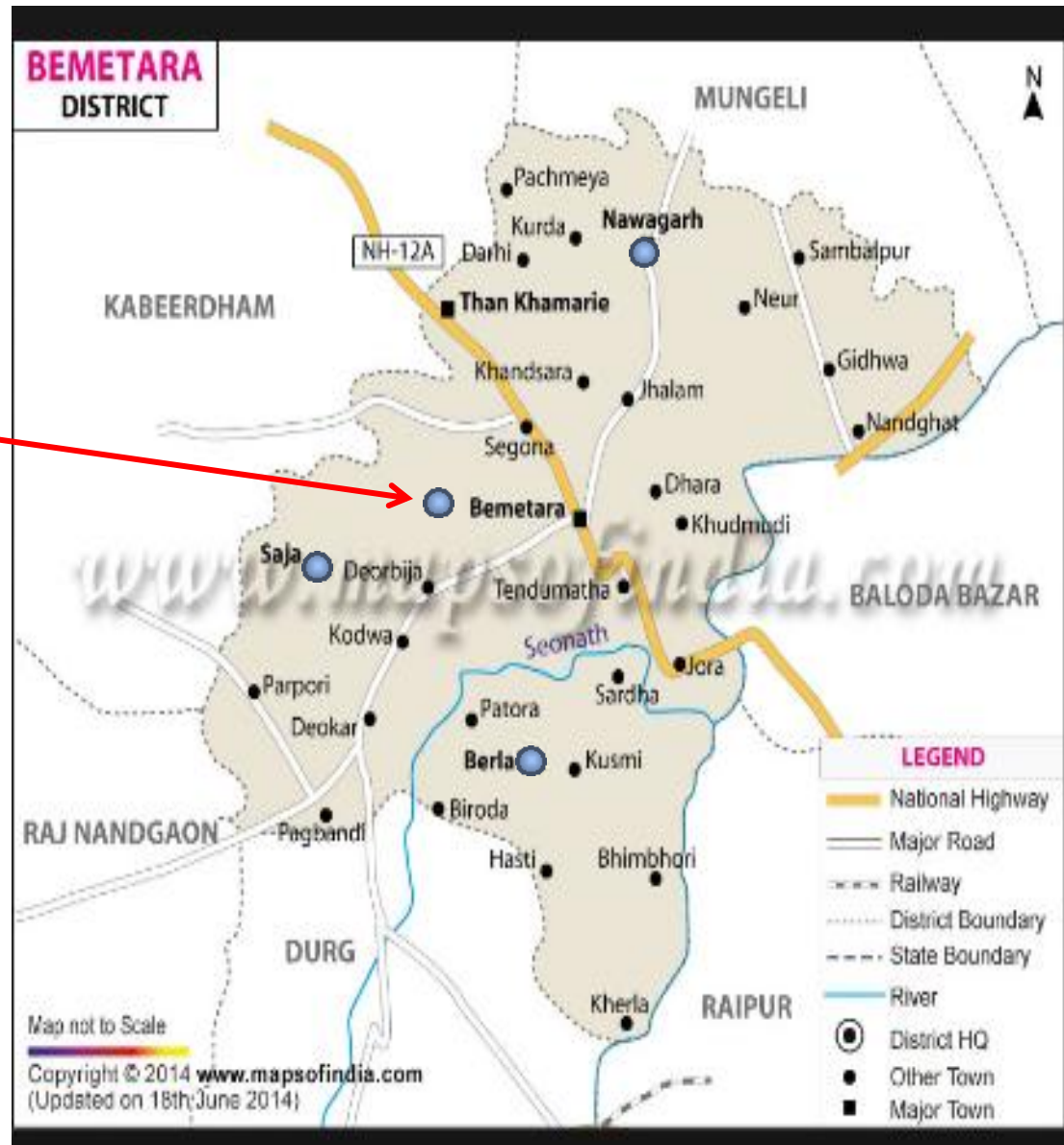
KRISHI VIGYAN KENDRA, BEMETARA (C.G.)
INDIRA GANDHI KRISHI VISHWAVIDYALAYA



OUTREACH OF KRISHI VIGYAN KENDRA, JHAL, BEMETARA (C.G.)



-  बेमेतरा
-  बेरला
-  साजा
-  नवागढ



Map not to Scale
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 (Updated on 18th June 2014)

Staff Position of KVK, Bemetara

S. No.	Sanctioned post	Name of the incumbent	Designation	Discipline
1	Sr Scientist & Head	Vacant		
2	Subject Matter Specialist	Shri Toshan Kumar Thakur	SMS	Fisheries
3	Subject Matter Specialist	Dr. (Smt) Ekta Tamrakar	SMS	Entomology
4	Subject Matter Specialist	Dr. Jitendra Kumar Joshi	SMS	Farm Machinery and Power Engg.
5	Subject Matter Specialist	Dr. Ku. Chetna Banjare	SMS	Horticulture
6	Subject Matter Specialist	Dr. (Smt.) Pragya Pandey	SMS	Agronomy
7	Subject Matter Specialist	Vacant	-	-
8	Programme Assistant	Vacant	-	-
9	Computer Programmer/ Programme Assistant	Shri Shiv Kumar Sinha	PA(Comp.)	Comp. Application
10	Farm Manager	Dr. Hemant Sahu*	FM	Genetics & Plant Breeding
11	Assistant	Shri Palash Choubey	AG-I	AG-I
12	Jr. Stenographer / Comp. Operator	Shri Bhagwat Prasad Verma	AG-II	AG-II
13	Driver	Shri Sparsh Patel	Driver	Jeep
14	Driver	Vacant	-	-
15	Supporting staff	Shri Omprakash Sahu	Peon	Peon
16	Supporting staff	Vacant	-	-

* Dr Hemant Sahu, FM attached at DES Office, IGKV, Raipur

Demonstration Unit at KVK, Bemetara



Distillation Unit



Polly House



Germination Chamber (HTP)



Fisheries Unit



Hardening Chamber (HTP)

Basic Information of Agriculture of Bemetara District Year 2022-23

S.No	Particulars	Unit	Bemetara Block	Saja Block	Berla Block	Nawagarh Block	Total
1	Annual Rainfall	MM	1159.1	1016.6	871.0	953.3	998.7
2	Geographical area	Ha	72780	72490	77920	62500	285690
3	Net Cultivated area	Ha	58240	60180	56470	50320	225210
4	Double cropped area	Ha	45316	49508	33184	39367	1,67,375
5	Total Cultivated area	Ha	103556	109688	89654	89687	3,92,585
6	Kharif area	Ha	57382	59954	55960	51102	224398
7	Rabi area	Ha	46174	49734	33694	38585	168187
8	Total cropped area	Ha	103556	109688	89654	89687	392585
9	Cropping Intensity	Percentage	177.80%	182.28%	158.76%	178.23%	174.32%
10	Kharif- Irrigated area	Ha	28930	32900	23600	20580	106010 (49%)
11	Rabi- irrigated area	Ha	25500	26750	20150	17850	90250 (56%)

Source : Dept. of Agriculture, District-Bemetara

Area of Major Crops in Year 2022-23

S.No.	Name of Crop	Unit	Area
Kharif			
1	Paddy	Ha	1,93,763.800
2	Jwar-Kodo-Kutki	Ha	5,544.620
3	Pigeonpea	Ha	5,064.336
4	Soybean	Ha	5,139.383
5	Sugarcane	Ha	3778.097
6	Vegetables & Others	Ha	7,279.912
Rabi			
1	Wheat	Ha	47,320
2	Paddy	Ha	19,880
3	Chickpea	Ha	65,010
4	Lathyrus	Ha	25,690
5	Vegetables & Others	Ha	3,870

Source : Dept. of Agriculture, District-Bemetara

Area of Major Fruits, Vegetables & Spices Crops in Year 2022-23

S.No.	Name of Crop	Unit	Area
Fruit Crop			
1	Mango	Ha	1,022
2	Banana	Ha	1,029
3	Papaya	Ha	664
4	Guawa	Ha	537
Vegetable Crops			
1	Tomato	Ha	2,445
2	Brinjal	Ha	1,804
3	Cauliflower	Ha	1,648
4	Cabbage	Ha	1,230
5	Cow pea	Ha	1,026
Spices crops			
1	Coriander	Ha	717
2	Garlic	Ha	533
3	Red-chilli	Ha	273
4	Turmeric	Ha	232
5	Ginger	Ha	132

Source : Dept. of Agriculture, District-Bemetara

Recommendation / Suggestions of LAST SAC Meeting (6th) and Monthly Workshop

Promotion of biofertilizer

Exposure visit of farmers to Banana Pseudostem Fiber Based Enterprises

Weed problems and Post emergence herbicide

Natural Fish Food - plankton Production

Low fish production

Lack of awareness about Natural Farming

Lack of fodder production and silage making

Lack of knowledge and availability about OP seedlings

Drone Demonstration

Multicrop Inclined plate planter for DSR

Paddy residue burning

Actions taken



Trainings and awareness programmes



Critical Input Distribution



Demonstrations

Summery of OFT & FLD conducted in FY 2022-23

Name	Designation & Discipline	OFT	FLD
Shri Toshan Kumar Thakur	SMS (Fisheries)	02	02
Dr. Ekta Tamarakar	SMS (Entomology)	01	02
Dr. Pragya Panday	SMS (Agronomy)	04	01
Dr. Chetna Banjare	SMS (Horticulture)	02	01
Dr. Jitendra Kumar Joshi	SMS (FMPE)	04	03
TOTAL		13	09

OFT-1 Assessment of Pangasius Fish Farming in bio-floc fish tank

Crop/Enterprise	Fish
Problem diagnosed	High cost of fish production, Low fish production
Farming situation	Medium size tank (30000L Capacity)
Production system and thematic area	Super Intensive Fish Production Technology
Farmers' practices	Pangasius Fish Farming in Fish Pond
Details of technologies selected for assessment/refinement Treatments	T1 – Stoking Density of Pangasius Fish Seed (Fingerlings) @ 5 Nos/M3 (Farmer practice) T2 - Stoking Density of Pangasius Fish Seed (100g) @ 40Nos./M3, T3 - @ 70 Nos./M3 (Research Practice)
Source of technology	KVK, IGKV, Raipur (C.G.)
No. of farmers	04
Area of each trial	04 tank
No of trial	04
No. of animals (if animals are part of OFT)	-
Performance indicators	Yield, ABW, Survival, FCR, B:C ratio
Name of SMS	Toshan Kumar Thakur

Result

Assessment of Pangasius Fish Farming in bio-floc fish tank

Name and unit of Parameter	Parameters			Average Cost of cultivation (Rs)		
	FP (T ₁)	RP (T ₂)	RP (T ₃)	FP (T ₁)	RP (T ₂)	RP (T ₃)
Yield in Qt. (in 6-7 months)	23.00 (0.1ha/ 10 lakh L) ABW 500-600g	10.80 (30000L Tank) ABW 800-900g FCR 1.2	17.75 (30000L Tank) ABW 700-800g FCR 1.4	1,50,000	66,000	1,20,000

Average Gross Return (Rs)			Average Net Return (Rs)			Benefit-Cost Ratio (Gross Return / Gross Cost)		
FP (T ₁)	RP (T ₂)	RP (T ₃)	FP (T ₁)	RP (T ₂)	RP (T ₃)	FP (T ₁)	RP (T ₂)	RP (T ₃)
2,18,500	1,02,600	1,68,000	68,500	36,600	48,625	1.45	1.55	1.40



Assessment of growth of fish fed with farm made fish feed in composite fish farming

Crop/Enterprise	Fish
Problem diagnosed	Low Fish Production, high cost of palleted fish feed
Farming situation	Mid-land, Low-land
Production system and thematic area	Fish Feed Management
Farmers' practices	Pangasius Fish Farming in Fish Pond
Details of technologies selected for assessment/refinement Treatments	T1 – No fish feeding/Manuring only (Farmer practice) T2 - Fish feeding with farm made feed (Rice bran & Mustard Oil cake in 1:1 Ratio + 0.1% Mineral Vitamin Mixture @3% per Kg BW (Research Practice)
Source of technology	CIFA, Bhubaneshwar
No. of farmers	04
Area of each trial	1.6 ha
No of trial	04
No. of animals (if animals are part of OFT)	-
Performance indicators	Yield, ABW, B:C ratio
Name of SMS	Toshan Kumar Thakur

Result

Assessment of growth of fish fed with farm made fish feed in composite fish farming

Parameters			Average Cost of cultivation (Rs/ha)	
Name and unit of Parameter	FP (T ₁)	RP (T ₂)	FP (T ₁)	RP (T ₂)
Yield (Qt./ha)	20.60	35.00	85,000	2,40,000

Average Gross Return (Rs/ha)		Average Net Return (Rs/ha)		Benefit-Cost Ratio (Gross Return / Gross Cost)	
FP (T ₁)	RP (T ₂)	FP (T ₁)	RP (T ₂)	FP (T ₁)	RP (T ₂)
2,88,400	4,90,000	2,03,400	2,50,000	3.39	2.04



Assessment of use of mattha (Butter milk) for management of insect pest in paddy

Name of Enterprise/Subject	Crop (Paddy)/Entomology
Season & Year	Kharif 2022-23
Problem diagnosed	Poor yield due to infestation of insect pest
Thematic Area	ITK
Farmers Practice (T ₁)	No Use of Mattha (Butter milk)
Rec. Practice (T ₂)	Use of Mattha(Butter milk) @5ml per liter.
Source of Technology	DES, Ranjmata Vijayaraje Sindhiya, Krishi Vishwavidyalaya, Glalior 2022
Observation to be recorded	No .of insects /plants, Yield , B:C ratio
No. of Trials	06
Name of SMS	Dr. Ekta Tamrakar

Result

Assessment of use of mattha (Butter milk) for management of insect pest in paddy

Treatment	Yield (q ha ⁻¹)	% change in Yield	Parameter*	Gross Cost Rs./ha	Gross Income Rs/ha	Net income	B:C Ratio**
Farmers Practice (T1)	22.8	27.6	(Leaf folder) 5.25, (Stem borer) 6.62, (Brown plant hopper) 4.7	25000	46512	21512	1.86
Improved Practice (T2)	29.1		(Leaf folder) 2.83, (Stem borer) 3.1, (Brown plant hopper) 2.8	26480	59364	32884	2.2



Season & Year- *Kharif -2022*

Problem Diagnose - Farmers has not get there exact value of their whole produce at the time of harvest, traditional milling pulse processing.

Thematic area – Enterprises

Name of Technology – Agricultural Processing

Source of Technology- IGKV, Raipur

Treatment details	
Treatments (T1) Farmers practice Local distribution/traditional pulse milling	Treatment (T2) Recommended practice PDKV design Mini Dal Mill
No. of Trails	5
Performance indicator/parameter	Losses (%), Milling efficiency, cost economic.
Name of scientist	Dr. Jitendra Kumar Joshi , SMS (Farm Machinery and Power Engineering)

Parameter	Farmers practice (T1)	Recommended practice (T2)			
	Traditional stone chakki mill	PDKV mini dal mill			
	Pigeon pea	Pigeon pea		Masur	Gram
	Rajiv Lochan	Asha	Rajiv Lochan	CG masur-1	Vaibhav
A Grade (unbroken dal)	4.67 (15.56)	5.95 (19.86)	6.25(20.83)	6.95 (23.16)	7.5 (25)
B Grade (less than 25% breakage)	4.4 (18)	6.212 (20.70)	5.92 (19.73)	4.812 (16.04)	5.2 (17.33)
C Grade (25-75% breakage)	12.6 (42)	11.33 (37.77)	11.62 (36.73)	10.8 (36)	10.2 (34)
D Grade (broken)	1.10 (3.66)	0.530 (1.76)	0.90 (3)	0.80 (2.6)	0.66 (2.2)
E Grade (Powder n husk)	5.9 (16.33)	4.212 (14.04)	3.912 (16.37)	5.12 (17.06)	3.92 (13.0)
Total dal recovery	22.77 (75.9)	23.49 (78.3)	23.79 (79.3)	22.56 (75.2)	22.9 (76.3)
Total	28.67	28.83	28.602	28.48	27.48
Unavoidable loss	1.33	1.16	1.39	1.51	2.52
Labour requirement, man h/day	2	7	7	7	7
Machine capacity (q/h)	0.35	0.67	0.7	0.6	0.8
Maximum machine capacity (q/day)	1.4	3.35	3.5	3	4
Machine efficiency (%)	72	78	79	75	82
Cost of milling (Rs/kg)	2.054	1.029	1.029	1.029	1.029
Total input cost (fixed + variable cost) / 30 kg	1600	1700.4	1760.4	2346	1440
Cost of milling (Rs/quintal)	5333.3	5850.38	5968.15	6292.12	5272.2
Gross income Rs/quintal)	6451.5	7420	7515	7200	6900
Net income (Rs/quintal)	1118.2	1569.62	1546.85	907.88	1626.8
Benefit cost ratio	1.20	1.26	1.25	1.14	1.30

30 kg sample tested

30 kg sample tested

Average quantity of raw material processed and processed product obtained from PKV Dal mill (Qtl. / unit)

Sr. No.	Particulars	Commodity processed			
		Pigeonpea	Masur	Gram	Total
1.	Plant operated (days/yr.)	150			
2.	Raw material processed (qt.) product	370 (100)	50 (100)	80 (100)	500 (100)
a.	Dal (finished product) (qt.)	272.13 (73.55)	35.96 (71.92)	61.04 (76.30)	369.13 (73.92)
b.	Broken Dal (qt.)	20.72 (5.60)	1.77 (3.55)	5.88 (6.8)	28.37 (5.31)
c.	By-product (churri) (qt.)	77.14 (20.85)	12.26 (24.53)	13.52 (16.9)	102.92 (20.76)
3.	Percentage of finished product to raw material	73.55	71.92	76.30	73.93
4.	Total cost of processing (fixed + variable) in Rs/-	2208215	314606	503369.6	3026191
5.	Total gross income Rs/-	2780550	360000	552000	3692550
6.	Net Income Rs/-	572335	45394	48630.4	666359.4



Grader



Dryer



Splitter



Mini dal mill



Polisher



खानूक टोकमगर

ऐसे हो रहा प्रसंस्करण...

स्टेप-1 **सोईया** : फसल की खेती करने सोईया की जाती है। 30, 40 व 50 में सोईया की जाती है। इसको फिर खरप में मलिन की तरह मई है।

स्टेप-2 **भूमई** : दाल को मलिन टुकरी में इलाकह इलाकह 20 मिनट तक भुन जाय है। इसमें अजमा मीनकन पुर ही जाय है और सुकने के बाद जालकन करके से लेय है।

स्टेप-3 **दाल मिन** : मसुदा दाल को दाल मिन जाय है। फिर उसके मिनके टुकने के लिए मिन में दाल जाय है। फली में दूध दाल को रक जाय है। फिर पुर में सुक दाल जाय है।

स्टेप-4 **साइंडर मशीन** : दाल को साइंडर मशीन में पीस जाय है। दाल को डेरने में दाल जाय है। फिर दाल को रक करने के लिए मिन में



खानूक दाल फसली जालमनमरी, मसुदा मीनकन और मीन में

खानूक टोकमगर

जालमन मिनर

सज्ज के कानरी गांव के किराना भी उतम वर्ग लंबे समय से अरहर की खेती कर रहे हैं, लेकिन फसल बेचने के लिए उन्हें अब तक स्थानी बाजार नहीं मिल पाया था। इस वजह से उन्हें विद्यार्थियों से सौदा कर अरहर बेचना पड़ रहा था। अब छत्तीसगढ़ सरकार के उनके गांव के करीब में ही दाल प्रसंस्करण की मशीनें लगाकर दी हैं। अब उन्हें अपनी दालहन फसलों को बेचने के लिए स्थानी बाजार मिल गया है और बाजार से वाम भी 200 रुपए उजबड़ मिल रहा है। बी वर्ग काठो ही रिक वे करीब सात एकड़ में अरहर की खेती करते हैं। इससे उन्हें आनंदही अचड़ी-खसी हो जाती है।



दाल प्रसंस्करण इकाई में अरहर, चना और मसूर दिवड़ा की मिलिंग

दालहन उत्पादकों को मिला स्थायी बाजार, कृषि आय का बढ़ा शेर

छ चैतन्य खाकर ने दाल के पीसमूदा गांव में दाल प्रसंस्करण इकाई स्थापित की है। जहां 5 युवाओं को केवारा मिल है। इन मिन में जिनमें 10 से 15 मिनट दाल को मिनने की जाये है। यही जिनमें 200 से 250 मिनट दाल प्रसंस्करण किए जा रहे हैं। दो घण्टे के पीछे 60 मिनट दाल मिनो हो चुकी है। मिन का संभालना दाल को अपनी कृषक उत्पादक सबकी खरीदी मशीन को मिन तक है। इस इकाई में अब तक 600 मिनकन दाल मिन है और जिनमें सब से बड़ा मिन करने का मिनकन को मिन का मिनकन मिनकन

खानूक टोकमगर

प्रतिमाह 200 से 250 विंचटल दाल का उत्पादन

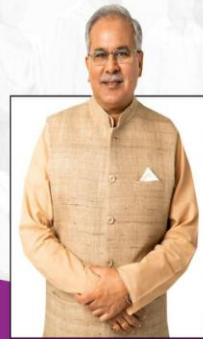
ज्यादा खानूक से जाती है दाल
 दाल प्रसंस्करण इकाई दाल का उत्पादक जाय है। खानूक दाल को दाल इलाकह में भुन जाय है। फिर दालहन इकाई के बाद जालकन मलिन में हावकर मिनके मिन किए जाते हैं। फली में कोने के बाद पुर में सुकने के बाद खानूक इलाके में दाल का उत्पादक जाय है।

दाल के तीन तरह के दाल दाल

दाल की मिनकन	मिनकन की मिनकन
पॉलिश दाली	100 रुपए
मिनकन पॉलिश	90 रुपए
कम मिनकन	80 रुपए



दाल प्रसंस्करण से बंपर कमाई कर रहे ग्रामीण



- ✦ हर महीने कर रहे 2 लाख रुपए से अधिक की आमदनी
- ✦ बेमेतरा जिले के ग्राम मही-दही (भैसमुड़ा) में जिला प्रशासन के सहयोग से स्थापित की गई है दाल प्रसंस्करण इकाई
- ✦ मुख्यमंत्री भूपेश बघेल जी के स्वरोजगार को बढ़ावा देने के प्रयास को मिल रही बड़ी सफलता

Innovatory Work

OFT-5

Assessment of Banana Pseudostem fiber machine set up

FARM MACHINERY & POWER

Season & Year- *Kharif -2022*

Problem Diagnose - Farmers has not get there exact value from their whole crop, farmers throw and waste the pusedostem.

Thematic area – **AEG**

Name of Technology – Resources conservation Technology

Source of Technology- **NAU, Gujrat**

Treatment details

Treatments (T1) Farmers practice	Treatment (T2) Recommended practice
Prepare Compost and left outside in the field	Banana Pusedostem Fiber machine

No. of Trails

5

Performance indicator/parameter

Labour requirement, machine capacity
machine efficiency %, electricity
consumption, cost economic

Name of scientist

Dr. Jitendra Kumar Joshi ,
SMS (Farm Machinery and Power Engineering)

FARM MACHINERY & POWER		Farmers practice	Recommended practice			
Parameter	Unit	Prepare Compost and left outside in the field	Banana Stem Fiber (Banana Pusedostem fiber Extraction machine)	Fiber handicraft and handloom products	SAP (Banana Stem water) by weight	Scutcher (banana Pulp)
Products/ha	No. of stem 3400/ha	68 tone	0.680 tone	10% of total fiber	14.994 tone	39.98 tone
Per stem	Per stem	16 kg	200 gm	-	4.212 kg	11.76 kg
18 ha Area required to cover by 4 Extractor machine	Total stem-61200 (200 working days in a year)	1224 tone	12.240 tone	-	269.89 tone	719.64 tone
Labour required to cut the stem	Ha	40 man days/ha	13	4	2	2
Labour required to cut the 61200 stems	18 ha	720	234	72	36	36
Cost for harvesting of stem	220 Rs labour charges		51480	15840	7920	7920
Machine capacity	(kg/h)	-	2.4 kg/h	-	-	-
Maximum machine capacity	(kg/day)	-	50 kg/day	2 kg/day	1.263 t	3.52 t
Total input cost (fixed + variable cost)/ha	Rs/ha	8800/-	15420 (fixed + variable cost)/ha			
Total input cost (fixed + variable cost)	Rs for 18 ha area	158400	277560			
Gross income by each product	Rs/day	-	7000	2000	3789	7040
Gross income with all products	Rs/day	-	19829			
Gross income with all products	Rs/Year		356922			
Net income with all products	Rs/day	-	4409			
Net income with all products	Rs/Year		79362			
Benefit cost ratio		-	1:1.28			

**Net Income generated from Banana Fiber Extraction Unit
(1st Feb 2022 to 31st December 2022)**

S. No.	Particular	Total Income (Rs. In Lacs)
1.	Raw Fiber sold to Netloop Innotex LLP	2.30
2.	Raw fiber Handicraft and Handlooms products	0.240
3.	Banana pseudostem sap and pulp	2.085
4.	Handicraft and handloom products	1.50
Total Rs. In Lakh		6.125

Banana Pseudostem Fiber & OLN Stock as on dated 31st March 2023

S. No.	Particular	Available stock	Unit Rate (Rs.)	Total cost (Rs. In Lacs)
1.	Raw Fiber	1000 kg	115.00	1.150
2.	Combed Fiber	300 kg	150.00	0.450
3.	Cardet Fiber	100 kg	75.00	0.075
4.	Banana pseudostem liquid nutrients	5000 liter	120.0	6.00
Total Rs. In Lakh				7.25

आत्मनिर्भरता

हनुम को फिलान्ट्री का मिला मौका, आमदनी भी अच्छी



राज्यीय स्तर पर महिलाओं को प्रोत्साहित करने के लिए...



प्रत्येक महिला को 2000 रुपये का उपकरण प्रदान किया गया...

तने से ऐसे-ऐसे उत्पाद हो रहे तैयार

केला के तने को छोड़कर फिलान्ट्री के बाकर प्रदान किया जाता है...

पुरुषों को प्रोत्साहित करने के लिए...

महिलाओं को तने का मिला भाव...

तीन महीने में 15 किलो टने का उत्पादन...

दूरस्थ राज्यों से मिला ऑर्डर...

केला तना से चार तरह के उत्पाद तैयार करने वाली किरानेदार

महिलाओं को प्रोत्साहित करने के लिए...

प्रकारों में से एक...

प्रकारों में से एक...



अपने गांव में ही हनुम बिखेर रही बेमेतरा की महिलाएं...

केला तना से चार तरह के उत्पाद क्राफ्ट, खाद, वॉश और अचार

हनुम, प्रोत्साहन, प्रोत्साहन और अन्य उत्पादों से तैयार की डिजाइन

रामह की 114 महिलाएं क्राफ्ट से जुड़ी हैं

दूर महीने में 15 किलो टने का उत्पादन



Shot on OnePlus
By jatin



OFT-6

Assessment of Banana Pseudostem water to promote organic farming in aromatic crop

RESEARCHABLE

Season & Year- *Kharif -2022*

Problem Diagnose - *Impacts of chemical fertilizer on environment and health.*

Thematic area – **AEG**

Name of Technology –

Source of Technology- **NAU, Gujrat**

Treatment details

Farmers practice

**Broadcasting of Urea, DAP
fertilizer (T1)**

Recommended practice

**Application of Banana Psuedostem water
T2: 50% RDA
T3: 100% RDA**

No. of Trails

5

Performance indicator/parameter

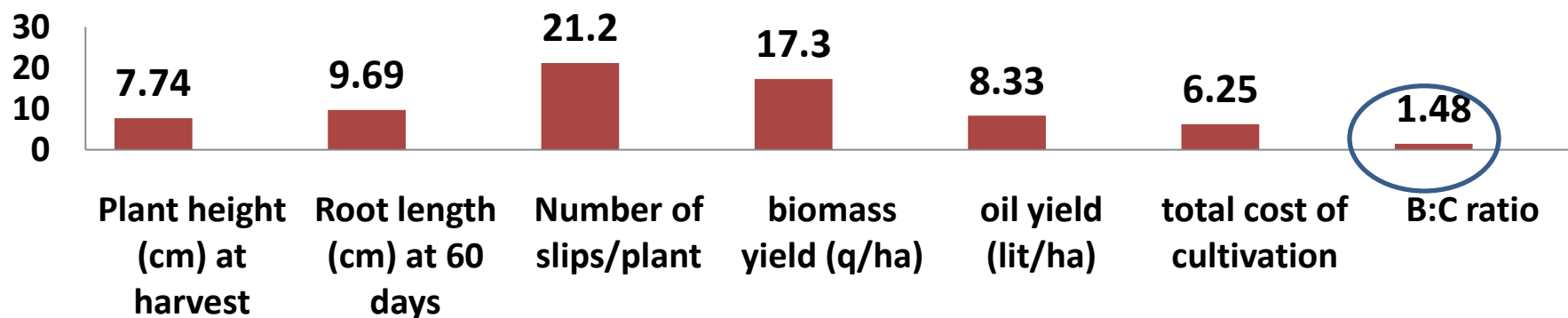
**Plant Geometry, Bio mass yield (q/ha), Oil
yield (Lit./ha) cost economic**

Name of scientist

**Dr. Jitendra Kumar Joshi , SMS (Farm
Machinery and Power Engineering)**

Result**Assessment of Banana Pseudostem water to promote organic farming in aromatic crop****RESEARCHABLE**

Parameters	Farmers practice	Recommended practice		T2 % change over farmers practice	T3 % change over farmers practice
	T1 N:P:K (80:50:30)	T2 50% RDA (2,500 lit/ha)	T3 100% RDA (5,000 lit/ha)		
Plant height (cm) at harvest	121.46	110.23	130.87	-9.24	7.74
Root length (cm) at harvest	29.9	30.5	32.8	2.0	9.69
Number of slips/plant at harvest	78.89	75.78	95.67	-3.94	21.2
biomass Yield(q/ha)	180	175	195	-15.5	17.3
Oil Yield (lit/ha)	72	70	78	-2.77	8.33
Total cost of cultivation (Rs/ha)	64000	62000	68000	-3.125	6.25
Gross Income (Rs/ha)	86400	84000	93600	-2.77	8.33
Net Income (Rs/ha)	22400	22000	25600	-1.78	14.28
B:C Ratio	1.35	1.35	1.37	0	1.48

**Fig. % increased over the check on each tested parameters of Palmrosa grass**



Lemon Grass



Palmarosa Grass

Sap was applied in 10 equal splits through drip in both the crops

Commercial Production of Enriched Banana Pseudostem Organic Nutrients

- ❑ Novel organic liquid nutrients are banana pseudostem sap obtained as a byproduct during extraction of fiber from banana pseudostem.
- ❑ The banana pseudostem sap is collected by squeezing scutcher waste either manually or by press obtained during the process of fiber extraction.
- ❑ The sap obtained is to be filtered for removing the suspended material.
- ❑ Mixing of different organic inputs and sap has to be done in sequential manner.
- ❑ The whole mixture is then filled in bio-digester and incubated under anaerobic condition.
- ❑ The mixture is to be stirred periodically.
- ❑ After specified period the supernatant is to be collected, filtered and stored in air tight container



RESEARCHABLE

Banana pseudostem based Sap chemical and biochemical composition

Parameter	Unit	Content (range)	Mean
N	%	-	0.015
P		0.002-0.007	0.0028
K		0.154-0.234	0.208
S		Trace-0.004	0.002
Ca		0.004-0.020	0.014
Mg		0.014-0.101	0.048
Fe	ppm	2.57-38.17	10.72
Mn		2.66-19.34	9.78
Zn		Trace-1.79	1.07
Cu		Trace-4.30	0.98
Total soluble sugars		(mg/ml)	0.356-4.881
Total phenols	-	2.750-25.19	13.803
Total amino acids	(mg/ml)	0.022-0.232	0.129
Urease activity	(U/ml/min)	1.450-10.14	4.676
Cytokinin (mg/l)	(mg/l)	44.5	
Gibberellic acid	(mg/l)	13.7	

Banana pseudostem based enriched Organic Liquid Nutrients chemical and biochemical composition

Chemical			Biochemical		
Parameters	Unit	Mean	Parameters	Unit	Mean
N	%	0.088	Total phenol	Mg/100 ml	51-52.5
P		0.016	Urease activity	U/ml/min	65-81
K		0.254	Gibberellic Acid	Mg/l	188.00
Ca		0.028	Cytokinin	Mg/l	210.0
Mg		0.041	Microbe	Unit	Population
S		0.017	Total viable count	(CFU/ml)	1065 x 10 ³
Mn		ppm	5.90		PSB
Cu	0.45		Rhizobium		285 x 10 ²
Zn	4.51		Azotobacter		460 x 10 ²
Fe	565.3		Fungal count		Not detected
pH	4.54		EC	13.11	

OFT-7**Impact assessment of custom hiring service centers in Bemetara district****FARM MACHINERY & POWER****Season & Year – *Rabi-2022-23*****Problem diagnose – *unavailability of conservation machines*****Thematic area - *Resources conservation technology*****Name of Technology - *Farm Mechanization*****Source of Technology- *IGKV Raipur*****Treatment details****Treatments (T1) *Farmers practice*****Treatment (T2) *Recommended practice******Farmers itself******CHC******No. of Trails******5******Performance indicator/parameter******List of beneficiaries, satisfaction from the scheme, % change in agriculture income, fallow land conversion .******Name of scientist******Er. Jitendra Kumar Joshi , SMS (Farm Machinery and Power Engineering)***

ongoing

Result

Impact assessment of custom hiring service centers in Bemetara district

FARM MACHINERY & POWER

No. of CHS Centres in Bemetara District	Block Berla	Block Bemetara	Block Nawagarh	Block Saja	No. of beneficiaries	No of Village Covered	Major recommendations
					Farmers		
58	28	6	8	16	435	362	To acquaint with various agricultural machines according to season of different crops

Assessment of propagation of ginger planting materials through pro-tray

Season and Year	Kharif -2022
Problem	Use of high seed rate and costly seed (Rhizome)
Thematic area	Crop Production
Name of Technology	Raising of ginger seedlings in protray methods.
Source of technology	IGKV, Raipur
Farmers practice (T₁)	Conventional planting
Assessed recommended practice(T₂)	<ul style="list-style-type: none"> • Ginger bud sprouts in protray with nursery medium cocopeat & vermicompost (3:1) •Seed rhizomes are cut into single buds with small piece of rhizomes weight 4-6 gm. • Treatment of bud sprouts (bavistin @1.5 gm) for 30 min before planting • Seedling will be ready within 30-40 days for planting.
No. of Demonstration	04
Parameter	Yield (qu./ha), Net return (Rs/ha), Gross return (Rs/ha) and B:C ratio
Name of SMS responsible	Dr. Chetna Banjara (SMS, Horticulture)

Result

Assessment of propagation of ginger planting materials through pro-tray

S. No.	Parameter	T1	T2
1	Yield (qu/ha)	70.00	72.20
2	Cost of Cultivation (Rs/ha)	88,500/-	75,000/-
3	Gross Return (Rs/ha)	2,10,000/-	2,25,000/-
4	Net Income (Rs/ha)	1,21,500/-	1,90,000/-
5	B:C Ratio	2.37	3.00



Assessment of yield estimation of Hybrid Seed and Open Pollinated (OP) varieties of tomato.

Season and Year	Kharif -2022
Problem	Crop production seeds collected by farmers
Thematic area	Crop Production
Name of Technology	Yield estimation of different varieties of tomato
Source of technology	IGKV, Raipur
Farmers practice (T₁)	Crop production by tomato local seeds collected by farmers
Assessed recommended practice(T₂)	Crop Production by Saho Tomato Seeds (Hybrid seeds)
Assessed recommended practice(T₃)	Crop Production by Kashi Aman Tomato Seeds (OP)
No. of Demonstration	04
Parameter	Germination percentage (%), yield (qu./ha) and B:C ratio
Name of SMS responsible	Dr. Chetna Banjara (SMS, Horticulture)

Result

Assessment of yield estimation of Hybrid Seed and Open Pollinated (OP) varieties of tomato.

S. No.	Parameter	T1	T2	T3
1	Germination percentage (%)	78%	95%	93%
2	Yield (qu/ha)	200	450	300
3	Cost of Cultivation (Rs/ha)	99,740/-	1,25,200/-	1,10,000/-
4	Gross Return (Rs/ha)	2,00,000/-	4,50,000/-	3,00,000/-
5	Net Income (Rs/ha)	1,00,260/-	3,24,800/-	1,90,000/-
6	B:C Ratio	2.05	3.59	2.72



OFT-10

Assessment of performance of new rice variety MTU 1153 against popular variety MTU 1010 on farmers' fields

Season & year	<i>Kharif 2022</i>
Problem	Old rice variety (older than 10 years)
Thematic area	Crop production
Name of technology	Varietal assessment
Source of technology	IGKV
Farmer's practice (T1)	Rice variety MTU 1010 (release year 2000)
Assessed Recommended practice (T2)	Rice variety MTU 1153 (release year 2015)
Number of trials	4
Parameter	Number of tillers, yield, B:C ratio
Name of SMS responsible	Dr. Pragya Pandey

Assessment of performance of new rice variety MTU 1153 against popular variety MTU 1010 on farmers' fields

Parameter	Av. Yield, q/ha	No. of tillers	No. of grains per panicle	Cost of cultivation (Rs/ha)	Gross returns (Rs/ha)	Net income (Rs/ha)	B:C ratio
Farmers Practice (MTU 1010)	46.7	12 (10-14)	93	30000	95268	65268	2.17
Recommended practice (MTU 1153)	52.5	14 (11-16)	106	30000	107100	77100	2.57



Assessment of scientific package and practice Fodder production in Bemetara district

Season & year	<i>Kharif 2022</i>
Problem	Poor interest of farmers in fodder production
Thematic area	Crop production
Name of technology	Fodder crop production
Source of technology	IGKV Raipur
Farmer's practice (T1)	Fodder Crop production by conventional method
Recommended practice (T2)	Fodder Maize production (Variety J-1006) with seed treatment + line sowing + 1 time interculture operation +80:40:40 ::N:P:K
Performance indicator/parameter	Plant height, yield, B:C ratio
Number of trials	4
Name of scientist	Dr. Pragya Pandey

Assessment of scientific package and practice Fodder production in Bemetara district

Treatment	Yield (q /ha)	Parameters Plant height (feet)	Cost of cultivation Rs./ha	Gross returns (Rs/ha)	Net income (Rs/ha)	B:C ratio
Farmer's Practice (T1)	180	6.5-8	17500	90000	72500	4.14
Improved Practice (T2)	220	6.5-8	18500	110000	91500	4.94

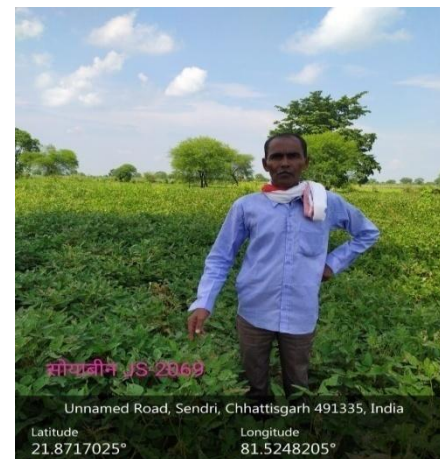


Season & year	<i>Kharif 2022-23</i>
Problem	Lower yield in soybean due to heavy narrow leaf weed infestation
Thematic area	Weed management
Name of technology	Chemicals weed management
Source of technology	IGKV Raipur
Farmer's practice (T1)	Weedy check (Weed free plots with hand weeding) (Variety JS 20-69, R.Y-2016)
Recommended practice (T2)	Fenoxaprop-p-ethyl @32-40 g a.i. / acre (2-3 leaf stage of weed)
Recommended practice (T3)	Quizalofop ethyle @16-20 g a.i. / acre (2-3 leaf stage of weed)
Performance indicator/parameter	Weed index, Yield q/ha, Net return, B:C ratio
Number of trials	4
Name of scientist	Dr. Pragya Pandey

Result

Assessment of Chemical Weed management in soybean

Treatment	Yield (q ha ⁻¹)	No. of pods	Weed index	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net Income (Rs./ha)	B:C ratio
Weedy check (T1)	16.3	78		25000	70090	45090	1.81
Improved Practice (Fenoxaprop-p-ethyl) (T2)	12.4	58	23.92	21000	53320	32320	1.53
Improved Practice (Quizalofop ethyle) (T3)	13.6	65	16.56	21000	58480	37480	1.78



Dactyloctenium aegyptium, *Digitaria sanguinalis*, *Acrachne racemosa* and *Eragrostis* spp.

Season & year	<i>Rabi 2022-23</i>
Problem	Lower yield in Chickpea due to heavy weed infestation
Thematic area	Weed management
Name of technology	Chemicals weed management
Source of technology	IGKV Raipur
Farmer's practice (T1)	One hand weeding at 30 DAS
Recommended practice (T2)	Topramezone @ 19.4 g a.i./ha. (20-25 days after sowing) for broad leaves weed
Performance indicator/parameter	Weed index, Yield q/ha, Net return, B:C ratio
Number of trials	4
Name of scientist	Dr. Pragya Pandey

Result

Assessment of Chemical Weed management in Chickpea

Treatment	Yield (q ha ⁻¹)	No. of pods	Weed index	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net Income (Rs./ha)	B:C ratio
Weedy check (T1)	16.2	74		26000	86427	60427	2.32
Farmers practice (T2)	12	60	25.92	24000	64020	40020	1.67
Recommended practice (T3)	13.8	68	14.81	23000	73623	50623	2.20



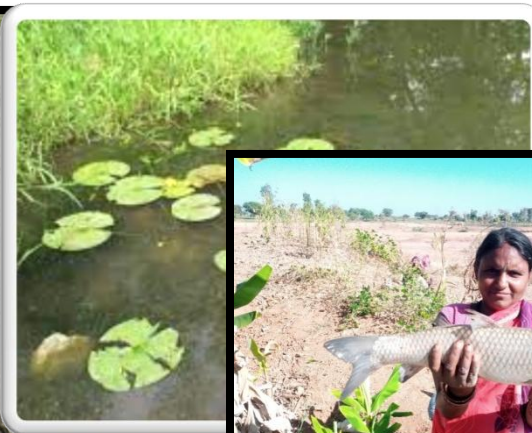
Demonstration on use of grass carp fish to control aquatic weeds in composite fish farming pond

Crop	Fish
Thematic area	Fish Pond Management
Technology for demonstration	Control of aquatic weeds by using Grass carp fish
Area (ha)	2 ha
No. of farmers/ demonstration	05
Data on parameter in relation to technology demonstrated	Demonstration : Stocking of Grass carp fingerlings @500 Nos./ha in composite fish farming pond
	Local Check/ Farmer Practice: Culture IMC only in composite fish farming
Parameters identified	ABW, Yield, B:C ratio

Result

Demonstration on use of grass carp fish to control aquatic weeds in composite fish farming pond

Parameters		Average Cost of cultivation (Rs/ha)			
Name and unit of Parameter	FP (T ₁)	RP (T ₂)	FP (T ₁)	RP (T ₂)	
Yield (Qt./ha)	18.50	23.00	1,25,000	1,36,000	
Average Gross Return (Rs/ha)		Average Net Return (Rs/ha)		Benefit-Cost Ratio (Gross Return / Gross Cost)	
FP (T ₁)	RP (T ₂)	FP (T ₁)	RP (T ₂)	FP (T ₁)	RP (T ₂)
2,59,000	3,13,000	1,34,000	1,77,000	2.07	2.30



Crop	Fish
Thematic area	Fish Production
Technology for demonstration	Composite fish farming
Area (ha)	3 ha
No. of farmers/ demonstration	05
Data on parameter in relation to technology demonstrated	Demonstration : Culture Exotic carp with IMC with 40:30:30 ratio of SF, CF & BF Fish)
	Local Check/ Farmer Practice: Culture carp fishes in irregular composition
Parameters identified	ABW, Yield, B:C ratio

Result

Demonstration on Composite Fish Farming

Parameters			Average Cost of cultivation (Rs/ha)	
Name and unit of Parameter	FP (T ₁)	RP (T ₂)	FP (T ₁)	RP (T ₂)
Yield (Qt./ha)	18.50	25.80	1,25,000	143000

Average Gross Return (Rs/ha)		Average Net Return (Rs/ha)		Benefit-Cost Ratio (Gross Return / Gross Cost)	
FP (T ₁)	RP (T ₂)	FP (T ₁)	RP(T ₂)	FP (T ₁)	RP (T ₂)
2,59,000	361200	1,34,000	218200	2.07	2.52



FLD-03

Demonstration of use of leaf extracts for all type of insect pest in paddy

Season & Year	Kharif - 2022
Problem	Yield loss due to infestation of insect pest
Thematic Area	ITK
Farmers Practice (T ₁)	No use of leaf extract
Rec. Practice (T ₂)	Neem leaf 6 kg, Ipomea leaf 1 kg, Kaner leaf 1 kg, Custard apple leaf 1 kg, garlic 1.5 kg . Make a paste and apply @4 liter/acre
Observation to be recorded	Stem borer infestation %, Leaf folder infestation %, BPH/GLH infestation %,Yield ,B:C ratio
No. of Trials	8
Name of SMS	Dr. Ekta Tamrakar

Result

Demonstration of use of leaf extracts for all type of insect pest in paddy

Treatment	Yield (q ha ⁻¹)	% change in Yield	Parameter*	Gross Cost Rs/ha	Gross income Rs./ha	Net Income Rs/ha	B:C Ratio**
Farmers Practice (T1)	24.8	27.4	(Stem borer, leaf folder, BPH) 6.42, 4.7, 5.12	27500	50592	29592	2.4
Improved Practice (T2)	31.6		(Stem borer, leaf folder, BPH) 3.67, 2.42, 4.25	28500	64464	42464	2.9



Demonstration of use of Neem leaf extract for management of shoot & fruit borer in Brinjal

Season & Year	Rabi-2022
Problem	27-30 % yield loss due to infestation of insect pest
Thematic Area	ITK
Farmers Practice (T ₁)	No use of Neem leaf extract use of indoxa carb@60ml/acre
Rec. Practice (T ₂)	Use Neem leaf extract @5 ml/liter
Observation to be recorded	No. of damaged fruits / plant ,Yield ,B:C ratio
No. of Trials	8
Name of SMS	Dr. Ekta Tamrakar

Result

Demonstration of use of Neem leaf extract for management of shoot & fruit borer in Brinjal

Treatment	Yield (q ha ⁻¹)	% change in Yield	Parameter*	Gross Cost Rs/ha	Gross income Rs./ha	Net Income Rs/ha	B:C Ratio**
Farmers Practice (T1)	232	14.2	(No. of damaged fruits / plant) 16	98000	232000	134000	2.36
Improved Practice (T2)	265		(No. of damaged fruits / plant) 9	100000	265000	165000	2.65



FLD-05

Demonstration on broad bed sowing method using of Indira soya seed drill for soybean sowing.

FARM MACHINERY & POWER

Season & Year- *Kharif -2022*

Problem Diagnose - Low yield due to poor drainage problem in farmers field due to flat sowing of seed

Thematic area – **AEG**

Name of Technology – **Resources conservation technology**

Source of Technology- **IGKV, Raipur**

Treatment details

Treatments (T1) Farmers practice
Flat bed sowing by Seed drill machine

Treatment (T2) Recommended practice
Indira soya Broad bed Sowing machine

No. of Trails

10

Performance indicator/parameter

Plant mortality %, Field capacity, fuel consumption, cost economic, field efficiency %.

Name of scientist

Er. Jitendra Kumar Joshi , SMS (Farm Machinery and Power Engineering)

Demonstration of broad bed furrow machine for sowing of soybean crop

FARM MACHINERY & POWER

Prioritized Problem	Details of technology	Source of technology
Low yield due to poor drainage problem in farmers field due to flat sowing of seed	T1: Flat bed sowing by seed drill sowing machine	IGKV, Raipur
	T2 : broad bed sowing by BBF sowing machine	

Data Recorded on parameters

- ❖ Plant Population (No/m²)
- ❖ Plant height (cm) at harvest
- ❖ Root length (cm) at 60 days
- ❖ Plant mortality (%)
- ❖ Field capacity (ha/h)
- ❖ Number of pods/plant
- ❖ Grain Yield (Kg/ha)



Shot on OnePlus
By Jatin

Result

Table : Growth character and field attributes of soybean during 2021 and 2022

FARM MACHINERY & POWER

Parameters	Normal flatbed sowing (T1) FP		Broad bed sowing (T2) RP		% change over control in 2021	% change over control in 2022
	2021	2022	2021	2022		
Plant Popn (No/m ²)	72.56	76.45	76.5	80.23	5.42	4.94
Plant height (cm) at harvest	60.46	61.87	64.23	65.78	6.23	6.31
Root length (cm) at 60 days	19.9	20.5	24.8	25.6	24.62	24.87
Plant mortality (%)	8.0	6.2	3.5	2.3	56.25	62.90
Field capacity (ha/h)	0.7	0.72	0.74	0.76	5.55	5.40
Number of pods/plant	35.78	37.89	50.67	52.63	41.61	38.90
Cost of cultivation (Rs/ha)	21560	22540	22020	23180	2.13	2.83
Grain Yield(q/ha)	9.93	10.50	12.78	13.23	35.22	39.26
Gross income (Rs/ha)	39223.5	41475	50481	52258	28.7	25.9
Net income (Rs/ha)	17663.5	18935	28461	29078	61.1	53.56
B:C ratio	1.81	1.84	2.29	2.25	26.5	22.28

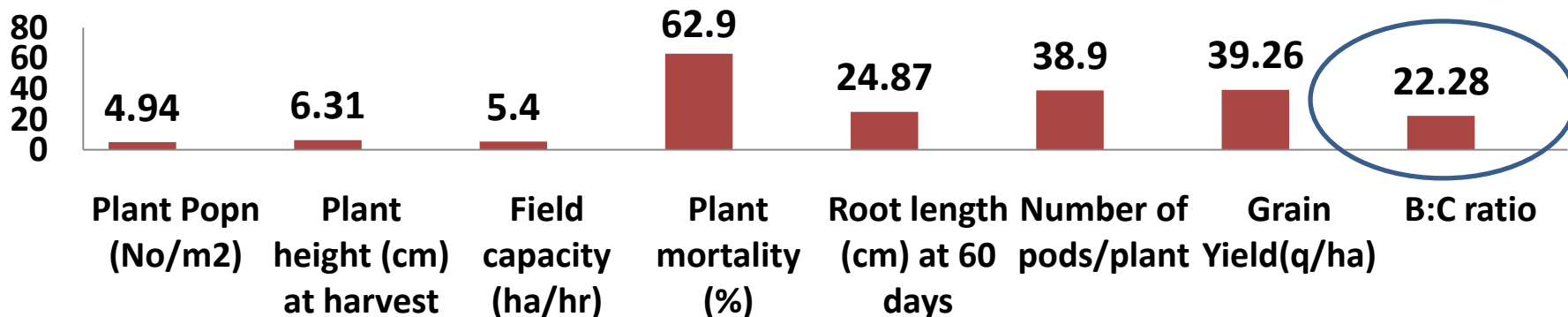


Fig. % increased over the check on each tested parameters of soybean crop

Table : Growth character and field attributes of soybean during 2021 and 2022



On the basis of this study the better results of two consecutive year were found in Broad Bed sowing system by BBF sowing machine on the growth and yield characters of soybean as compared to conventional methods of sowing i.e. normal flat bed sowing with seed drill.



FLD-06**Demonstration of manually operated 8 row paddy drum seeder for rice sowing.****FARM MACHINERY & POWER****Season & Year –*Kharif-2022*****Problem diagnose – manually transplanting cost is too high, also required labour.****Thematic area - AEG****Name of Technology – Farm Mechanization****Source of Technology- IGKV, Raipur****Treatment details****Treatments (T1) Farmers practice****Treatment (T2) Recommended practice****Manually transplanting****Paddy drum seeder****No. of Trails****10****Performance indicator/parameter****Plant height (cm), No. of tiller/m², labour cost, cost economic, grain yield (q/ha), B:C ratio****Name of scientist****Er. Jitendra Kumar Joshi , SMS (Farm Machinery and Power Engineering)**

Result**Demonstration of manually operated 8 row paddy drum seeder for rice sowing.****FARM MACHINERY & POWER**

Parameter	manually transplanting	Paddy drum seeder	% change
Plant height (cm)	96	113	17.70
No. of tiller/m ²	520	585	12.5
Labour requirement, man days/ha	14	2	-85.71
Field capacity (ha/h)	0.05	0.15	200
Field efficiency (%)	-	71.2	-
Grain yield (q/ha)	39	45	15.38
Gross return (Rs/ha)	70200	81000	15.38
Net return (Rs/ha)	41800	53900	28.94
Cost of transplanting operation (Rs/ha)	4700	800	-82.9
Total Cost of cultivation, Rs/ha	28400	27100	-5.55
Benefit cost ratio	1.47	1.98	34.6



FLD-07**Demonstration of drone technology on farmer's field.****FARM MACHINERY & POWER****Season & Year –*Rabi-2022-23*****Problem diagnose – *manually spraying by knapsack sprayer*****Thematic area - *AEG*****Name of Technology – *Precision Agriculture*****Source of Technology- *IGKV, Raipur*****Treatment details****Treatments (T1) *Farmers practice*****Treatment (T2) *Recommended practice******Manually Spraying by Knapsack sprayer******Spraying by drone******No. of Trails******10******Performance indicator/parameter******Field capacity (ha/hr), field efficiency (%), labour cost, cost economic, Grain yield (q/ha), B:C ratio******Name of scientist******Er. Jitendra Kumar Joshi , SMS (Farm Machinery and Power Engineering)***

Result

Demonstration of drone technology on farmer's field.

FARM MACHINERY & POWER

Parameter	T1 Farmers practice (manually spraying by Kanpsack)	T2 Recommended practice (drone spraying)	% difference
Actual Field capacity (ha/h)	0.4	2.85	144.8
Time required to cover one hectare area (h/ha)	2.5	0.35	-86
Field efficiency of machine (%)	84.2	88.02	4.75
Battery consumption maximum hours to complete discharge the battery	1.5	1	33.3
Spraying efficiency (%)	94.40	91.54	-3.02
Cost of plant protection inputs (Rs/ha)	4000	3000	33.3
Cost of spraying (Rs/ha)	600	1200	-100
Cost of cultivation, Rs/ha	22000	20500	6.81
Crop yield (q/ha)	23.2	24.4	5.17
Gross income (Rs/ha)	46400	48800	5.17
Net income (Rs/ha)	24400	28300	15.98
B:C ratio	2.10	2.38	13.33



items	Fixed wing drone	Quad-copter
Weight (kg)	2.5-6	1.5-5
Speed (m/s)	11-17	8-10
Battery type	Lithium polymer	Lithium polymer
Photo capture capacity	3 photos per second	3 photos per second
Flight altitutde (m)	150	90
Flight duration (min)	90	45
Area cover in single flight (km2)	4-5	2-4
Type of terrain	Plain area	Hilly area

Demonstration of drone technology on farmer's field (wheat crop).

FARM MACHINERY & POWER



Season and Year	Rabi-2022
Problem	Low yield due to use of local Variety & Traditional package of practices
Thematic area	Varietal Assessment
Name of Technology	Improved Variety & Improved Package of Practices
Source of technology	IGKV, Raipur
Farmers practice (T₁)	Use of local Sweet Potato with traditional package of practice
Assessed recommended practice(T₂)	Indira Nandini with full package of practices under ridge and furrow system
No. of Demonstration	04
Parameter	Yield (qu/ha), B:C ratio
Name of SMS responsible	Dr. Chetna Banjara (SMS, Horticulture)

S. No.	Parameter	T1	T2
1	Yield (qu/ha)	85.40	96.00
2	Cost of Cultivation (Rs/ha)	50,700/-	62,000/-
3	Gross Return (Rs/ha)	1,70,800/-	1,92,000/-
4	Net Income (Rs/ha)	1,20,100/-	1,30,000/-
5	B:C Ratio	3.36	3.09



Demonstration on timely fertilizer management in cotton under agro-climatic condition of Bemetara

Season & year	<i>Kharif 2022</i>
Problem	Untimely use of fertilizer in cotton
Thematic area	Crop production
Name of technology	Nutrient management
Source of technology	ICAR
Farmer's practice (T1)	Fertilizer application at 45 DAS and 80 DAS
Assessed Recommended practice (T2)	Nitrogen in 3 splits viz. basal, 45 and 65 DAS, Phosphorus as basal and Potash in 2 splits viz. basal and 45 DAS
Number of trials	4
Parameter	Number of balls, yield, B:C ratio
Name of SMS responsible	Dr. Pragya Pandey

Result

Demonstration on timely fertilizer management in cotton under agro-climatic condition of Bemetara

Treatment	Yield (q/ha)	No. of branches	Number of balls	Cost of cultivation	Gross income (Rs./ha)	Net Income (Rs./ha)	B:C ratio
Farmer's Practice (T1)	29.5	30	167	57000	179360	122360	2.14
Improved Practice (T2)	32.0	35	193	58000	194560	136560	2.35



Extension Activities & Awareness programmes conducted by KVK

Details of Extension Activity	No. of Activities	No of farmers Participated	No of extension functionaries participated
Scientist visit to farmer's field	63	240	25
Diagnostic visit to farmer's field	14	20	04
Method demonstration	18	228	05
Exposure visit	08	120	-
SHG's convener meeting	06	120	06
Field visit of farmer's field under CFLD, OFT and FLD	22	235	20
Kisan mela	04	Mass	Mass
Field day	05	215	08
Lectures delivered as resource persons	32	640	28
Workshop	13	281	30
Newspaper coverage	87	Mass	Mass
Popular articles	5	Mass	Mass
Film show	20	Mass	Mass
Special day celebration	4	185	12
On-campus RY Training/Awareness Programme	18	952	42
Off-campus RY Training/Awareness Programme	21	1505	-
Off-campus FW Training/Awareness Programme	13	667	-
Kisan Gosthi	03	650	14

Footfall of Farmers at KVK during 2022

No. of Farmers	No. of officials	No. of Guest/VIPs	Total
397	153	53	603

Status of Kisan Mobile Advisory (KVK-KMA)

Thematic area	No of Calls	No of advisory sent	No of Msg sent	No. of farmers received msg	Total no of villages in District	No of village Covered by KVK through KMA
Crop management, Weather, Pest Management, Nutrition Security & Women Empowerment, Horticulture, Livestock, Fisheries, Farm Mechanization, and Other	55	88	79	794514	4599	4599

Sponsored Training Programme

S. No.	Name of Training	Sponsored Department
01	Energy and water conservation	CREDA, Bemetara



Sponsored Training Programme

S. No.	Name of Training	Sponsored Department
02	Quality Seed Production of Rabi Crops	NSP, IGKV, Raipur



Sponsored Training Programme

S. No.	Name of Training	Sponsored Department
03	Protected cultivation of Horticultural Crops	Deptt. Of Horticulture, Bemetara



SUMMARY OF CFLD (KHARIF – 2022)

S.N.	Crop	Pulse / Oilseed	Variety	Technology provided to farmers	Area (ha)	Beneficiaries
1.	Pigeon pea	Pulse	Rajeev Lochan	Seed treatment, Line sowing	20	23
2.	Sesame	Oilseed	TKG-308	Seed treatment, Line sowing	20	50

Result

CFLD – Pigeon Pea (Kharif 2022)

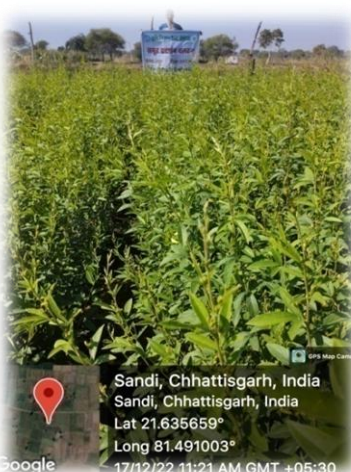
Variety : Rajeev Lochan

Area : 20ha

Beneficiaries : 23

Technology Demonstrated : Seed treatment, Line Sowing

Parametera	Farmers Practice (T1)	Recommended Practice (T2)	% change
Av. Yield, q/ha	4.16	5.03	20.9
Cost of Cultivation, Rs/ha	19600	21000	7.1
Net Returns, Rs/ha	7856	12198	55.2
B:C ratio	1.4	1.5	7.1



Result

CFLD – Sesame (Kharif 2022)

Variety : TKG-308

Area : 20ha

Beneficiaries : 50

Technology Demonstrated : Seed treatment, Line Sowing

Parameter	Farmers Practice (T1)	Recommended Practice (T2)	% change
Av. Yield, q/ha	3.9	5.7	31.5
Cost of Cultivation, Rs/ha	14842	15648	5.4
Net Returns, Rs/ha	13639	25979	47.2
B:C ratio	1.9	2.6	26.9



SUMMARY OF CFLD (RABI – 2022-23)

S.N.	Crop	Pulse / Oilseed	Variety	Technology provided to farmers	Area (ha)
1.	Mustard	Oilseed	CG Sarso-1	Seed treatment Line sowing Pest management	20
2.	Field pea	Pulse	Paras	Seed treatment, Line sowing with seed drill	20
3.	Chickpea	Pulse	RVG-201	Seed treatment, Line sowing	20
4.	Lathyrus	Pulse	Mahativda	Seed treatment, Line sowing	10
5.	Sun flower	Oilseed	Sungold	Seed treatment, Line sowing	10

Result

CFLD – Mustard (Rabi 2022-23)

Variety : CG Sarso

Area : 20ha

Beneficiaries : 25

Technology Demonstrated : Seed treatment, Line Sowing, Pest Management

Parameter	Farmers Practice (T1)	Recommended Practice (T2)	% change
Av. Yield, q/ha	6.5	8.8	26.1
Cost of Cultivation, Rs/ha	15000	16000	6.2
Net Returns, Rs/ha	17825	28440	37.3
B:C ratio	2.1	2.7	22.2



Result

CFLD – Field Pea (Rabi 2022-23)

Variety : Paras

Area : 20ha

Beneficiaries : 25

Technology Demonstrated : Seed treatment, Line Sowing, Pest Management

Parameter	Farmers Practice (T1)	Recommended Practice (T2)	% change
Av. Yield, q/ha	5.8	7.5	22.2
Cost of Cultivation, Rs/ha	19080	20500	6.9
Net Returns, Rs/ha	11080	18500	40.1
B:C ratio	1.5	1.9	21.0



Result

CFLD – Chick Pea (Rabi 2022-23)

Variety : RVG 201

Area : 20ha

Beneficiaries : 32

Technology Demonstrated : Seed treatment, Line Sowing

Parameter	Farmers Practice (T1)	Recommended Practice (T2)	% change
Av. Yield, q/ha	4.8	5.9	18.6
Cost of Cultivation, Rs/ha	21000	22000	4.5
Net Returns, Rs/ha	4600	9476.5	51.3
B:C ratio	1.2	1.4	14.2



Result**CFLD – Lathyrus (Rabi 2022-23)**

Variety : Mahatiwda

Area : 10ha

Beneficiaries : 15

Technology Demonstrated : Seed treatment, Line Sowing

Parameter	Farmers Practice (T1)	Recommended Practice (T2)	% change
Av. Yield, q/ha	6.2	8.1	23.4
Cost of Cultivation, Rs/ha	11820	13000	9.0
Net Returns, Rs/ha	5600	11300	50.4
B:C ratio	1.4	1.86	24.7



Result**CFLD – Sunflower (Rabi 2022-23)**

Variety : Sungold

Area : 10ha

Beneficiaries : 23

Technology Demonstrated : Seed treatment, Line Sowing

Parameter	Farmers Practice (T1)	Recommended Practice (T2)	% change
Av. Yield, q/ha	6.3	8.2	23.1
Cost of Cultivation, Rs/ha	21000	22000	4.5
Net Returns, Rs/ha	19320	31480	38.6
B:C ratio	1.9	2.4	20.8



SUMMARY OF CFLD (SUMMER – 2023)

S.N.	Crop	Pulse / Oilseed	Variety	Technology provided to farmers	Area (ha)
1.	Sun flower	Oilseed	Sungold	Seed treatment, Line sowing	10
2.	Groundnut	Oilseed	Lepakshi	Seed treatment, Line sowing	10
3.	Green Gram	Pulse	Shikha	Seed treatment, Line sowing	10
4.	Black Gram	Pulse	Indira Urad-1	Seed treatment, Line sowing	10

Sun flower

Green Gram

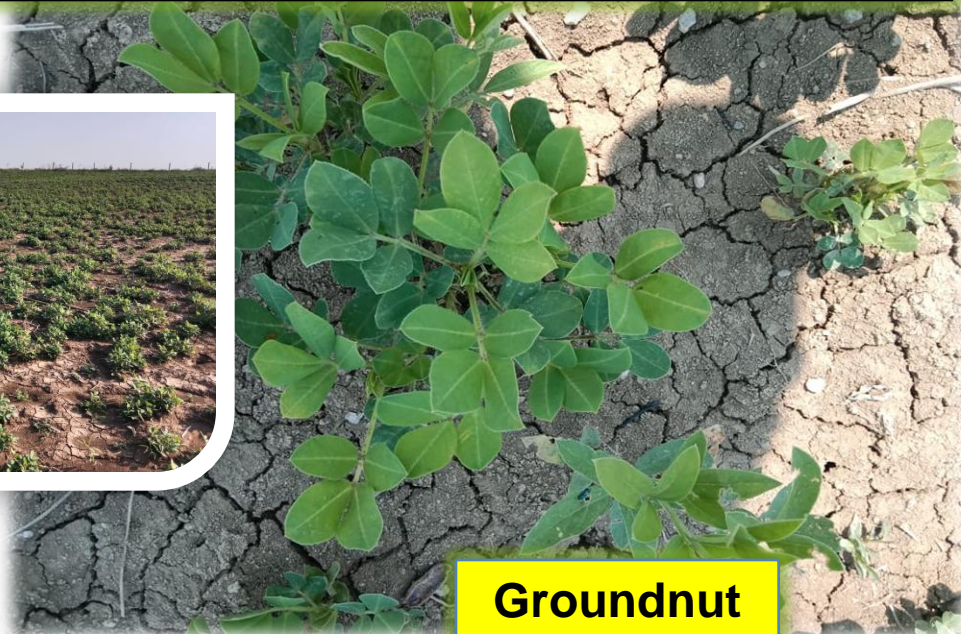


CFLD - SUMMER 2023 (On-going)

Black Gram



Groundnut



KVK Farm-Bemetara

Details of Area (ha):

Total Area, ha		Area under infrastructures (Road, Office, Threshing floor, staff quarters etc), ha	Soil Type	Net Cultivated area, ha		Area under research(ha)	Area under seed production, ha	Fallow Land ha	Orchard	Area under Aromatic Crops
As per revenue record	Actual land available			Irrigated	Rainfed					
20.00	20.00	5.00	Entisol	12.00	-	-	6.00	1.00	5.00	3.00

Instructional Farm of KVK, Bemetara



1. Administrative building
2. Farmer's Hostel
3. Hi-Tech Nursery

4. Seed Hub Godown
5. Vermi Tank
6. Poly House

7. Distillation Unit
8. Fisheries Unit
9. Mother Orchard

Seed production programme of field crop (2022-23)

S. No.	Crops	Variety	Area (ha.)	Production (qtls.)	Produced Category	Remark
KHARIF						
1.	Soybean	JS 20-98	4	21.20	BS	6Qtl pass
2.	Black gram	Indira Urd Pratham	1	3.02	BS	-
3.	Paddy	Doobraj Selection -1	1.2	13.0	FS	-
RABI						
1.	Lentil	IPL 316	2	2.24	FS	Ungraded
2.	Chickpea	C.G. Chana 2	4.4	19	BS	Ungraded
SUMMER						
1.	Soybean	JS 20-98	1	-	BS	On field
2.	Black Gram	Mukundra Ued 2	1	-	BS	On field

Scented Rice



Soybean



Seed production programme of field crop (2022-23)

Chickpea



Lentil



Black Gram



Seed production of horticultural crops (2022-23)

S. No.	Crops	Variety	Area (ha.)	Production (qtls.)	Produced Category	Remark
KHARIF						
1.	Turmeric	Rashmi	1.6	4.6*	TL	*Production from 2 acre area
2.	Indian bean (Sem)	Indira sem 1	0.4	0.10	FS	
RABI						
1.	Fenugreek (Methi)	RMP 305	1	1.0	FS	Ungraded
2.	Coriander	Jawahar Dhaniya	0.4	0.22	TL	Ungraded

Indian Bean



Fenugreek



Seed production of horticultural crops (2022-23)

Coriander



Turmeric



Chickpea Rabi 2022



Black Gram Summer 2022



Visit of monitoring team to Seed Production Programme



Soybean Summer 2023



Status of Hi-Tech Polly House , KVK, Bemetara

Name of Planting Materials/Seedlings	Tomato (OP), Tomato (Graft.) Brinjal, Chilli, Cabbage, Cauliflower, Watermelon, Muskmelon, Bitter gaurd
No. of Planting Materials Produced	Tomato (OP) – 571614, Tomato (Graft.) – 7589, Brinjal – 46157, Chilli (OP) – 194250, Chilli – 18114, Cabbage – 6573, Cauliflower – 38680, Watermelon – 16940, Muskmelon – 58000, Bitter gaurd – 11550.
No. of Planting Material Sold	969464
Gross Income	10,98,444
Net Income	3,39,313



Germination Chamber



Hardening Chamber

Vegetable Seedling/Planting Material Production at Hi-Tech Polly House



Oil Extraction/ Distillation Unit of KVK



Status of Revolving Fund of KVK Farm

Opening Balance as on 01.04.2023		Income Generated during year 2022-23	Total (1+2+3)	Expenditure under revolving fund 2022- 23	Closing Balance as on 31.03.2023	
Seed Money	Income money				Seed Money	Income credit so far
1	2	3	4	5	6	7
145000	126118.64	2800514.86	3071633.5	2556773.07	145000	369860.43

SOYBEAN SEED HUB

Seed production Target (qtls.)

Year	Target	Achievement
2020-21	800	21.60
2021-22	200	0.0
2022-23	175	75.0
Total	1175	96.6

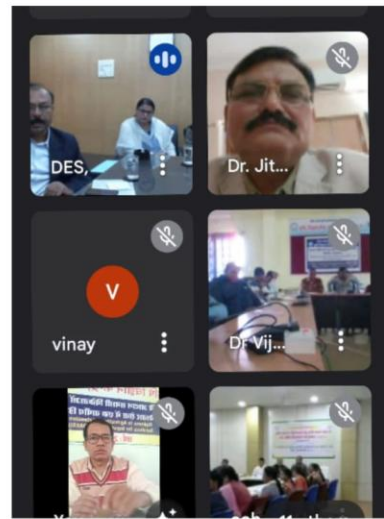


Status of Revolving Fund – Soybean Seed Hub

Opening Balance as on 01.04.2023		Income Generated during year 2022- 23	Total (1+2+3)	Expenditur e under revolving fund 2022- 23	Closing Balance as on 31.03.2023	
Seed Money	Income money				Seed Money	Income credit so far
1	2	3	4	5	6	7
00	1983311.29	6363976.00	8347287.29	910991.0	0.00	7436296.29

DAESI COURSE 2022-23

Date of start	No. of student	No. of Class	No. of exposure visit
11.12.2022	20	20	01



International Millet Year 2023

No. of Activities : 19

No. of Participants : 573



Result

Demonstration on CSS-MIDH

S.No.	Crops	Variety	Target	Achievement
1	Turmeric	Rashmi	2 ton	2.46 ton
2	Aromatic plants – Lemon grass	Himshikhar	1 ha	1 ha
3	Ginger	Local	1 ha	1 ha
4	Seed Spices - Coriander	Jawahar Dhania -1	0.50 ton	0.55 ton



MGNREGA Works Sanctioned to KVK, Bemetara

S. No.	Name of works	Amount proposed, Rs	Amount sanctioned, Rs	Amount received, Rs	Pending amount of proposal, Rs	Remarks
1	Misrit Paudh Nursery karya	663000.00	663000.00	663000.00	0.00	Completed
2	Avshadhi Evam Sugandhit Paudh Nursery	927000.00	927000.00	927000.00	0.00	ongoing
3	Vanashpatik Pravardhit Paudh Nursery Karya	1624000.00	1624000.00	1624000.00	0.00	Plantation done
4	Aushadhi Evam Sagandh Paudh Ropan	226000.00	226000.00	226000.00	0.00	Plantation done
5	KVK-Padat Bhoomi Vikas Karyakaram Antargat Karya (for Block I, 5 ha, 500 Plants)	1202000.00	1202000.00	1202000.00	0.00	Plantation done
6	KVK-Padat Bhoomi Vikas Karyakaram Antargat Vrisharopan Karya (for Block II, 5 ha, 500 Plants)	1202000.00	1202000.00	1202000.00	0.00	Plantation done
7	KVK-Padat Bhoomi Vikas Karyakaram Antargat Vrisharopan Karya (for Block III, 5 ha, 500 Plants)	1202000.00	1202000.00	1202000.00	0.00	Plantation done
8	KVK-Padat Bhoomi Vikas Karyakaram Antargat Vrisharopan Karya (for Block IV, 1 ha, 100 Plants)	217000.00	217000.00	217000.00	0.00	Plantation done
	Total	7263000.00	7263000.00	7263000.00	0.00	
Year 2022-23						
1.	Jhal Paudh nursery karya 2022-23	1256000.00	1624000.00	-	-	Work on progress
2.	DHOLIYA UDYANIKI PAUDH (PHALDAR, C HAYADAR, AROMATIC & MEDICINAL) NURSERY KARYA 2022-23)	1767000.00	1767000.00	-	-	Work on progress
	Total	3023000.00	3023000.00	-	-	

Planting material Production Programme at KVK Farm, Bemetara under MGNREGA

S. No.	Name of Crop	Variety	Number of Planting Material
1	Mango	Local Collection	5000
2	Jamun		5000
3	Citrus		5000
4	Pomegrante		1000
5	Bel		5000
6	Tamrind		1000
7	Guava		10000
8	Custard Apple		5000
9	Gulmohar		10000
10	Karanj		8000
11	Ban Tulsi		5000
12	Bringraj		5000
13	Ber		1000
14	Amla		2000
15	Guava (Gooty)	Illahabadi safeda, Dharidar, Arka Mrudula	8000
16	Citrus (Gooty)	Kagazi	5000
17	Pomegranate (Gooty)	Bhagua, G-137	2000
18	Mango (Grafted)	Amrapali, Deshari, Langda, Chausa	1000

Planting material (Fruit Plant) Production



Planting material (Fruit Plant) Production



Planting material (Fruit Plant) Production



Amla



Bael



Guava



Kagazi Lime

Block Plantation at Otebandh & Rampur by KVK, Bemetara under MGNREGA



RNBM - One Day Training Programme

No. of Participants : 65 farmers (ST-02, SC-06, OBC-56, Others-01)



DRONE TECHNOLOGY DEMONSTRATION 2022-23

No. of Farmers	Area (Ha)	Crop	Village
60	40	Paddy, Green gram	Kusmi, Bahera, Mohtara & Jhal



NATURAL FARMING

S.No.	Particulars	Numbers/Name
01	No. of Training Programme	01
02	No. of Participant	40
03	No. of Awareness Programme	63
04	No. of Participants	1870
05	No. of Demonstration conducted	08
06	Name of Crop under Demonstration	Tomato, Chick pea, Wheat, Cauliflower



Natural Farming : Training Programme



प्राकृतिक खेती से लाभ की दी जानकारी

बेमेतरा @ पत्रिका जिले में प्राकृतिक खेती के प्रति कृषकों में जागरूकता लाने के लिए कृषि विज्ञान केन्द्र द्वारा प्राकृतिक खेती पर जागरूकता कार्यक्रम सह किसान दिवस का आयोजन किया गया। इस कार्यक्रम में 130 कृषकों की सहभागिता रही। कार्यक्रम के मुख्य अतिथि डॉ. टी.डी. साह, प्राध्यापक कृषि महाविद्यालय एवं अनुसंधान केन्द्र बेमेतरा, डॉ. एस. मलैया प्राध्यापक कृषि महाविद्यालय एवं अनुसंधान केन्द्र, सरपंच प्रतिनिधि नंदकिशोर वर्मा, रेखा ठाकुर, उद्यानिकी विभाग तथा वरिष्ठ वैज्ञानिक एवं प्रमुख व वैज्ञानिकों की उपस्थिति में हुआ। डॉ. टी.डी. साह द्वारा प्राकृतिक खेती पर अपना



विचार व्यक्त करते हुए रासायनिक खेती से होने वाली हानि तथा प्राकृतिक खेती से होने वाले लाभों के बारे में जानकारी दी। कृषि विज्ञान केन्द्र के वरिष्ठ वैज्ञानिक एवं प्रमुख तोषण कुमार ठाकुर द्वारा प्राकृतिक खेती को भविष्य की खेती बताया हुए समाज को रोगमुक्त रखने के लिए खेती की लागत घटाने के लिए कृषकों को प्राकृतिक खेती करने के लिए जागरूक किया गया। कार्यक्रम

में उद्यानिकी विभाग से उपस्थित रेखा ठाकुर द्वारा उद्यानिकी फसलों के उत्पादन में प्राकृतिक खेती को बढ़ावा देने के लिए प्रेरित किया गया। वैज्ञानिक डॉ. जितेन्द्र जोशी द्वारा प्रेस्टेशन तथा विडियों के माध्यम से कृषकों को प्राकृतिक खेती के घटक, बीजामृत, जीवामृत, नीमास्र, अग्निमास्र इत्यादि के उपयोग व निर्माण विधि पर विस्तृत जानकारी दी गई।



Natural Farming : Awareness Programme



S.No.	Crop Name	Variety Name	Cost of Cultivation in Demo Plot (Rs./ha.)	Yield in Demo Plot (qtl/ha.)	Cost of Cultivation in Non-Demo Plot (Rs./ha.)	Yield in Non-Demo Plot (qtl/ha.)
1	Tomato	Saho	42000	120	60000	200
2	Tomato	Saho	41700	118	59750	195
3	Tomato	Saho	41250	122	59400	198
4	Tomato	Saho	42375	124	60000	218
5	Chickpea	RVG 202	22000	10.9	25000	14.8
6	Wheat	GW 366	22000	31.3	25000	40
7	Wheat	GW 366	22750	32.2	26250	39.2
8	Cauliflower	Hybrid (Namdhari)	48000	340	40000	300



Financial Status of KVK, Main Grant (FY 2022-23)

Head	Allotment	Released	Net Expenditure	Balance
A	B	C	D	C-D
Pay & Allowances	8450000.00	7777000.00	7689228.00	87772.00
Recurring	1500000.00	1500000.00	1500000.00	0.00
TA	120000.00	123600.00	120000.00	3600.00
DAESI Course	642960.00	642960.00	237723.00	405237.00
Kisan Bhagidari Prathmikta Hamari	99800.00	99800.00	98425.00	1375.00
CSS MIDH	200000.00	200000.00	200000.00	0.00
Garib Kalyan/PM Event 31May 2022	225000.00	225000.00	225000.00	0.00
License fee to NAU, Navsari for	600000.00	600000.00	600000.00	0.00
SAP(Swachhata Action)	24690.00	24690.00	24690.00	0.00
Watershed Management Prog	30000.00	30000.00	30000.00	0.00
Agri Startup/Kisan Sammelan Delhi	106876.00	106876.00	106876.00	0.00
Natural Farming	272147.00	272147.00	272147.00	0.00
CFLD PULSE 2022-23	395280.00	395280.00	395280.00	0.00
Previous Year CFLD Pulse	134621.00	134621.00	134621.00	0.00
CFLD Oilseed 2022-23	318420.00	318420.00	318420.00	0.00
CFLD Oilseeds previous year	110992.00	110992.00	110992.00	0.00
NSP Crop Training Prog	20000.00	20000.00	20000.00	0.00
Furniture NRC	800000.00	800000.00	800000.00	0.00
Farm Implements NRC	100000.00	100000.00	100000.00	0.00
Drone Technology	120000.00	120000.00	120000.00	0.00
RNBM Bamboo Mission	60000.00	60000.00	60000.00	0.00
AICRIP Linseed SCSP Oil Expeller	500000.00	500000.00	500000.00	0.00
NHM Horticulture Workshop	200000.00	200000.00	200000.00	0.00

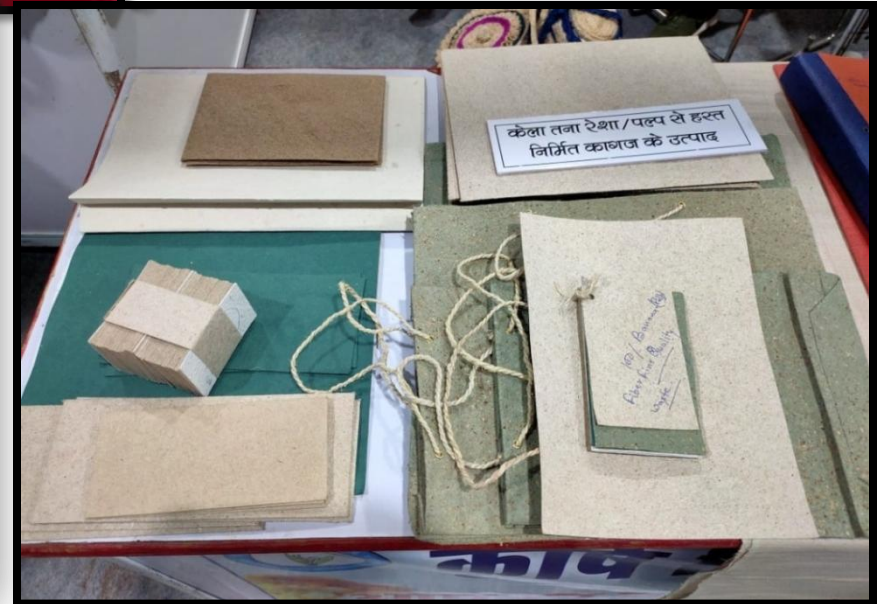
Financial Status of Externally Funded Project : DMF (FY 2022-23)

Mar-23	O.B./Revalidate				
Head	Allotment	Released	Expenditure	Balance	Remark
Kela ke tana resha se parda, file, folder, dari etc. Hathkargha avm hastshilp utpad nirman karya	118000.00	118000.00	118000.00	0.00	2022-23
Establishment of Ethanol production unit from sugarcane	76600.00	76600.00	76582.00	18.00	2022-23
Establishment of Liquid Organic Fertilizer Unit from sudostem of Banana in Gothan Village Rakhi	1000000.00	1000000.00	1000000.00	0.00	2021-22 Revalid.
Establishment of natural paint manufacturing unit in Gauthan under Rural Industrial Park	2500000.00	2500000.00	2499999.00	1.00	2021-22 Revalid.
Gauthan gramo me Babul ped wa Aalsi me madhu makkhi Palan karya	54907.00	54907.00	54907	0.00	2021-22 Revalid.
Establishment of Dal mill & Mini Oil Miil	59586.00	59586.00	0	59586.00	2021-22 Revalid.
Establishment of file, folder, Diary etc. from banana fiber & banana pulp	820000.00	820000.00	820000	0.00	2021-22 Revalid.
Total	4629093.00	4629093.00	4569488.00	59605.00	

Activities Photographs under DMF (FY 2022-23)



Activities Photographs under DMF (FY 2022-23)



Visit of Dignitaries



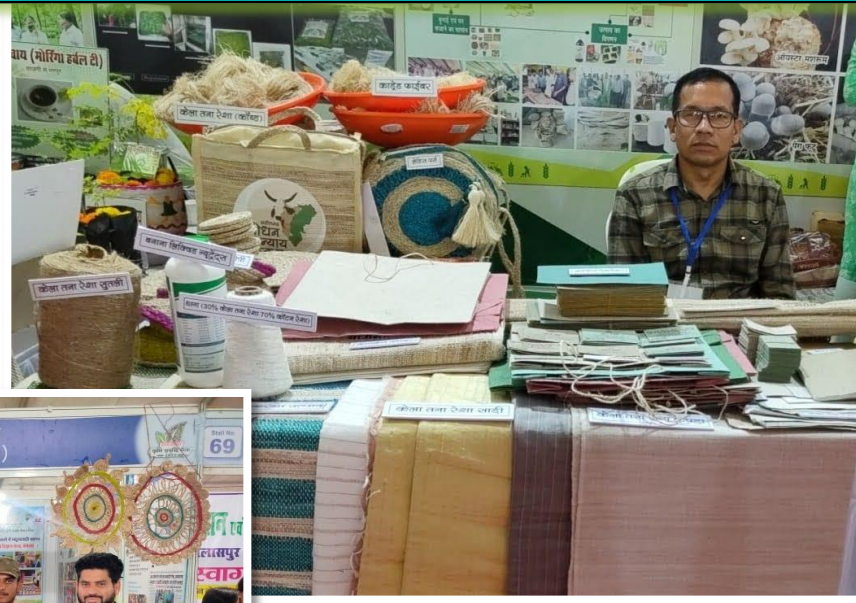
Visit of Dignitaries



Other Extension & Awareness Activities



Other Extension & Awareness Activities



Other Extension & Awareness Activities



Other Extension & Awareness Activities



Shot on OnePlus

Annual Action Plan

FY 2023-24

OFT - 1 : Assessment of Pangasius Fish Farming in bio-floc fish tank

Crop/Enterprise	Fish
Problem diagnosed	Hi cost of fish production, Low fish production
Farming situation	Small to medium tank
Production system and thematic area	Super Intensive Fish Production Technology
Farmers' practices	Tilapia Fish Farming in Fish Pond
Details of technologies selected for assessment/refinement Treatments	T1 – Stoking Density of Pangasius Fish Seed (Fingerlings) @ 5 Nos/M3 (Farmer practice) T2 - Stoking Density of Pangasius Fish Seed (100g) @ 25Nos./M3 , T3 - @ 70 Nos./M3 (Research Practice)
Source of technology	IGKV, KVK, Raipur
No. of farmers	04
Area of each trial	05 tank
No of trial	04
No. of animals (if animals are part of OFT)	-
Critical input	Fish Seed/Probiotics/Molases
Performance indicators Observation to be recorded	Yield, ABW, Survival, FCR, B:C ratio
Cost of input	Rs. 5000/- Per trial (Approx.)
Total cost	Rs. 20000/-

OFT-2 : Assessment of growth promoter 'Raa fres- AQ' in maximizing fish growth and yield during winter

Crop/Enterprise	Fish
Problem diagnosed	Low yield from carp culture due to less growth during winter
Farming situation	Small to Medium pond
Production system and thematic area	Fish Production & Fish Pond Management
Farmers' practices	Application of traditional feed only for fish body growth
Details of technologies selected for assessment/refinement Treatments	T1: No use of growth promoter in fish feed (Farmer Practice) T2 : Use of Growth promoter (Raa fres AQ @500g/1ton of feed as feed additive
Source of technology	CIFE, Mumbai (2000), Fishery Technology, Vol. 47, No (2) : 2010
No. of farmers	04
Area of each trial	05 tank
No of trial	04
No. of animals (if animals are part of OFT)	-
Critical input	Growth promoter
Performance indicators Observation to be recorded	ABW, FCR, Yield, B:C ratio
Cost of input	Rs. 4000/- per trial (Approx.)
Total cost	Rs. 16000/-

OFT-3 Title :- Assessment of thiomethoxam + lamda-cyhalothrin for management of stem fly and girdle beetle

Crop/Enterprise	Soyabean
Problem diagnosed	Heavy loss due to severe infestation of stem fly and girdle beetle
Farming situation	Irrigated
Production system and thematic area	IPM
Farmers' practices	Indiscriminate use of chemical insecticide
Details of technologies selected for assessment/refinement Treatments	T1 – Indiscriminate use of chemical insecticide T2 – Seed treatment of Imidachloprid 48 FS @ 1.25g/kg seed, spraying of thiomethoxam 12.6% +lamda-cyhalothrin 9.5% ZC@125 ml/ha
Source of technology	NRCS, Indore 2018
No. of farmers	4
Area of each trial	0.4
No of trial	4
No. of animals (if animals are part of OFT)	-
Critical input	Insecticide
Performance indicators Observation to be recorded	No .of stem fly infested plant, no. of girdle beetle infested plant, yield, B:C ratio
Cost of input	2000
Total cost	8000

OFT-4 Title :- Assessment of control measures practices under natural farming against fruit borer in Tomato.

Crop/Enterprise	Tomato
Problem diagnosed	Indiscriminate use of chemical insecticide
Farming situation	Irrigated
Production system and thematic area	Plant Protection (Natural Farming)
Farmers' practices	Indiscriminate use of Chemical insecticides
Details of technologies selected for assessment/refinement Treatments	T1- Indiscriminate use of Chemical insecticides T2- Beejamrit @20 lit/100 kg seed, Jeevamrit @12.5 lit+250 lit water/ha(first application after 21 DAS), after this in every 21 days apply jeevamrit@ 25 lit/50 lit/ 12.5 liter respectively, Neemastra @500 lit/ha, Bramhastra @ 15-20 lit+ 500 liter water/ha, fermented butter milk @15-20 liter+ 500 liter water/ha T3-
Source of technology	RVSKVV, Gwalior
No. of farmers	04
Area of each trial	1.6
No of trial	04
Critical input	Beejamrit, Jeevamrit, Neemastra, Bramhastra
Performance indicators Observation to be recorded	No .of damaged fruits /plants, Yield , B:C ratio
Cost of input	1000
Total cost	6000

OFT - 5 : Assessment of animal drawn five row chickpea planter on farmer's field

Crop/Enterprise	Chickpea crop
Problem diagnosed	More seed rate in broadcasting, seed to seed distance is not maintained. Animals unused for sowing
Farming situation	Rabi - Irrigated
Production system and thematic area	Use of Improved Animal drawn farm implements / Utilization of Animal Energy (UAE)
Farmers' practices	Broadcasting
Details of technologies selected for assessment/refinement Treatments	T1 - Broadcasting sowing T2 - Animal drawn five row chickpea planter Sowing
Source of technology	IGKV Raipur
No. of farmers	4
Area of each trial	1 acre
No of trial	5
No. of animals (if animals are part of OFT)	2
Critical input	Animal drawn five row chickpea planter sowing machine
Performance indicators Observation to be recorded	Field capacity (ha/h) , cost economic field efficiency %, crop yield (kg/ha)
Cost of input, Rs	Rs. 400/- (Approx.)
Total cost, Rs	Rs. 2000/-

OFT-6: Assessment of Ridge and furrow planter for chickpea sowing on farmer's field.

Crop/Enterprise	Chickpea crop
Title of on-farm trial	Assessment of Ridge and furrow planter for chickpea sowing on farmer's field.
Problem diagnosed	higher seed rate, more water requirement compare to flat bed sowing
Farming situation	Rabi - Irrigated
Production system and thematic area	Resources conservation technology
Farmers' practices	Broadcasting
Details of technologies selected for assessment/refinement Treatments	T1 Seed cum fertilizer drill sowing T2 Ridge and furrow planter sowing T3 Broadcasting
Source of technology	IGKV Raipur
No. of farmers	4
Area of each trial	1 acre
No of trial	5
No. of animals (if animals are part of OFT)	2
Critical input	Ridge and furrow planter sowing machine
Performance indicators Observation to be recorded	Field capacity, fuel consumption, cost economic field efficiency %, crop yield
Cost of input, Rs	400
Total cost, Rs	2000

OFT- 07: Organic Farming in Tomato in Bemetara District.

Season and Year	Kharif 2023
Problem	Soil deterioration due to excess use of chemicals.
Thematic area	Crop production
Name of Technology	Organic Farming
Source of technology	Name of Book - Prakritik Kheti: Adhunik Krishi me Navachar Published by: DES, RVSKVV, Gwalior, MP(2022).
Farmers practice (T₁)	Conventional package and practices.
Assessed recommended practice(T₂)	Seed treatment by Beejamrit and application of Jeevamrit/Ghan jeevamrit., FYM, Vermicompost, Trichoderma
No. of Demonstration	04
Parameter	Soil testing , Yield (q/ha), B: C ratio
Name of SMS responsible	Dr. Chetna Banjara (SMS, Horticulture)

OFT-08 : Organic Farming in Cauliflower in Bemetara District.

Season and Year	Rabi 2023- 2024
Problem	Soil deterioration due to excess use of chemicals.
Thematic area	Crop production
Name of Technology	Organic Farming
Source of technology	Name of Book - Prakritik Kheti: Adhunik Krishi me Navachar Published by: DES, RVSKVV, Gwalior, MP(2022).
Farmers practice (T₁)	Conventional package and practices.
Assessed recommended practice(T₂)	Seed treatment by Beejamrit and application of Jeevamrit/Ghan jeevamrit., FYM, Vermicompost, Trichoderma
No. of Demonstration	04
Parameter	Soil testing , Yield (q/ha), B: C ratio
Name of SMS responsible	Dr. Chetna Banjara (SMS, Horticulture)

OFT 09- Assessment of Chemical Weed management in Soybean

Crop/Enterprise	Soybean
Problem diagnosed	Lower yield in Soybean due to heavy weed infestation
Farming situation	Kharif (Rainfed/Irrigated)
Thematic area	Weed management
Farmers' practices (T1)	No use of herbicides
Assessed Recommended practice (T2)	Fenoxaprop-p-ethyl @32-40 g a.i. / acre (2-3 leaf stage of weed)
Assessed Recommended practice (T3)	Quizalofop ethyle @16-20 g a.i. / acre (2-3 leaf stage of weed)
Source of technology	IGKV Raipur
No of trial	04
Performance indicators Observation to be recorded	Weed index, Yield q/ha, Net return, B:C ratio
Name of SMS responsible	Dr. Pragya Pandey

OFT 10- Comparison of yield of Kodo millet (*Paspalum scorbiculatum* L.) under Organic Farming and conventional (Chemical) farming in Bemetara District

Crop/Enterprise	Kodo Millet
Season & year	<i>Kharif 2022</i>
Problem diagnosed	Injudicious use of chemical and soil deterioration
Thematic area	Crop production
Farmers' practices (T1)	20:20:10::N:P:K kg/ha.
Assessed Recommended practice (T2)	Seed treatment with Beejamrit + application of Jeevamrita/vermicompost/FYM + Use of Neemastra/bramhastra
Source of technology	Name of Book - Prakritik Kheti: Adhunik Krishi me Navachar, Published by: DES, RVSKVV, Gwalior, MP (2022)
No of trial	04
Performance indicators	No. of tillers, Yield (q/ha), B: C ratio
Name of SMS responsible	Dr. Pragya Pandey

OFT 11 - Assessment of Chemical Weed management in Chickpea

Crop/Enterprise	Chickpea
Season & year	<i>Kharif 2022</i>
Problem diagnosed	Lower yield in Chickpea due to heavy weed infestation
Farming situation	Rabi (Rainfed/Irrigated)
Thematic area	Weed management
Farmers' practices (T1)	One hand weeding at 30 DAS
Assessed Recommended practice (T2)	Topramezone @ 19.4 g a.i./ha. (20-25 days after sowing) for broad leaves weed
Source of technology	IGKV Raipur
No of trial	03
Performance indicators Observation to be recorded	Weed index, Yield q/ha, Net return, B:C ratio
Name of SMS responsible	Dr. Pragya Pandey

FLD - 1 : Demonstration on inclusion of exotic carp with IMC in composite fish farming system

Crop	Fish
Thematic area	Fish Production
Technology for demonstration	Composite fish farming
Critical inputs	Fish Seed
Season and year	2023-24
Area (ha)	2 ha
No. of farmers/ demonstration	05
Data on parameter in relation to technology demonstrated	Demonstration : Culture Exotic carp with IMC with 40:30:30 ratio of SF, CF & BF Fish)
	Local Check/ Farmer Practice: Culture IMC only in composite fish farming
Parameters identified	ABW, Yield, B:C ratio
Cost of input	Rs. 5000/- Per Trial (Approx.)
Total cost	Rs. 25000/-
Extension and Training activities under FLDs	04

FLD - 2 : Demonstration on Vitamin & Mineral Premix with Traditional Fish Feed for Increasing Fish Yield

Crop	Fish
Thematic area	Fish Pond Management
Technology for demonstration	Fish feed Management
Critical inputs	Vitamin and Mineral Premix
Season and year	2023-24
Area (ha)	2 ha
No. of farmers/ demonstration	05
Data on parameter in relation to technology demonstrated	Demonstration : Feeding fish feed mix with vitamin mineral mix @ 0. 1% /kg Fish Feed
	Local Check/ Farmer Practice: Use of conventional fish feed only
Parameters identified	ABW, Yield, B:C ratio
Cost of input	Rs. 2000/- Per demo. (Approx.)
Total cost	Rs. 10000/-
Extension and Training activities under FLDs	04

FLD-3 Title :- Demonstration of Fenpyroximate 5EC @ 300ml /ha + Propiconazole 25 EC @300ml/ha against panicle mite in paddy crop

Crop	Paddy
Thematic area	Plant Protection
Technology for demonstration	Demonstration of Fenpyroximate 5EC @ 300ml /ha + Propiconazole 25 EC @300ml/ha against panicle mite in paddy crop.(Two application at booting and panicle initiation stage)
Critical inputs	Pesticide recommended in trial
Season and year	Kharif 2023
Area (ha)	0.4
No. of farmers/ demonstration	8
Data on parameter in relation to technology demonstrated	Demonstration
	Local Check/ Farmer Practice:-
Parameters identified	No. of healthy grains/ No. of discolored grains /No. of chaffy grains per panicle, Yield ,B:C ratio
Cost of input	2000
Total cost	8000
Extension and Training activities under FLDs	2

FLD-4 Title : Demonstration of IPM modules against Shoot & fruit borer in Brinjal

Crop	Brinjal
Thematic area	IPM
Technology for demonstration	Pheromone trap@20/ha, use of neem product 3000 ppm @1 liter/ha, need based spray of Spinosad 14.5 % SC @ 175 ml/ha
Critical inputs	Pheromone lure, Spinosad insecticide
Season and year	Rabi 2023
Area (ha)	0.4
No. of farmers/ demonstration	6
Data on parameter in relation to technology demonstrated	Demonstration
	Local Check/ Farmer Practice:
Parameters identified	No. of damaged fruits / Plant, No. of insects/trap, Yield ,B:C ratio
Cost of input	4000
Total cost	9000
Extension and Training activities under FLDs	2

FLD - 5 : Demonstration on DSR planter cum FYM applicator machine for sowing of rice crop on farmer's field

Crop	Rice
Thematic area	Agricultural Engineering
Problem Diagnose	Uneven fertilizer drilled into the soil, more seed rate in broadcast method of sowing, reduction of organic compound in the soil
Technology for demonstration	Resources conservation technology
Critical inputs	DSR Inclined plate planter cum FYM applicator machine
Season and year	<i>Kharif</i> season, 2023
Area (ha)	4
No. of farmers/ demonstration	6
Data on parameter in relation to technology demonstrated	Demonstration: DSR Inclined plate planter cum FYM applicator machine
	Local Check/ Farmer Practice: Broadcasting sowing
Parameters identified	Fertilizer rate (Kg/ha), Organic Matter (%), Field capacity, fuel consumption, cost economic, field efficiency % Crop yield (kg/ha)
Cost of input, Rs/acre	Rs. 500/- (Approx.)
Total cost, Rs	Rs. 5000/-
Extension and Training activities under FLDs	Role of farm mechanization in Organic farming, DSR planter cum FYM applicator machine setting and adjustment.

FLD - 6 : Demonstration on soybean-pigeonpea intercropping broadbed sowing machine on farmer's field

Crop	Soybean-pigeonpea
Thematic area	Agricultural Engineering
Problem Diagnose	Risk on single crop due to weather effects.
Technology for demonstration	Resources conservation technology /Farm Mechanization
Critical inputs	Soybean-pigeonpea intercropping broadbed sowing machine
Season and year	<i>Kharif</i> season, 2023
Area (ha)	4
No. of farmers/ demonstration	6
Data on parameter in relation to technology demonstrated	Demonstration: soybean-Pigeonpea Intercropping Sowing machine
	Local Check/ Farmer Practice: Broadbed sowing only soybean
Parameters identified	Plant mortality %, Field capacity (ha/h) , fuel consumption (l/ha), cost economic field efficiency %, crop yield (kg/ha)
Cost of input, Rs/acre	Rs. 500/- (Approx.)
Total cost, Rs	Rs. 5000/-
Extension and Training activities under FLDs	Role of farm mechanization in farmers doubling income. soybean-pigeonpea intercropping broadbed sowing machine setting and adjustment.

FLD - 7 : Demonstration on broad bed sowing method using of Indira soya seed drill for soybean crop

Crop	Soybean
Thematic area	Agricultural Engineering
Technology for demonstration	Resources Conservation Technology
Critical inputs	Indira soya seed drill machine
Season and year	<i>Kharif</i> season, 2023
Area (ha)	4
No. of farmers/ demonstration	7
Data on parameter in relation to technology demonstrated	Demonstration: Broad bed sowing method using of Indira soya seed drill
	Local Check/ Farmer Practice: Flat bed line sowing
Parameters identified	Plant mortality %, Field capacity, Fuel consumption, Cost economic, Field efficiency %, Crop yield
Cost of input, Rs/acre	Rs. 400/- (Approx.)
Total cost, Rs	Rs. 4000
Extension and Training activities under FLDs	Broadbed sowing method for reducing the mortality of crop due to heavy rainfall Indira soya seed drill machine setting and adjustment.

FLD - 8 : Demonstration on tractor operated round baler machine

Crop	Paddy
Thematic area	Agricultural Engineering
Technology for demonstration	Paddy Straw Management
Critical inputs	Tractor operated round baler machine
Season and year	<i>Rabi</i> season, 2023
Area (ha)	4
No. of farmers/ demonstration	8
Data on parameter in relation to technology demonstrated	Demonstration: Bale making through Tractor operated Baler machine
	Local Check/ Farmer Practice: Burn/Manually lifting
Parameters identified	Field capacity, field efficiency, bale output (kg/h), bale weight (kg), time required (h/ha), fuel consumption lit/h, cost of cultivation Rs/ha, straw recovery (%) , labour requirement (man-h/ha)
Cost of input, Rs/acre	Rs. 500/- (Approx.)
Total cost, Rs/-	Rs. 5000/-
Extension and Training activities under FLDs	Paddy straw management techniques, Tractor operated round baler machine setting and adjustment.

FLD-09: Demonstration on propagation of ginger planting materials through pro-tray.

Season and Year	Kharif -2023
Problem	Use of high seed rate and costly seed (Rhizome)
Thematic area	Crop Production
Name of Technology	Raising of ginger seedlings in protray methods.
Source of technology	IGKV, Raipur
Farmers practice (T₁)	Conventional planting
Assessed recommended practice(T₂)	<ul style="list-style-type: none"> •Ginger bud sprouts in protray with nursery medium cocopeat & vermicompost (3:1) •Seed rhizomes are cut into single buds with small piece of rhizomes weight 4-6 gm. • Treatment of bud sprouts (mancozeb @0.3%) for 30 min before planting • Seedling will be ready within 30-40 days for planting
No. of Demonstration	05
Parameter	No. of Rhizome / plant , weight (gm./plant), yield (qt./ha) and B:C ratio
Name of SMS responsible	Dr. Chetna Banjara (SMS, Horticulture)

FLD-10: Demonstration on propagation of turmeric planting materials through pro-tray.

Season and Year	Kharif -2023
Problem	Use of high seed rate and costly seed (Rhizome)
Thematic area	Crop Production
Name of Technology	Raising of turmeric seedlings in protray methods.
Source of technology	IGKV, Raipur
Farmers practice (T₁)	Conventional planting
Assessed recommended practice(T₂)	<ul style="list-style-type: none"> • Turmeric bud sprouts in protray with nursery medium cocopeat & vermicompost (3:1) • Seed rhizomes are cut into single buds with small piece of rhizomes weight 4-6 gm. • Treatment of bud sprouts (mancozeb @0.3%) for 30 min before planting • Seedling will be ready within 30-40 days for planting
No. of Demonstration	05
Parameter	No. of Rhizome / plant , weight (gm./plant), yield (qt./ha) and B:C ratio
Name of SMS responsible	Dr. Chetna Banjara (SMS, Horticulture)

FLD 11 - Demonstration of Integrated Weed Management in Cotton

Crop/Enterprise	Cotton
Season & year	<i>Kharif 2022</i>
Problem diagnosed	Lower yield in Cotton due to heavy weed infestation
Thematic area	Weed management
Farmers' practices (T1)	Pre- emergence application of Pendimethalin @ 1.0 kg/ha. + one hand weeding at 45 DAS
Assessed Recommended practice (T2)	Pre- emergence application of Pendimethalin @ 1.5 kg/ha. + one hand weeding at 45 DAS
Source of technology	Agronomy of Field crops by S.R. Reddy & Y. Reddi Rama
No of trial	03
Performance indicators Observation to be recorded	Weed index, Yield q/ha, Net return, B:C ratio
Name of SMS responsible	Dr. Pragya Pandey

**FLD 12 – Demonstration of new Wheat variety Kanishka (C.G. – 1029) in
Bemetara District**

Crop/Enterprise	Wheat
Season & year	<i>Kharif 2022</i>
Problem diagnosed	Yield loss due to cultivation of local/old variety
Thematic area	Varietal assessment
Farmers' practices (T1)	Cultivation of local/old variety
Assessed Recommended practice (T2)	Wheat variety (C.G. Hans Gehu)
Source of technology	IGKV , Raipur
No of trial	04
Performance indicators Observation to be recorded	Test weight, No. of effective tillers, Yield (q/ha), B: C ratio
Name of SMS responsible	Dr. Pragya Pandey

Target for Production and supply seed, planting material and technological products

Kharif 2023 Seed Production Programme at KVK Farm, Bemetara

S. No.	Name of Crop	Variety	Class of Seed	Area (Ha)	Expected Production (Q)
1	Soybean	JS 20-98	BS	5	60
2	Urd	Indira Urd Pratham	BS	1	5
3	Paddy	Dubraj Selection-1	FS	1	15
4	Pigeon Pea	C G Arhar 1	FS	0.4	6
5	Sem	Indira Sem-1	FS	0.4	3
6	Turmuric	Rasmi	TL	0.6	40

Rabi 2023-24 Seed Production Programme at KVK Farm, Bemetara

S. No.	Name of Crop	Variety	Class of Seed	Area (Ha)	Expected Production (Q)
1	Chick Pea	C G Chana-2	BS	3	40
2	Wheat	Chhattisgarh Amber	FS	2	25
3	Lathyrus	Mahatiwada	FS	0.4	4
4	Lentil	IPL-316	FS	1	5
5	Methi	RMT-305	FS	1	3
6	Coriander	Jawahar Dhaniya-1	TL	0.2	0.5
7	Palak	All Green	TL	0.2	0.5

Target for Production and supply seed, planting material and technological products

Planting material Production Programme at Hi-tech Nursery of KVK-Bemetara, Farm

S. No.	Name of Crop	Variety	Number of Planting Material
1	Tomato	Sahoo, Prishi, EW-815, NS-962, Kashi Aman	350000
2	Grafted Tomato	Sahoo	30000
3	Brinjal	VNR-212, Galaxy Green Round and White Brinjal	20000
4	Grafted Brinjal	VNR-212	10000
5	Chilli	Pride, NS-1061 (R), Kashi Anmol	100000
6	Cabbage	NS-43, Fieldman	30000
7	Cawliflower	, Super Sigrhah, Amazing, Tetris	40000
8	Water Melon	Kiran-2	30000
9	Musk Melon	Akshay-25, Mogambo, No. 24	40000
10	Bittergourd	BSAF Ruhan	15000
11	Broccoli	Green Magic	5000
12	Turmeric	Rashmi	300000
13	Ginger	Local	300000

Proposed plan of Soybean Seed Hub for year 2023-24

S. No.	Crops	Variety	Area (ha.)	Production (qtls.)	Produced Category
KHARIF					
1.	Soybean	JS 20-69	100	1000	CS II

THANK YOU

