



***KRISHI VIGYAN KENDRA
BOKARO***



ANNUAL REPORT

(April 2013 - March 2014)

Zonal Workshop of KVKs Zone-II

2-3 June 2014

Venue: NIRJAFT, Kolkata

**BIRSA AGRICULTURAL UNIVERSITY, KANKE,
RANCHI (JHARKHAND)**

PROFORMA FOR ANNUAL REPORT 2013 (April 2013 to March 2014)

1. GENERAL INFORMATION ABOUT THE KVK

1.1. Name and address of KVK with phone, fax and e-mail

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

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

Address	Telephone		E mail
	Office	FAX	
Birsa Agricultural University, Jharkhand, Kanke, Ranchi Pin-834006	(VC) 0651-2450500(O)	0651-2450850	vc_bau@rediffmail.com
	(DEE) 0651- 2450849 (O)	0651-2450525	rpsratna07@yahoo.co.in deebauranchi@gmail.com

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

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

1.4. Year of sanction of KVK:

(Reference of Sanction Order)

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

1.5. Staff Position (as on 31st March, 2014)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale with present basic	Date of joining	Permanent /Temporary	Category (SC/ST/OBC/Others)
1	Programme Coordinator	-	-	-	-	-	-	-
2	Subject Matter Specialist	Sri Uday Kumar	I/C Programme Coordinator & SMS	Agronomy	PB(15600 - 39100) GP- Rs.6000.00 Basic- Rs. 27390.00	19-07-04	Permanent	Others
3	Subject Matter Specialist	Dr. Anil Kumar	SMS	Horticulture	PB(15600 - 39100) GP- Rs.6000.00 Basic- Rs. 29790.00	19-07-04	Permanent	Others
4	Subject Matter Specialist	Dr. Sudhir Kumar Jha	SMS	Soil Science	PB(15600 - 39100) GP- Rs.6000.00 Basic- Rs. 29790.00	20-07-04	Permanent	Others
5	Subject Matter Specialist	Sri Vinay Kumar	SMS	Agril. Engg.	PB(15600 - 39100) GP- Rs.6000.00 Basic- Rs. 27390.00	20-07-04	Permanent	Others
6	Subject Matter Specialist	Mrs Neena Bharti	SMS	Plant Protection	PB(15600 - 39100) GP- Rs.6000.00 Basic- Rs. 27390.00	20-07-04	Permanent	ST
7	Subject Matter Specialist	Mrs. Nandana Kumari	SMS	Home Science	PB(15600 - 39100) GP- Rs.6000.00 Basic- Rs. 27390.00	19-07-04	Permanent	Others
8	Programme Assistant	Mrs Smita Shweta	Programme Assistant	Fishery Science	PB (9300-34800) GP-Rs. 4200.00 Basic- Rs. 18730.00		Permanent	Others
	Assistant	Sri T.N. Tiwari	Assistant		PB (9300-34800) GP-Rs. 4800.00 Basic- Rs. 23770.00		Permanent	Others
9	Computer Programmer	Naman Kandulna	Computer Assistant		PB (9300-34800) GP-Rs. 4200.00 Basic- Rs. 17490.00	20-07-2004	Permanent	ST
10	Farm Manager	-	-	-	-	-	-	-
11	Accountant / Superintendent	Sri Abhay Kumar Singh	O.S.cum Accountant	-	9300.00		Contractual Staff	Others
12	Stenographer	Sri Ratnesh Kumar Mishra	Stenographer	-	5200.00		Contractual Staff	Others
13.	Driver	Sri Ranchandra Lohar	Driver	-	5200.00		Contractual Staff	Others
14.	Driver	Sri Panchanand Mahto		-	3000.00		Contractual Staff	Others
15.	Supporting staff	Sri Ruplal Marandi		-	4440.00		Contractual Staff	ST
16.	Supporting staff	Sri Durga Prasad Mahto		-	4440.00		Contractual Staff	Others

1.6. Total land with KVK (in ha) :

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

Total area should be matched with breakup

1.7. Infrastructure Development:

A) Buildings and others

S. No.	Name of building	Not yet started	Completed up to plinth level	Completed up to lintel level	Completed up to roof level	Totally completed	Plinth area (sq.m)	Under use or not*	Source of funding
1.	Administrative Building					Completed	500		I.C.A.R.
2.	Farmers Hostel					Completed	300		I.C.A.R.
3.	Staff Quarters (6)			Completed up to lintel level		Incomplete	400		I.C.A.R.
4.	Piggery unit	Not yet started							
5.	Fencing					Completed			District Administration
6.	Rain Water harvesting structure					Incomplete (Micro irrigation system is not installed)	120x120 x10 ft pond		I.C.A.R.
7.	Threshing floor					Completed			I.C.A.R.
8.	Farm godown					Completed			I.C.A.R.
9.	Farm godown					Completed			District Administration
10.	Preservation unit					Completed			I.C.A.R.
11.	Dairy unit	Not started							
12.	Poultry unit	Not started							
13.	Goatary unit	Not started							
14.	Mushroom Lab	Not started							
15.	Mushroom production unit								
16.	Shade house	Not started							
17.	Soil test Lab					Completed			District Administration
18.	ATIC centre					Completed			District Administration
19.	IT Infrastructure					Completed			I.C.A.R.
20.	Plant diagnostic lab	Not started							I.C.A.R.
21.	Irrigation channel	Not started							I.C.A.R.
22.	Deep boring	Failed							I.C.A.R.
	Others, Please Specify								

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

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total km. Run	Present status
Jeep	2005	431129.00	243745	Time to time repairing is needed
Tractor	2006	361200.00	1135	Time to time repairing is needed

C) Equipment & AV aids

Name of equipment	Year of purchase	Cost (Rs.)	Present status	Source of fund
a. Lab equipment				
Refrigerator	2007	11990.00	Good	I.C.A.R.
Food processor	2007	4995.00	Good	I.C.A.R.
Commercial gas cylinder	2008	3000.00	Good	I.C.A.R.
Weighing machine	2008	7540.00	Good	I.C.A.R.
Weighing machine	2010	12740.00	Good	I.C.A.R.
Weighing machine	2010	7260.00	Good	I.C.A.R.
Aqua soft dispenser	2012	20000.00	Good	I.C.A.R.
Crown corking machine	2013	19700.00	Good	I.C.A.R.
Tomato Pulpar	2013	29800.00	Good	I.C.A.R.
Screw type Juice Extractor	2013	22000.00	Good	I.C.A.R.
Refractometer	2013	43000.00	Good	I.C.A.R.
b. Farm machinery				
c. AV Aids				
Computer	2006	45000.00	Good	I.C.A.R.
UPS	2006	7000.00	Good	I.C.A.R.
Laser Printer	2006	8000.00	Good	I.C.A.R.
Fax Machine	2006	8000.00	Not installed	I.C.A.R.
Xerox	2007	72000.00	Not functioning	I.C.A.R.
2 KVA Stabilizer	2007	4850.00	Good	I.C.A.R.
Stabilizer 500 VA Manual Auto-cut	2007	1750.00	Good	I.C.A.R.
Camera	2005	12650.00	Good	
Camera	2007	14512.50	Not functioning properly	I.C.A.R.
LCD Projector	2007	51989.00	Good	I.C.A.R.
HAKIM Audio Visual Trolley	2007	8534.00	Good	I.C.A.R.
Projector Screen 8'x6'	2007	7550.00	Good	I.C.A.R.
15Mtrs special imported moulded VGA cable	2007	7500.00	Good	I.C.A.R.
Laser pointer torch with duel effect	2007	2200.00	Good	I.C.A.R.
AHUJA Medium Power Amplified -120 Watt	2013	8847.36	Good	I.C.A.R.
AHUJA 2 way compact PA wall Speaker	2013	8694.72	Good	I.C.A.R.
AHUJA Reflex Horn-WFA-21" Bell Dia	2013	986.84	Good	I.C.A.R.

AHUJA Driver unit –Model-AU40XT	2013	1408.77	Good	I.C.A.R.
AHUJA PA Microphone-Model AUD 101XLR	2013	1693.85	Good	I.C.A.R.

D) Farm implements

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

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

Sl.No.	Date	Number of Participants	Salient Recommendations	Action taken	If not conducted, state reason
1.	09.03.2013	35	1. Technology suitable for the district should be given to ATMA, Bokaro twice in a year.	Technology suitable for Bokaro district has been given to ATMA Bokaro before the start of the cropping seasons kharif & rabi .	
			2. Project on mushroom spawn production should be submitted to DRDA under National Rural Livelihood Mission programme.	Project had been submitted to DRDA Bokaro for approval.	
			3. A bulletin highlighting success stories should be developed on acid soil management through sweet potato cultivation with nutrient management and area expansion under improved	Draft of success stories had been prepared. Copy of this is enclosed for necessary correction. After that bulletin will be published.	

			varieties of mustard.		
			4. One treatment of higher fertilizer dose should be added in OFT on nutrient management of SRI paddy in medium land condition.	One treatment of fertilizer dose N 150 kg + P ₂ O ₅ 75 kg + K ₂ O 90 kg/ha (2 split) had been included and OFT has been conducted.	
			5. OFT related to on Agricultural Engineering should be recaste as per the suggestions given.	OFT has been recasted and presented in Action Plant 2013-14.	
			6. FLD on preparation of tomato puree should be done instead of OFT.	FLD had been conducted on tomato crush.	
			7. Possibility of developing integrated farming system model should be explored in collaboration with District Fishery Officer.	Integrated farming system model has been developed in 6 farmer's pond with integrated fish-cum-duck farming in Petarwar and Chandankiyari block of Bokaro distric. Other enterprises will be added this year 2014-15.	
			8. Bio-pesticide treatment should be added as one of the control measures in OFT on shoot in brinjal.	One treatment of bio-pesticide (2 spray of Bt Delfin @ 1g/lit at 15 days interval from the time of appearance) had been added.	
			9. The KVK should also address issues related to livestock production, lac cultivation, water management, SWI and soybean cultivation in the district.	KVK has conducted 5 training programme on livestock production in which 127 farmers participated. KVK also conducted FLD on Black Bangal breed of goat involving 5 farmers with the help of ATMA Bokaro. Training and FLD had been conducted on Kusmi & Rangini lac culture with the help of IINRG, Namkum, Ranchi and ATMA Bokaro. Total No. of 45 farmers participated in the FLD programme. On farm trial is going on in SWI technique and moisture conservation through mulching. FLD on soybean cultivation will be done in the kharif 2014.	

** Salient recommendation of SAC in bullet form
Attach a copy of SAC proceedings along with list of participants*

List of the members attended the 8th SAC meeting:-

1. Dr. R.P. Singh 'Ratan' Director Extension Education, B.A.U., Ranchi - Chairman
2. Sri Uday Kr. Singh, I/C Programme Coordinator, KVK, Bokaro - Member
3. Sri Vikash Kumar, DHO and DAO-cum-P.D ATMA, Bokaro - Member
4. Sri Ram Kumar, Representative of District Fishery Officer, Bokaro - Member
5. Sri K. N. Das, DDM, NABARD, Bokaro - Member
6. Sri K. Bhattacharya, L.D.M., Bokaro - Member
7. Sri Rakesh Kumar, District Co-operative Officer, Bokaro - Member
8. Sri Shambhu Pd. Yadav, District Fishery Officer, Bokaro - Member
9. Sri Sushil Kumar Singh, District Dairy Development Officer, Bokaro - Member
10. Sri Ashok Samrat, District Soil Conservation Officer, Bokaro - Member
11. Amrit Anand Khusar, Plant Protection Inspector, Dhanbad - Member
12. Dr. Anil Kumar, S.M.S., Horticulture, KVK, Bokaro - Member
13. Dr. Sudhir Kumar Jha, S.M.S., Soil Science, KVK, Bokaro - Member
14. Er. Vinay Kumar, S.M.S., Agril. Engg., KVK, Bokaro - Member
15. Mrs. Neena Bharti, S.M.S., Plant Protection, KVK, Bokaro - Member
16. Mrs. Nandana Kumari, S.M.S., Home Science, KVK, Bokaro - Member
17. Sri Om Prakash, Nodal Officer, ISAP, Bokaro - Member
18. Mrs. Priyanka Verma, Farm Manager, KVK, Bokaro - Member
19. Sri Naman Kandulna, Computer Assistant, KVK, Bokaro - Member
20. Sri T.N.Tiwary, Assistant, KVK, Bokaro - Member
21. Sri Dip Chand Gope, Secretary, NGO (JOR), Gomia - Member
22. Sri Uttam Kumar Das, NGO, Simanchal Jan Kalyan Sameti, Chandankiyari, Bokaro - Member
23. Sri Suganchand Mahto, Progressive farmer, Lukaya, Petarwar, Bokaro - Member
24. Sri Radheshyam Bedia, Progressive farmer, Chargi, Petarwar, Bokaro - Member
25. Sri Jagdish Manjhi, Progressive farmer, Rukam, Petarwar, Bokaro - Member
26. Sri Bharat Murmu, Progressive farmer, Koh, Petarwar, Bokaro - Member
27. Sri Parmeshwar Manjhi, Progressive farmer, Rukam, Petarwar, Bokaro - Member
28. Sri Ram Prasad Baske, Progressive farmer, Chandankiyari, Petarwar, Bokaro - Member
29. Sri Benilal Mahto, Krishak Mitra, Utasara, Petarwar, Bokaro, - Member
30. Sri Karamchand Manjhi, Progressive farmer, Petarwar, Bokaro -Member
31. Mrs. Lalita Devi, Progressive farmer, Khutahara, Petarwar, Bokaro - Member
32. Mrs. Purnima Devi, Progressive farmer, Khutahara, Petarwar, Bokaro - Member
33. Mrs. Rinki Devi, Progressive farmer, Sadmakala, Petarwar, Bokaro - Member
34. Sri Abhay Kumar Singh, OS-cum-Accountant, KVK, Bokaro - Member
35. Sri Ratnesh Mishra, Stenographer, KVK., Bokaro - Member

2. District level data on agriculture, livestock and farming situation (2013-14)

Sl. no.	Item	Information
1	Major Farming system/enterprise	<ol style="list-style-type: none"> 1. Agriculture + Horticulture (Vegetable) + Animal Husbandry 2. Agriculture + Horticulture (Vegetable) 3. Agriculture + Animal Husbandry 4. Agriculture + Horticulture (Vegetable) + Animal Husbandry+ Fishery 5. Agriculture + Horticulture (Vegetable) + Animal Husbandry+ Lac culture 6. Agriculture + Animal Husbandry+ Lac culture 7. Agriculture + Labour
2	Agro-climatic Zone	<p>IV- Central North Eastern Plateau Zone</p> <p>Characteristics:</p> <p>Geographical area of Zone = 41293 K.m² Mining dominates in central part. Damodar, Barakar, More and Ajay are the main rivers of this zone. Damodar basin is famous for coal. This zone is characterized by having humid & sub humid tropical monsoon type of climate. Average rainfall of the zone is 1320 m.m. Monsoon breaks in the second week of June. In normal years pre monsoon rains are received in the month of May about 60 m.m. Apart from this winter rain during December- February is sparse. Soil developed on Rajmahal traps are dark, heavy textured, neutral in reaction and moderately well drained to poorly drained and moderately rich in N but poor in P&K. Soils of Dhanbad & Giridih areas are light textured, moderately to slightly acidic and moderately well drained and poor in N & P and moderate to fairly rich in K. Upland Soils of Ranchi and Hazaribagh areas are gravely to sandy, shallow, acidic and of very poor fertility status where as medium land soil are yellow coloured, slightly to moderate acidic, some what poorly drained & moderately fertile where as the soils of Koderma side are light textured, silty in nature, yellowish to reddish in colour & neutral to moderately acidic in reaction. These are poor to moderate in N, poor in available P and rich to very rich in K. Very limited irrigation potential has been exploited in this zone. Although it is claimed that 8-9% area is irrigated. Larger part of agricultural land is rainfed. Less than 55% area comes under net cultivated area. Good forest is available on 12-13 percent land. Rice, maize, wheat, potato, linseed, rapseed and mustard, til, niger, ground nut and vegetables are major crops of the region.</p> <p>Climate of the Bokaro district is sub humid with water deficiency in winter. Temperature ranges from 2^oC in winter to 45^oC in hot summer. The main drainage system is Damodar & Swarnrekha rivers. Only 5-8% of net sown area is irrigated. The average annual rainfall of the district is 1275 mm.</p>

		Upland soils are red to brownish red in colour, light textured, well drained, acidic in reaction and poor in organic carbon, N, Ca, Mg., P & S. Medium land soils are yellow, yellowish in colour, light to medium texture, moderately acidic and poor in N, Ca, Mg and organic matter. Whereas the low land soils are gray to grayish in colour, heavy textured, neutral to slightly alkaline in reaction, poorly drained and medium in N and organic matter. The major crops of the district are rice, maize, wheat, potato, lentil, linseed, rapeseed & mustard, groundnut, potato and vegetables like lady's finger, tomato, brinjal, french bean, radish, cauliflower, cabbage & cucurbits.			
3	Agro ecological situation	<ol style="list-style-type: none"> 1. Red sandy loam, gravely undulating topography with mines and forests: Undulating topography, having red sandy loam soil, full of gravels, covered with perennial forests, having mines 2. Sandy loam rainfed: Upland sandy loam soil, no irrigation facility, agriculture only depend on rain water 3. Sandy loam irrigated: Medium land, sandy loam soil, having irrigation facility 4. Clay loam rainfed : Low land, clay loam soil, agriculture depend only rain water 			
4	Soil type	<ol style="list-style-type: none"> 1. Stony and gravely soil: Found in the foot hill prone to intensive erosion low water holding capacity highly acidic low in fertility status and organic matter content only suitable for pasture and recreation purpose. 2. Light texture soil (Sandy soil) : Found in upland, coarse texture soil, highly acidic in reaction, low water holding capacity, low in organic matter content and poor in fertility status, rich in micronutrient except Boron and Molybdenum, prone to erosion. 3. Medium texture soil (Loamy soil): Found in medium land, soil texture is mainly sandy loam to sandy clay loam, soils are moderately acidic, poor in fertility status and low in organic matter content and water holding capacity is moderate. 4. Fine textured soil (Clayey soil) : Heavy texture soil , found in low land, soils are fairly acidic to neutral in reaction, water holding capacity is high, organic matter content is medium and moderate in fertility status. 			
5	Productivity of major 2-3 crops under cereals, pulses, oilseeds, vegetables, fruits and others	Crop	Area (ha)	Production (MT)	Productivity (Qtl /ha)
		Paddy (Hybrid)	3075	12300	40.00
		Paddy	26113	40088	15.50
		Wheat	1300	1272	10.00
		Maiz	4746	7595	16.00
		Arhar	2130	1374	6.50
		Gram	1309	1149	8.25
		Mustad	1615	388	6.00
		Pea	325	387	12.00
		Green gram			6.0

		Horse gram			4.0
		Black gram			6.0
		Lentil			8.0
		Sesame			2.0
		Niger			2.0
		Linseed			5.0
		Mustard			6.0
		Brinjal	496	5952	
		Potato	300	750	
		Cauliflower	508	4572	
		Pea	325	387	
6	Mean yearly temperature, rainfall, humidity of the district				
7	Production of major livestock products like milk, egg, meat etc.				

2.6 Details of operational area / villages (2013-14)

Sl. No.	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Area
1.	Bermo	Petarwar	Ambadih, Chargi, Bundu, Lukaiya, Koh, Jaradih, Itke, Chanpi, Angwali, Kojram, Rukam etc.	Paddy Groundnut Vegetables Potato Onion Poultry	1. Low productivity 2. Low profitability in vegetable cultivation 3. Low productivity in poultry	1. Introduction of high yielding varieties of paddy 2. Introduction of disease resistant variety of vegetable specially in tomato & brinjal
2.	Bermo	Kasmar	Durgapur, Madhukarpur, Mayapur, Kurko, Chandipur, Baraikala, Ranitanr, Rangamati, Hisim, Kedla.	Arhar Sesame Niger Paddy Vegetable Goatry	1. Low productivity 2. Low profitability in vegetable crops 3. Low profitability in goatry	3. Introduction high yielding variety of Arhar Sesame and Niger 4. Management of soil acidity through furrow application of lime 5. Income generation activity for rural youth & farm women
3.	Chas	Chas	Dharpura, Jhopro, Ulgoda	Arhar Sesame Niger Paddy Vegetable Goatry	1. Low productivity 2. Low profitability in vegetable crops 3. Low profitability in goatry	6. Rain water harvesting. 7. INM & IPM 8. Post harvest management, marketing & value addition
4.	Chas	Chandankiyari	Bansgari, Lanka, Machatanr	Paddy Groundnut Vegetables Potato Onion Poultry	1. Low productivity 2. Low profitability in vegetable cultivation 3. Low productivity in poultry	

2.7 Priority thrust areas

S. No	Thrust area
1.	Soil and water conservation
2.	Intensification in crop production system
3.	Crop diversification
4.	Development of seed production system.
5.	Value addition of fruits & vegetables.
6.	Improvement of indigenous poor breeds of livestock.
7.	Management of soil acidity.
8.	Promotion of lac cultivation
9.	Development of integrated farming system
10.	Insect pest and disease management of major crops
11.	Mushroom production and value addition

3. TECHNICAL ACHIEVEMENTS

3. A. Details of target and achievement of mandatory activities by KVK during 2013-14

OFT				FLD			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
12	13	113	119	40 ha	38ha	270	256+ 52 (Preservation)= 308

Training				Extension activities			
Number of Courses		Number of Participants		Number of activities		Number of participants	
Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
112	90	3065	2683	1800	1509	-	15621

Seed production (q)		Planting material (Nos.)	
Target	Achievement	Target	Achievement
120	83.5	1000	255

@Target should match with your midterm report

3.1 Achievements on technologies assessed and refined

OFT-1

1.	Title of On farm Trial	Nutrient management of SRI paddy in medium land condition.
2.	Problem diagnose	Low yield of SRI paddy in medium land situation due to less use of nutrients.
3.	Details of technologies selected for assessment	<p>Refinement</p> <p>Technology Option</p> <p>Farmers practice - N 60kg + P₂O₅ 25 kg+ K₂O 10 kg/ha</p> <p>Technological option i - RDF (N 80kg + P₂O₅ 40 kg+ K₂O 20 kg/ha)</p> <p>Technological option ii - (N 120kg + P₂O₅ 60 kg+ K₂O 50 kg /ha[two split]</p> <p>Technological option iii - (N 150kg + P₂O₅ 75 kg+ K₂O 90 kg/ha[two split]</p>
4.	Source of Technology	B. A. U., Ranchi
5.	Production system and thematic area	Rice based production system, Integrated Nutrient Management
6.	Performance of the Technology with performance indicators	Given in table
7.	Final recommendation for micro level situation	To harvest the potential yield in SRI paddy, fertilizer dose should be increased to N 150kg + P ₂ O ₅ 75 kg+ K ₂ O 90 kg/ha[two split]. However for resource poor farmer fertilizer should be N 120kg + P ₂ O ₅ 60 kg+ K ₂ O 50 kg /ha[two split].
8.	Constraints identified and feedback for research	Fertilizer recommendation for SRI paddy should be reassessed.
9.	Process of farmers participation and their reaction	Individual contact with farmers and participatory approach.

Thematic area: Integrated Nutrient Management

Problem definition: Low yield of SRI paddy in medium land situation due to less use of nutrients.

Technology assessed: *Refinement*

Table: 1- Effect of different doses of fertilizer on yield and yield attributing characters of SRI paddy.

Technology Options	No. of trials	Yield attributing characters		No. of grains / panicle	Yield (q/ha)		Cost of cultivation Rs.	Gross return (Rs / ha)	Net return (Rs./ha)	BC ratio
		No. of tillers/hill			Grain	Straw				
		30 DAT	60 DAT							
Farmers practice - N 60kg + P ₂ O ₅ 25 kg+ K ₂ O 10 kg/ha	08	12.5	18.0	92.5	35.5	45.8	20800	51105	30305	2.45
Option i - RDF (N 80kg + P ₂ O ₅ 40 kg+ K ₂ O 20 kg/ha)		16.6	25.5	105.1	42.8	52.0	21900	60348	38448	2.76
Option ii - (N 120kg + P ₂ O ₅ 60 kg+ K ₂ O 50 kg /ha[two split])		24.8	36.5	122.5	59.6	68.0	23100	84876	61776	3.67
Option iii - (N 150kg + P ₂ O ₅ 75 kg+ K ₂ O 90 kg/ha[two split])		28.2	42.1	132.8	63.5	74.5	24000	90635	66635	3.77
CD 5 %		3.4	5.5	-	5.2	7.5				

Results: Maximum grain yield of 63.5q/ha was observed in technological option – iii followed by 59.6 q/ha in technological option – ii. But both the treatments are statistically at par but significantly superior to farmers practice and RDF treatments. Maximum net return of Rs. 66635/ha with B:C ratio 3.77 was found in technological option – iii followed by maximum net return Rs. 61776/ha and B:C ratio of 3.67 in technological option – ii.

OFT-2

1.	Title of On farm Trial	Preservation of sun-dried mahua flower as mahua laddoo (locally called as mahua laddha).
2.	Problem diagnose	Huge wastage of mahua flower in the preparation of unhealthy local alcoholic drink and its misuse as animal feed.
3.	Details of technologies selected for assessment	(i) Adoption of sterilization method of preservation and use of emulsifier (GMS, glycerol mono stearate which act as antistaling agent) (ii) Sensory Evaluation is done by score card method
4.	Source of Technology	Beverage of Food World; June, 2010
5.	Production system and thematic area	Food preservation
6.	Performance of the Technology with performance indicators	Given on separate sheets
7.	Final recommendation for micro level situation	Mahua laddoo prepared by the use of sterilized sundried mahua flower, roasted maize flour and roasted groundnut flour along with GMS(0.1%) was best from shelf life, nutritive value and different parameters of sensory evaluation point of view
8.	Constraints identified and feedback for research	Emulsifier (GMS) were also not available in near-by area of village, which is available only in big town. In the preparation of mahua laddoo through technological option –I & technological option –II, there is need of pressure cooker for sterilization purpose which is available in very few home in villages.
9.	Process of farmers participation and their reaction	Farm women participated in the preparation of mahua laddoo both by traditional method as well as method given in research & find new method little bit difficult due to involvement of sterilization process whereas local method of mahua laddoo preparation is easy and simple. They all did sensory evaluation through score card method & gave their response in their own way.

Thematic area: Food preservation

Problem definition: Huge wastage of mahua flower in the preparation of unhealthy local alcoholic drink and as animal feed, In spite of being rich in nutrients and with good health benefits.

Technology assessed: Shelf life of mahua laddoo prepared by new methods enhanced upto 5 weeks (more than one month) by adopting sterilization method of preservation and by the use of emulsifier (GMS 0.1%)

Table: 1- Nutritive value of all three mahua laddoos

Nutrients	Protein (g)	Fat (g)	CHO (g)	Energy (Kcal)	Calcium (mg)	Iron (mg)	Ranking
Mahua laddoo							
Farmers practice based mahua laddoo	3.92	1.28	56.04	251.43	27.47	1.44	3rd
Technological option-I based mahua laddoo	16.50	16.54	119.42	692.77	99.88	3.74	2 nd
Technological option-II based mahua laddoo	21.72	23.64	159.73	939.24	110.80	3.39	1 st

Table: 2- Shelf life and cost of all three mahua laddoos.

Mahua laddoo	Farmers practice based mahua laddoo	Technological option-I based mahua laddoo	Technological option-II based mahua laddoo
Parameters			
Shelf life (in weeks)	1 week	3 weeks (less than one month)	5 weeks (more than one month)
Cost (per kg) mahua laddoo (in Rs.)	32.40	60.00	58.00

Note: In cost calculation, price of jar is not included.

Table: 3- Mean value of different parameters of sensory evaluation by score card method after 1 week of shelf life.

Parameters	Appearance	Texture	Flavor	Taste	Overall acceptability	Overall grading
All three mahua laddoos						
Farmers practice based mahua laddoo	6.87	6.62	6.50	7.12	7.00	III
Technological option-I based mahua laddoo	8.25	7.62	8.00	8.37	7.75	II
Technological option-II based mahua laddoo	9.25	8.62	8.5	9.37	9.12	I

Table: 4 - Mean value of different parameters of sensory evaluation by score card method after 3 week (or before one month) of shelf life.

Parameters	Appearance	Texture	Flavor	Taste	Overall acceptability	Overall grading	Remarks
All three mahua ladoos							
Farmers practice based mahua ladoo	-	-	-	-	-	-	Shelf life 1 week
Technological option-I based mahua ladoo	7.37	7.00	7.12	7.62	7.24	II	In good condition even upto 3 weeks
Technological option-II based mahua ladoo	8.62	8.25	8.00	8.37	8.12	I	In good condition even after 5 weeks

Table: 5 - Mean value of different parameters of sensory evaluation by score card method after 5 weeks (after one month)of shelf life.

Parameters	Appearance	Texture	Flavor	Taste	Overall acceptability	Remarks(shelf life)
All three mahua ladoos						
Farmers practice based mahua ladoo	-	-	-	-	-	1 week
Technological option-I based mahua ladoo	-	-	-	-	-	3 weeks
Technological option-II based mahua ladoo	8.25	7.00	6.62	8.37	8.00	5 weeks

Results: Mahua ladoos prepared by the use of sterilized sundried mahua flower, roasted maize flour and roasted groundnut flour along with the use of GMS(0.1%) has shelf life more than 5 weeks.

OFT- 3

1.	Title of On farm Trial	Preservation of surplus tomato in peak season as salty tomato chutney.
2.	Problem diagnose	Huge wastage of tomato in peak season due to presence of its glut in local market and its very low price
3.	Details of technologies selected for assessment	Preservation of tomato as tomato chutney by concentration (preservation method) and by the use of preservative e.g. vinegar and sodium benzoate.
4.	Source of Technology	ICAR, New Delhi
5.	Production system and thematic area	Food preservation
6.	Performance of the Technology with performance indicators	Given in tables
7.	Final recommendation for micro level situation	Shelf life of local salty tomato chutney enhanced upto 5 months with the help of concentration method of preservation and preservatives e.g. vinegar(15 ml/Kg) and sodium benzoate(0.6-0.7 gram/Kg final products).
8.	Constraints identified and feedback for research	Preservative e.g. sodium benzoate is not available in the nearby area of the village and available only in big town. As compared to the local salty tomato chutney , which preparation method is very easy and simple, new method needs step wise activity which seems slight difficult for farm women.
9.	Process of farmers participation and their reaction	Farm women participated preparation of all three kind of tomato chutneys and they all had done sensory evaluation by score card method and gave their response in their own way.

Thematic area: Food preservation

Problem definition: Huge wastage of surplus tomato in peak season due to presence of its glut and its very low price.

Technology assessed: Shelf life of local salty tomato chutney enhanced upto 5 months with the help of concentration method of preservation and by the use of preservative e.g. vinegar(15 ml/Kg) and sodium benzoate(0.6-0.7 gram/Kg of final products).

Table: 1- Nutritive value of all three tomato chutneys (per 100g)

Nutrients Products	Protein (g)	Fat (g)	CHO (g)	Energy (kcal)	Calcium (mg)	Iron (mg)	beta-carotene (micro gram)	Vitamin C (mg)
Farmer practice based salty tomato chutney	2.06	3.12	7.95	68.68	83.48	1.28	557.25	42.30
Technology Option i - Sweet tomato chutney (Standard method)	0.75	0.197	36.99	17.33	31.53	0.54	167.14	14.89
Technology Option ii - Salty tomato chutney with preservative	1.20	13.71	3.26	141.45	34.15	0.46	395.64	16.18

Table: 2- Shelf life and cost of all three tomato chutneys

Products Parameters	Farmer practice based salty tomato chutney	Sweet tomato chutney (Standard method)	Salty tomato chutney with preservative
Shelf life	1 day	even after 5 months(In good condition)	In good condition even after 5 months
Cost of tomato chutney/kg (in Rs.)	120	60	50

Note: Cost of Jar is not included.

Table: 3: Mean value of different parameters of sensory evaluation by score card method on 1st day of shelf life.

Parameters Products	Appearance	Texture	Flavour	Taste	Overall acceptability	Overall grading
Farmer practice based salty tomato chutney	4.5	3.75	4.25	4.62	4.37	3 rd
Technology Option i - Sweet tomato chutney (Standard method)	9.25	9.37	9.25	10	9.5	1 st
Technology Option ii - Salty tomato chutney with preservative	8.49	8.37	9.0	8.62	8.75	2 nd

Table: 4: Mean value of different parameters of sensory evaluation by score card method at 3 month of shelf life.

Parameters Products	Appearance	Texture	Flavour	Taste	Overall acceptability	Overall grading	Remarks
Farmer practice based salty tomato chutney	-	-	-	-	-	-	Shelf life = 1 day
Technology Option i - Sweet tomato chutney (Standard method)	8.5	9.12	8.75	9.75	9.25	9.25	
Technology Option ii - Salty tomato chutney with preservative	8.37	8.62	7.75	7.87	8.25	8.25	

Table: 5: Mean value of different parameters of sensory evaluation by score card method at 5 month of shelf life.

Parameters Products	Appearance	Texture	Flavour	Taste	Overall acceptability	Overall grading	Remarks
Farmer practice based salty tomato chutney	-	-	-	-	-	-	Shelf life = 1 day
Technology Option i - Sweet tomato chutney (Standard method)	8.25	8.12	8.25	8.37	8.62		In good condition even after 5 months
Technology Option ii - Salty tomato chutney with preservative	7.25	6.65	8.0	7.50	7.25		In good condition up to 5 months

Results: Local practice based salty tomato chutney has shelf life only 1 day where as salty tomato chutney prepared through the help of preservative e.g. vinegar and sodium benzoate has shelf life upto 5 months. From economics point of view it is cost effective as compared to sweet tomato chutney as well as local practice based salty tomato chutney.

OFT- 4

1.	Title of On farm Trial	Effect of different puddling method in paddy cultivation.
2.	Problem diagnose	High cost of puddling and low yield of paddy due to poor quality puddling through desi plough.
3.	Details of technologies selected for assessment	Farmer's practice - Puddling through Deshi plough Technological option i - Puddling through animal drawn Birsa ridger plough Technological option ii - Puddling through animal drawn puddler
4.	Source of Technology	IIT, Kharagpur
5.	Production system and thematic area	Rice based production system, Farm machinery and crop production
6.	Performance of the Technology with performance indicators	Given in table 1&2
7.	Final recommendation for micro level situation	Puddling through animal drawn puddler is found best for paddy cultivation with highest yield of 38.7q/ha and net profit of Rs. 24,510.00/ha and B:C ratio is 1.95. Puddling index of animal drawn puddler is found 23% higher than puddling through desi plough.
8.	Constraints identified and feedback for research	Animal drawn puddler is not easily available in the market. Feedback for research- As the draft animal size in the district is small, so weight and size of puddler may be reduced.
9.	Process of farmers participation and their reaction	Participatory approach.

Thematic area: Farm Machinery & crop production

Problem definition: High cost of puddling and low yield of paddy due to poor quality puddling through desi plough.

Technology assessed: Assessed

Table: 1- Performance of different types of puddling method.

Technology	Actual field capacity (ha/h)	Theoretical field capacity (ha/h)	Field efficiency (%)	Puddling index	Yield (q/ha)
Farmer's practice (Puddling through desi plough)	0.019	0.0310	61.27	0.60	34.5
Technology option i - Puddling through Birsa ridger plough	0.023	0.0360	63.75	0.65	35.9
Technology option ii - Animal drawn puddler	0.101	0.134	75.37	0.88	38.7

Note: Puddling index= $V1/V2 \times 100$

V1= Volume of settled soil, V2= Volume of soil water sample

Table: 2 – Economics of different puddling method

Technology option	No. of trials	Yield (q/ha)	Cost of puddling (Rs./ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
Farmer's practice (Puddling through desi plough)	7	34.5	7200.00	29200.00	44850.00	12150.00	1.37
Technology option i - Puddling through Birsa ridger plough		35.9	6600.00	28600.00	46670.00	15170.00	1.48
Technology option ii - Animal drawn puddler		38.7	3000.00	25000.00	50310.00	24510.00	1.95

Note: 1. Cost of puddling- Rs. 300.00/day

2. Cost of paddy- Rs. 1300.00/q

Results: Puddling through animal drawn puddler is found best for paddy cultivation with highest yield of 38.7q/ha and net profit of Rs. 24,510.00/ha and B:C ratio is 1.95. Puddling index of animal drawn puddler is found 23% higher than puddling through desi plough.

OFT-5

1.	Title of On farm Trial	Management of predators in kusumi lac cultivation.
2.	Problem diagnose	Low productivity in Kusmi lac due to damage by predators.
3.	Details of technologies selected for assessment	Farmers practice - No control measures for predators in lac cultivation Technological option i - 3 spray of Ethonfenprox 10 Ec @ 2 ml/lit at 25, 40 and 60 Technological option ii - use of nylon net (60 mesh) for covering brood lac Technological option iii - use of nylon net (60 mesh) for covering brood lac + 2 spray of Ethonfenprox 10 Ec @ 2 ml/lit at 30 and 60 DAI
4.	Source of Technology	IINRG, Namkum, Ranchi
5.	Production system and thematic area	Integrated Crop management
6.	Performance of the Technology with performance indicators	Given in table 1&2
7.	Final recommendation for micro level situation	Use of nylon net (60 mesh) for covering brood lac and 2 spray of Ethonfenprox 10 Ec @ 2 ml/lit at 30 and 60 DAI is found to be most effective for controlling predators
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	

Thematic area: Integrated Crop management

Problem definition: Low productivity in Kusmi lac due to damage by predators.

Technology assessed: Assessed

Table: 1- Effect of different control measures on incidence of predators.

Technological options	Dose	No. of predators/m encrustation					
		1 st spray- 25 day		2 nd spray- 40 day		3 rd spray- 60 day	
		<i>E.amabilis</i>	<i>P. pulvereaa</i>	<i>E.amabilis</i>	<i>P. pulvereaa</i>	<i>E.amabilis</i>	<i>P. pulvereaa</i>
Farmers practice	-	27.0	33.0	36.0	40.0	22.0	41.0
Technology Option i - 3 spray of Ethonfenprox 10 Ec	2ml/lit	19.0	27.5	13.5	14.0	10.5	8.0
Technology Option ii - Nylon net (60 mesh)	60 mesh	21.0	30.0	17.5	13.5	12.5	11.0
Technology Option iii - Ethonfenprox 10 Ec + Nylon net (60 mesh)	2ml/lit +60 mesh	15.0	23.0	10.5	16.0	7.5	6.0

Table: 2- Effect of yield and cost benefit ratio in various control measures on incidence of predators in Ber plant.

Technology option	No. of trials	Yield (in kg/5 plant)	Cost of cultivation (Rs./5plant)	Gross return (Rs./5plant)	Net return (Rs./5plant)	BC ratio
Farmers practice	8	20	2940.00	12868.00	9928.00	4.4
Technology Option i 3 spray of Ethonfenprox 10 Ec		50	3700.00	30992.00	27432.00	8.3
Technology Option ii - Nylon net (60 mesh)		45	3760.00	27992.00	24432.00	7.6
Technology Option iii - Ethonfenprox 10 Ec + Nylon net (60 mesh)		65	4060.00	39992.00	36232.00	9.8

Note: Sale price of lac @ Rs. 400.00/kg

Results:

OFT-6

1.	Title of On farm Trial	Effect of control measures of fruit and shoot borer in brinjal in rabi season.
2.	Problem diagnose	Low yield of brinjal due to attack of fruit and shoot borer.
3.	Details of technologies selected for assessment	Farmers practice - Cypermethrin @ 1 ml/lit after appearance of infestation (two spray) Technological option i - Flubendamide 480 SC @1 ml/ 5 lit water at 30 & 50 DAT Technological option ii - Cartap hydrochloride @ 1gm/lit at 30 & 50 DAT Technological option iii - Flubendamide 480 SC @1 ml/ 5 lit water at 30 DAT+ Cartap hydrochloride @ 1gm/lit at 50 DAT
4.	Source of Technology	BAU, Ranchi
5.	Production system and thematic area	Integrated pest management
6.	Performance of the Technology with performance indicators	
7.	Final recommendation for micro level situation	Flubendamide 480 SC @1 ml/ 5 lit water at 30 DAT+ Cartap hydrochloride @ 1gm/lit at 50 DAT is found to be most effective for controlling fruit and shoot borer in brinjal with an increase in marketable fruit yield of 38% over farmers practice.
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	

Thematic area: Integrated pest management

Problem definition: Low yield of brinjal due to attack of fruit and shoot borer.

Technology assessed: Assessment

Table 1: Percent infestation by fruit & shoot borer, *leucinodes orbonalis* and yield in various control measures of brinjal.

Treatment	Damage of fruit (%)		Yield of marketable fruits (q/ha)	Yield over control (%)	Gross income	Cost of cultivation	Net income	B:C
	No.	Weight						
Farmers Practice- Cypermethrin @ 1 ml/lit after appearance of infestation (two spray)	10.21	7.20	178	47.86	142400	39400	103000	1:2.6
Option i – Flubendamide 480 SC @1 ml/ 5 lit water at 30 & 50 DAT	3.29	3.52	218	80.15	172000	41500	130500	1:3.1
Option ii – Cartap hydrochloride @ 1gm/lit at 30 & 50 DAT	3.95	4.22	212	75.42	169600	40450	129150	1:3.2
Option iii - Flubendamide 480 SC @1 ml/ 5 lit water at 30 DAT+ Cartap hydrochloride @ 1gm/lit at 50 DAT	2.26	2.42	242	85.35	180000	40975	139025	1:3.4

Note: Brinjal sale price @ Rs. 800.00/q

OFT-7

1.	Title of On farm Trial	Assessment of different varieties of pea in rabi season
2.	Problem diagnose	Low productivity of pea due to no use of improved variety
3.	Details of technologies selected for assessment	Farmers practice - Use of local variety Technological option i - Var- GS 10 Technological option ii - Var- Fresh Perl Technological option iii - Var- 124
4.	Source of Technology	HARP, Plandu
5.	Production system and thematic area	Vegetable production
6.	Performance of the Technology with performance indicators	Given in table: 1
7.	Final recommendation for micro level situation	Variety JK-124 is found to be the best variety suitable for Bokaro district with the pod yield of 125q/ha and net return of Rs. 14500/ha with B:C ratio of 5.83. The price of this variety is higher than other variety due to good pod quality and sweetness.
8.	Constraints identified and feedback for research	Non availability of good quality seeds of high yielding variety in local market.
9.	Process of farmers participation and their reaction	Personal contact with farmers. Farmer's are happy to see the performance of variety JK-124.

Thematic area: Vegetable production

Problem definition: Low productivity of pea due to no use of improved variety

Technology assessed: Assessment

Table 1: Varietal trial of pea Yield attributing character

Technological option	Pod yield (q/ha)	Cost of cultivation (Rs.)	Gross income (Rs.)	Net return (Rs.)	B:C ratio
FP- (Ankur)	84.5	22500	103800	81300	4.61
Technology option i- GS – 10	114.0	26800	136800	110000	5.1
Technology option ii- Fresh Perl	108.6	26800	130320	103520	4.86
Technology option iii-JK - 124	125.0	30000	175000	145000	5.83

Price: JK- 124 @ Rs. 1400/q and other average price @ Rs. 1200/q

OFT-8

1.	Title of On farm Trial	Development of innovative intensive vegetable production model for irrigated condition in summer season.
2.	Problem diagnose	Low system productivity of in vegetable based cropping system under irrigated condition.
3.	Details of technologies selected for assessment	Farmers practice - Ginger sole crops Technological option i - Ginger+ Spinach (Mixed cropping) Technological option ii- Ginger+ Spinach (Mixed cropping) + Cauliflower Technological option iii- Ginger+ spinach (Mixed cropping) + Cauliflower + Bitter gourd
4.	Source of Technology	BAU, Ranchi
5.	Production system and thematic area	Vegetable production system, Inter cropping
6.	Performance of the Technology with performance indicators	
7.	Final recommendation for micro level situation	
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	

Thematic area: Vegetable production system, Inter cropping

Problem definition: Low system productivity of in vegetable based cropping system under irrigated condition.

Technology assessed: Refinement

Table I: Performance of different ginger based cropping system.

Technological option	Yield (qt/ha)		Ginger equivalent yield (qt/ha)	Cost of cultivation Rs.	Gross return Rs.	Net Return (Rs.)	B:C Ratio
	Ginger	Component crop					
FP- Ginger sole crops	189	-	189	152000	378000	226000	2.48
Option i- Ginger+ Spinach (Mixed cropping)	187	Spinach – 77	210.1	163000	420200	257200	2.57
Option ii- Ginger+ Spinach (Mixed cropping) + Cauliflower	176	Spinach- 66 Cauliflower- 181	304.4	190750	608800	418050	3.19
Technological option iii- Ginger+ spinach (Mixed cropping) + Cauliflower + Bitter gourd	184	Spinach- 69 Cauliflower- 178 Bitter gourd- 79	351	218250	702000	483750	3.21

Price: Ginger @ Rs. 2000/q, Spinach @ Rs. 600/q, Cauliflower @ Rs. 1500/q, Bitter gourd @ Rs. 1000/q

Result: Maximum ginger equivalent yield of 351q/ha with a net return of Rs. 483750/ha with a B:C ratio of 3.21 was observed in technological option -iii (Ginger+ spinach (Mixed cropping) + Cauliflower + Bitter gourd) followed by technological option –ii i.e. Ginger+ Spinach (Mixed cropping) + Cauliflower. Increased in yield of ginger crop in technological option –iii is due to shading effect of bitter gourd.

OFT-9

1.	Title of On farm Trial	Performance of pigeon pea based intercropping in rainfed upland situation.
2.	Problem diagnose	Low system productivity in rainfed upland situation.
3.	Details of technologies selected for assessment	Farmers practice - Sole pigeon pea (at 90 cm row spacing) Technological option i - Pigeon pea + turmeric (1:2) Technological option ii - Pigeon pea + ginger (1:2) Technological option iii - Pigeon pea + groundnut (1:2)
4.	Source of Technology	BAU, Ranchi
5.	Production system and thematic area	Integrated Crop management
6.	Performance of the Technology with performance indicators	
7.	Final recommendation for micro level situation	Pigeon pea + ginger 1:2 and pigeon pea + turmeric 1:2 are found to be best intercropping system for rainfed upland situation with pigeon pea equivalent yield of 98.8 and 94.7 q /ha respectively.
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	

Thematic area: Integrated Crop management

Problem definition: Low system productivity in rainfed upland situation.

Technology assessed: Assessment

Table I Performance of pigeon pea based intercropping in rainfed upland situation.

Technological option	Yield of component crop (q/ha)	Pigeon pea equivalent yield (q/ha)	Cost of cultivation (Rs.)	Gross Income (Rs.)	Net income	B:C
Farmers Practice- Sole pigeon pea (at 90 cm row spacing)	10.2	10.2	10500	30600	20100	2.91
Option i - Pigeon pea + turmeric (1:2)	Pigeon pea-7.2 Turmeric- 87.5	94.7	65200	284100	218900	4.35
Option ii- Pigeon pea + ginger (1:2)	Pigeon pea-7.8 Ginger- 68.4	98.8	82700	296400	213700	3.58
Option iii - Pigeon pea + groundnut (1:2)	Pigeon pea- 8.4 Groundnut- 9.5	21.0	19500	63000	43500	3.23

OFT-10

1.	Title of On farm Trial	Effect of sowing method on productivity of wheat under late sown condition
2.	Problem diagnose	
3.	Details of technologies selected for assessment	<p>Farmers practice - Broadcasting method (Broadcast the seed and making ridges for irrigation using 250-300 kg seed/ha)</p> <p>Technological option i - Recommended sowing method (Lie sowing with recommended seed rate 150 kg/ha at 20 cm spacing)</p> <p>Technological option ii - SWI method (Sowing of sprouted wheat seed using specific culture at 20x20 cm spacing with 20 kg/ha seed rate – 2 seeds/ hill)</p> <p>Technological option iii – Modified SWI method (Sowing of sprouted wheat seed at 20x20 cm spacing with 20 kg/ha seed rate – 2 seeds/ hill)</p>
4.	Source of Technology	
5.	Production system and thematic area	Integrated crop management
6.	Performance of the Technology with performance indicators	
7.	Final recommendation for micro level situation	SWI method followed by modified SWI method found to be best sowing method of wheat in late sown condition with the yield of 36.5 and 32.7 q/ha respectively.
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	

Thematic area: Integrated crop management

Problem definition: Low yield of late sown wheat due to faulty sowing method & high seed rate.

Technology assessed: Assessment

OFT-11

1.	Title of On farm Trial	Effect of foliar application of potassium and boron on yield and fruit quality of tomato.
2.	Problem diagnose	Cracking and poor fruit quality in tomato due to imbalance use of nutrients.
3.	Details of technologies selected for assessment	Farmer's practice - N 25kg + P ₂ O ₅ 15 kg+ FYM 5 ton/ha Technological option i - FP +Foliar spray of Boron @ 0.2 % 30 – 35 DAT Technological option ii - FP+ Foliar spray of potassium @ 1 % 30 DAT Technological option iii - FP+ Foliar spray of Boron @ 0.2 % + Potassium @ 1 % 30 – 35 DAT
4.	Source of Technology	ICAR, Research Complex for Eastern Region, Plandu, Ranchi
5.	Production system and thematic area	Integrated Nutrient management
6.	Performance of the Technology with performance indicators	Standing crop
7.	Final recommendation for micro level situation	
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	

Thematic area: Integrated Nutrient management

Problem definition: Cracking and poor fruit quality in tomato due to imbalance use of nutrients.

Technology assessed:

OFT-12

1.	Title of On farm Trial	Effect of irrigation method and mulching on yield of tomato.
2.	Problem diagnose	
3.	Details of technologies selected for assessment	Farmer's practice - Furrow irrigation without mulching Technological option i - Furrow irrigation + black polythene mulch Technological option ii - Raised bed and furrow irrigation + black polythene mulch
4.	Source of Technology	
5.	Production system and thematic area	Vegetable production & water management
6.	Performance of the Technology with performance indicators	Standing crop
7.	Final recommendation for micro level situation	
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	

Thematic area: Vegetable production & water management

Problem definition:

Technology assessed:

3.2 Achievements of Frontline Demonstrations

A. Details of FLDs implemented during 2013-14

Sl. No.	Crop	Thematic area	Technology Demonstrated with detailed treatments	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
				Proposed	Actual	SC/ST	Others	Total	
1.	Groundnut	ICM	Variety- TG-22 with full package & practices	2	3			16	
2.	Pigeon pea	ICM	Variety- ND-1 with full package & practices	5	3			10	
3.	Maize	ICM	Variety- PEHM-2 with full package & practices	5	3			32	
4.	Maize (Sweet Corn)	ICM	Variety- Sugar -75		0.5		5	5	
5.	Paddy	ICM	Variety- Sahbhagi with full package & practices	10	15			38	
6.	Acid soil management through sweet potato cultivation with nutrient Management	Management of problematic soils	Growing sweet potato in acid soil (pH<5.5) with recommended dose of fertilizer 50:60:60 (N:P ₂ O ₅ :K ₂ O kg /ha)	5	5	5	10	15	
7.	Vegetables	Cultivation of vegetables	Brinjal – Wilt resistant variety-Sungrow-122,Swarna Shakti, Swarna Shyamli	2	1	15	5	20	
8.	Vegetables	Cultivation of vegetables	Tomato – variety-Laxmi, Nandani	2	3		-	60	
9.	Paddy (Var- Lalat)	Farm mechanization	Use of Drum Seeder for paddy cultivation	5	2	2	2	4	
10.	Wheat (Var- K-301)	Farm mechanization	Use of Zero till seed cum fertilizer drill	2	2	2	2	4	
11.	Preservation of tomato as tomato crush	Preservation	Preservation of tomato as tomato crush		4	11	41	52	
12.	Dehydration of cauliflower by blanching, by the use of preservatives and sun drying	Preservation	Dehydration of cauliflower by blanching, by the use of preservatives and sun drying	2	2	-	22	22	

Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil (Kg/ha)			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P ₂ O ₅	K ₂ O					
Groundnut	Kharif	Rainfed	Alfisol (upland)	140-230	8-16	110-170					
Pigeon pea	Kharif	Rainfed	Alfisol (upland)	130-190	7-15	80-160					
Maize	Kharif	Rainfed	Alfisol (upland)	150-240	10-21	115-180					
Maize (Sweet Corn)	Kharif	Rainfed	Alfisol (upland)	180-250	14-25	112-175					
Paddy	Kharif	Rainfed	Alfisol (medium land)	160-240	12-22	110-190					
Acid soil management through sweet potato cultivation with nutrient Management	Kharif	Rainfed	Alfisol (upland)	110-160	7-14	70-150					
Vegetables (Brinjal)	Kharif	Rainfed	Alfisol (upland)	200-310	15-25	170-240					
Vegetables (Chilli)	Kharif	Rainfed	Alfisol (upland)	190-300	14-28	160-230					
Use of Drum Seeder for paddy cultivation	Kharif	Rainfed	Alfisol (medium land)								
Use of Zero till seed cum fertilizer drill	Rabi	Irrigated	Alfisol (medium land)								

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

Performance of FLD

Oilseeds:

Frontline demonstrations on oilseed crops

Crop	Thematic Area	Name of the technology demonstrated	No. of Farmers	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo	Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Groundnut	ICM	Variety- TG-22 with full package & practices	16	3	14.1	9.8	43.8	22500	56400	33900	2.5	21000	39200	18200	1.87
Total															

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

** BCR= GROSS RETURN/GROSS COST

Pulses

Frontline demonstration on pulse crops

Crop	Thematic Area	Name of the technology demonstrated	No. of Farmers	Area (ha)	Yield (q/ha)		% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo	Check		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Pigeon pea	ICM	Variety- ND-1 with full package & practices	10	3	11.5	7.8	47.4	11200	57500	46300	5.13	10000	39000	29000	3.9
	Total														

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

** BCR= GROSS RETURN/GROSS COST

Table: 1 Performance of frontline demonstration conducted on tomato

Crop	Details of technology	No. of demonstration	No. of beneficiaries	Parameters	Demo. Product (Tomato crush)	Check. Product (Salty tomato chutney)
Tomato	Tomato is preserved as tomato crush by concentrating raw tomato upto 1/3 rd by weight and by use of preservative like vinegar & sodium benzoate	4	52	1. Shelf life 2. Net weight/kg 3. Economics (Rs./kg) 4. Sensory evaluation characteristics I- Colour II- Texture III- Flavour IV- Taste	6 months 250g 27 Bright red Soft & smooth Very –very sour Very –very sour (primary produced)	1 day 675g 120 Dull red Rough Slight sour Slight sour but tasty

Note: In economics cost of jar is not included.

Table: 2 Performance of frontline demonstration conducted on cauliflower

Crop	Details of technology	No. of demonstration	No. of beneficiaries	Parameters	Demo. Product	Check. Product	% increased
Cauliflower	Cauliflower is treated with 0.05% KMS for ½ hr than sun draying is done after blanching	2	21	1. Economics (Rs./kg) 2. Sensory evaluation characteristics V- Colour VI- Appearance VII- Texture	15 Slight yellow Good Soft	10 Dull & dark brownish Poor Hard	

Note: In economics cost of jar is not included.

Other enterprises

Category	Name of the technology demonstrated	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		*Economics of demonstration (Rs.) or Rs./unit				*Economics of check (Rs.) or Rs./unit				
				Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
Oyster mushroom	Enterprise development																
Button mushroom																	
Vermi compost																	
Sericulture																	
Apiculture																	
Others (pl. specify)																	
Total																	

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

** BCR= GROSS RETURN/GROSS COST

Women empowerment

Category	Name of technology	No. of demonstrations	Name observations of	Demonstration	Check
Farm Women					
Pregnant women					
Adolescent Girl					
Other women					
Children					
Neonatal					
Infants					

Farm implements and machinery

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

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

** BCR= GROSS RETURN/GROSS COST

Technical Feedback on the demonstrated technologies

S. No	Crop	Feed Back

Extension and Training activities under FLD

SL. No.	Activity	Date	No. of activities organized	Number of participants	Remarks
1.	Field days	11-11-2013, 28-12-2013 & 30-12-2013	3	159	
2.	Farmers Training	25-06-2013	1	25	Training on paddy
		27-05-2013	1	20	Training on maize
		05-07-2013	1	22	Training on drumseeder
		12-12-2013	1	18	Training on tomato preservation
		17-01-2014	1	26	Training on Tomato cultivation
3.	Media coverage				
4.	Training for extension functionaries				

Abstract of Achievements on Training 2013-14

Clientele	On campus		Off campus		Total	
	No. of course	Participants	No. of course	Participants	No. of course	Participants
Practicing farmers	37	1022	48	1518	85	2540
Rural Youths	10	263	-	-	10	263
Extension functionaries	6	221	-	-	6	221
Total	52	1506	48	1518	101	3024
Sponsored training						
Practicing farmers	20	600			20	600
Extension functionaries	1	30			1	30
Total	21	630			21	630
Grand Total	73	2136	48	1518	122	3654

3.3 Achievements on Training (Including the sponsored and FLD training programmes):

Farmers and farm women (ON Campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST			M	F	T
		M	F	T	M	F	T	M	F	T			
(A) Farmers & Farm Women													
I Crop Production													
Resource conservation Technologies	1	24	-	24	-	-	-	8	-	8	32	-	32
Cropping Systems	1	10	4	14	0	0	0	6	0	6	16	4	20
Integrated Crop Management	6	77	81	158	0	0	0	9	10	19	86	91	177
II Horticulture													
a) Vegetable Crops													
Nursery raising	1	25	0	25	0	0	0	0	0	0	25	0	25
Exotic vegetables like Broccoli	1	24	6	30	0	0	0	0	0	0	24	6	30
Others, if any (ICM Horticulture)	3	35	38	73	0	3	3	2	2	4	37	43	80
Cultivation of vegetables	1	18	-	18	-	-	-	12	-	12	30	-	30
Off season vegetable	1	18	6	24	-	-	-	9	-	9	27	6	33
b) Spices													
Production and Management technology	1	5	9	14	2	0	2	12	0	12	19	9	28
III Soil Health and Fertility Management													
Soil and Water Conservation	1	27	0	27	0	1	1	1	0	1	28	1	29
Integrated Nutrient Management	2	22	2	24	2	0	2	28	0	28	52	2	54
Management of problematic soils	1	23	-	23	-	-	-	8	-	8	31	-	31
IV Livestock Production and Management													
Piggery Management	1	0	0	0	0	0	0	17	4	21	17	4	21
Goatry management	1	-	22	22	-	-	-	12	-	12	-	34	34
V Home Science/Women empowerment													
Income generation activities for empowerment of rural Women	1	0	22	22	0	0	0	0	0	0	0	22	22
Others, if any (Preservation)	2	0	14	14	0	23	23	16	0	16	16	37	53
Health education	1	0	10	10	0	0	0	0	0	0	0	10	10
VI Agril. Engineering													
Installation and maintenance of micro irrigation systems	1	17	10	27	0	0	0	2	0	2	19	10	29
Use of Plastics in farming practices	1	12	13	25	0	0	0	3	0	3	15	13	28
Repair and maintenance of farm machinery and implements	1	1	16	17	0	0	0	1	0	1	2	16	18
Rain water harvesting	1	27	0	27	0	1	1	1	0	1	28	1	29
VII Plant Protection													
Integrated Pest Management	2	40	3	43	4	0	4	11	4	15	55	7	62
Integrated Disease Management	1	-	23	23	-	-	-	-	8	8	-	31	31
Others, if any (Lac culture)	2	14	12	26	0	2	2	22	7	29	36	21	57
Seed treatment	1	12	11	23	2	0	2	0	0	0	14	11	25
VIII Capacity Building and Group Dynamics													
Formation & Management of SHGs	1	-	24	24	-	-	-	-	10	10	-	34	34
TOTAL	37	431	326	757	10	30	40	180	45	225	609	413	1022

Rural Youth (On campus)

Mushroom Production	4	10	37	47	0	0	0	6	48	54	16	85	101
Seed production	1	10	0	10	0	0	0	11	0	11	21	0	21
Production of organic inputs	1	0	0	0	0	1	1	4	20	24	4	21	25
Vermi-culture	1	0	28	28	0	0	0	0	0	0	0	28	28
Small scale processing	1	0	29	29	0	0	0	0	0	0	0	29	29
Rural Crafts	1	0	29	29	0	0	0	0	0	0	0	29	29
Others, if any (Lac culture)	1	9	21	30	0	0	0	0	0	0	9	21	30
TOTAL	10	29	144	173	0	1	1	21	68	89	50	213	263

Extension Personnel (On campus)

Productivity enhancement in field crops	2	71	0	71	0	0	0	3	0	3	74	0	74
Integrated Nutrient management	1	38	0	38	0	0	0	1	0	1	39	0	39
Capacity building for ICT application	1	42	0	42	0	0	0	0	0	0	42	0	42
Any other (Nursery raising)	1	25	0	25	0	0	0	7	0	7	32	0	32
Drip irrigation	1	34	0	34	0	0	0	0	0	0	34	0	34
TOTAL	6	210	0	210	0	0	0	11	0	11	221	0	221

Farmers and farm women (Off Campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST			M	F	T
		M	F	T	M	F	T	M	F	T	M	F	T
(A) Farmers & Farm Women													
I Crop Production													
Weed Management	2	53	0	53	3	0	3	10	0	10	66	0	66
Integrated Crop Management	3	66	0	66	2	0	2	30	0	30	98	0	98
II Horticulture													
a) Vegetable Crops													
Nursery raising	1	32	0	32	0	0	0	0	0	0	32	0	32
Others, if any (ICM – Horticulture) Cultivation of Vegetable)	4	104	14	118	0	0	0	4	0	4	108	14	122
Role of Hormone	1	43	0	43	3	0	3	0	0	0	46	0	46
Production and Management technology	2	72	0	72	0	0	0	0	0	0	72	0	72
III Soil Health and Fertility Management													
Integrated Nutrient Management	3	71	0	71	12	0	12	15	0	15	98	0	98
Production and use of organic inputs	2	61	9	70	0	0	0	10	0	10	71	9	80
Management of Problematic soils	1	32	0	32	0	0	0	0	0	0	32	0	32
Micro nutrient deficiency in crops	1	31	0	31	0	0	0	5	0	5	36	0	36
Nutrient Use Efficiency													
Soil and Water Testing	1	22	0	22	0	0	0	15	0	15	37	0	37
IV Livestock Production and Management													
Disease Management	1	16	0	16	0	0	0	0	0	0	16	0	16
V Home Science/Women empowerment													
Minimization of nutrient loss in processing	2	26	29	55	0	0	0	0	0	0	26	29	55
Gender mainstreaming through SHGs	1	0	39	39	0	0	0	0	0	0	0	39	39
Value addition	1	0	0	0	0	0	0	0	14	14	0	14	14

Consolidated table

Farmers and farm women (ON and OFF Campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST			M	F	T
		M	F	T	M	F	T	M	F	T			
(A) Farmers & Farm Women													
I Crop Production													
Resource conservation	1	24	0	24	0	0	0	8	0	8	32	0	32
Cropping System	1	10	4	14	0	0	0	6	0	6	16	4	20
Weed Management	2	53	0	53	3	0	3	10	0	10	66	0	66
Integrated Crop Management	9	143	81	224	2	0	2	39	10	49	184	91	275
II Horticulture													
a) Vegetable Crops													
Nursery raising	2	57	0	57	0	0	0	0	0	0	57	0	57
Exotic vegetables like Broccoli	1	24	6	30	0	0	0	0	0	0	24	6	30
Others, if any (ICM – Horticulture) Cultivation of Vegetable)	7	139	52	191	0	3	3	6	2	8	145	57	202
Cultivation of vegetables	1	18	-	18	-	-	-	12	-	12	30	-	30
Off season vegetable	1	18	6	24	-	-	-	9	-	9	27	6	33
Role of Hormone	1	43	0	43	3	0	3	0	0	0	46	0	46
b) Spices													
Production and Management technology	3	77	9	86	2	0	2	12	0	12	91	9	100
III Soil Health and Fertility Management													
Soil and Water Conservation	1	27	0	27	0	1	1	1	0	1	28	1	29
Integrated Nutrient Management	5	93	2	95	14	0	14	43	0	43	150	2	152
Production and use of organic inputs	2	61	9	70	0	0	0	10	0	10	71	9	80
Management of Problematic soils	2	55	0	55	0	0	0	8	0	8	63	0	63
Micro nutrient deficiency in crops	1	31	0	31	0	0	0	5	0	5	36	0	36
Nutrient Use Efficiency													
Soil and Water Testing	1	22	0	22	0	0	0	15	0	15	37	0	37
IV Livestock Production and Management													
Disease Management	1	16	0	16	0	0	0	0	0	0	16	0	16
Piggery Management	1	0	0	0	0	0	0	17	4	21	17	4	21
Goatry management	1	-	22	22	-	-	-	12	-	12	-	34	34
V Home Science/Women empowerment													
Minimization of nutrient loss in processing	2	26	29	55	0	0	0	0	0	0	26	29	55
Gender mainstreaming through SHGs	1	0	39	39	0	0	0	0	0	0	0	39	39
Value addition	1	0	0	0	0	0	0	0	14	14	0	14	14
Income generation activities for empowerment of rural Women	3	0	98	98	0	0	0	0	0	0	0	98	98
Others, if any (Preservation)	5	0	93	93	0	23	23	16	0	16	16	116	132
Health education	1	0	10	10	0	0	0	0	0	0	0	10	10
VI Agril. Engineering													
Installation and maintenance of micro irrigation systems	2	21	36	57	0	0	0	2	0	2	23	36	59
Use of Plastics in farming	1	12	13	25	0	0	0	3	0	3	15	13	28

practices													
Repair and maintenance of farm machinery and implements	2	26	16	42	0	0	0	1	0	1	27	16	43
Post Harvest Technology	1	9	9	18	0	3	3	3	0	3	12	12	24
Others, if any (Rain water harvesting)	6	145	22	167	0	1	1	29	0	29	174	23	197
VII Plant Protection													
Integrated Pest Management	8	190	33	223	4	0	4	19	4	23	213	37	250
Integrated Disease Management	1	-	23	23	-	-	-	-	8	8	-	31	31
Bio-control of pests and diseases	1	0	0	0	0	0	0	11	3	14	11	3	14
Others, if any (Lac culture)	2	14	12	26	0	2	2	22	7	29	36	21	57
Others, if any (Seed treatment)	3	36	56	92	2	2	4	0	0	0	38	58	96
VIII Capacity Building and Group Dynamics													
Formation & Management of SHGs	1	-	24	24	-	-	-	-	10	10	-	34	34
TOTAL	85	1390	704	2094	30	35	65	319	62	381	1727	813	2540

Rural Youth (ON and OFF Campus)

Mushroom Production	4	10	37	47	0	0	0	6	48	54	16	85	101
Seed production	1	10	0	10	0	0	0	11	0	11	21	0	21
Production of organic inputs	1	0	0	0	0	1	1	4	20	24	4	21	25
Vermi-culture	1	0	28	28	0	0	0	0	0	0	0	28	28
Small scale processing	1	0	29	29	0	0	0	0	0	0	0	29	29
Rural Crafts	1	0	29	29	0	0	0	0	0	0	0	29	29
Others, if any (Lac culture)	1	9	21	30	0	0	0	0	0	0	9	21	30
TOTAL	10	29	144	173	0	1	1	21	68	89	50	213	263

Extension Personnel (ON and OFF Campus)

Productivity enhancement in field crops	2	71	0	71	0	0	0	3	0	3	74	0	74
Integrated Nutrient management	1	38	0	38	0	0	0	1	0	1	39	0	39
Capacity building for ICT application	1	42	0	42	0	0	0	0	0	0	42	0	42
Any other (Nursery raising)	1	25	0	25	0	0	0	7	0	7	32	0	32
Drip irrigation	1	34	0	34	0	0	0	0	0	0	34	0	34
TOTAL	6	210	0	210	0	0	0	11	0	11	221	0	221

3.4. A. Extension Activities (including activities of FLD programmes)

Nature of Extension Activity	No. of activities	Farmers			Extension Officials			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Field Day	3			127						127
Kisan Mela	1			4000						4000
Kisan Ghosthi	4			174						174
Exhibition										
Film Show	32			900						900
Method Demonstrations										
Farmers Seminar										
Workshop										
Group meetings										
Lectures delivered as resource persons										
Newspaper coverage	9									
Radio talks										
TV talks	18									
Popular articles										
Extension Literature	8			8000						8000
Advisory Services										
Scientific visit to farmers field	91			738						738
Farmers visit to KVK	606			606						606
Diagnostic visits										
Exposure visits										
Ex-trainees Sammelan										
Soil health Camp										
Animal Health Camp										
Agri mobile clinic										
Soil test campaigns (Analysis)										
Farm Science Club Conveners meet										
Self Help Group Conveners meetings										
Mahila Mandals Conveners meetings										
Celebration of important days (specify)	1			46						46
Help line service	859			859						859
Any Other (Technology Week)	1			330						330
Total	1633			15780						15780

3.5 Production and supply of Technological products

Village seed

Crop	variety	Quantity of seed (q)	Value (Rs)	Number of farmers provided

Total				

KVK farm

Crop	variety	Quantity of seed (q)	Value (Rs)	Number of farmers provided
Paddy	Lalat	28.5	79800.00	
	Sahbhagi	32.4	90720.00	
	MTU- 7029	15.6	43680.00	
	Birsamati	3.5	14000.00	
Pigeon pea	ND-1	0.75	5250.00	
	Birsa Arhar-1	0.75	5250.00	
Turmeric	Rajendra Sonia	2	9000.00	
Grand Total				

Production of planting materials by the KVKs

Crop	Variety	Quantity of seed (q)	Value (Rs)	Number of farmers provided
Vegetable seedlings				
Cauliflower	Girja, Sweta, Sighra	6000	1800.00	9
Cabbage				
Tomato				
Brinjal				
Chilli				
Onion				
Others				
Fruits				
Mango	Amrapali, Malika, Langra	101 nos.	3535.00	17
Guava	Allahabad safeda	154 nos.	4620.00	16
Lime				
Papaya				
Banana				
Others				
Ornamental plants				
Medicinal and Aromatic				
Plantation				
Spices				
Turmeric				
Tuber				
Elephant yams				
Fodder crop saplings				

Forest Species				
Others, pl.specify				
Total				

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity	Value (Rs.)	No. of Farmers
		Kg		
Bio Fertilisers				
Bio-pesticide				
Bio-fungicide				
Bio Agents				
Others				
Total				

Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
Poultry				
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl. specify)				
Fisheries				
Indian carp				
Exotic carp				
Others (Pl. specify)				
Grand Total				

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

Item	Title	Authors name	Number	Circulation
Research papers				
Technical reports				
News letters				
Technical bulletins				
Popular articles				
Extension literature				
	dsapqvk [kkn iz;ksx ,oa cukus dh fof/k	Mk- lq/khj dqekj >k]Jh mn; dqekj flag]Mk- vfuy dqekj]]Jherh uhuk Hkkjrh	1000	800
	dkcZfud [kkn mRiknu rduhd	Jh mn; dqekj flag]Mk- lq/khj dqekj >k]Mk- vfuy	1000	950

		dqekj] Jh fou; dqekj] Jherh uhuk Hkkjrh]fiz;adk oekZ		
	pkjk laj{k.k	Jh mn; dqekj flag] Mk- vfuy dqekj]Mk- lq/khj dqekj >k] Jh fou; dqekj	1000	825
	Jh /kku mRiknu rduhd	Jh mn; dqekj flag Mk- lq/khj dqekj >k]Mk- vfuy dqekj]Jh fou; dqekj]Jherh uhuk Hkkjrh]fiz;adk oekZ	1000	830
	mjn dh [ksrh	Jh mn; dqekj flag]Mk- lq/khj dqekj >k] Mk- vfuy dqekj, Jh fou; dqekj	1000	750
	xsgw; dh mUur [ksrh	Jh mn; dqekj flag]Mk- lq/khj dqekj >k] Mk- vfuy dqekj] Jh fou; dqekj]Jherh uhuk Hkkjrh]fiz;adk oekZ	1000	900
	e`k:e mRiknu rduhd	Mk- vfuy dqekj]Jh mn; dqekj flag]Mk- lq/khj dqekj >k]Jh fou; dqekj]Jherh uhuk Hkkjrh]fiz;adk oekZ	1000	1000
	larqfyr moZjd dk O;ogkj ,oa dehs y{k.k	Mk- lq/khj dqekj >k]Mk- vfuy dqekj]Jh mn; dqekj flag] Jh fou; dqekj]Jherh uhuk Hkkjrh]fiz;adk oekZ	1000	875
	d`f`k esa iksV`k`k dk egRo iqNsa vki&crk,sa ge	Mk- lq/khj dqekj >k]Mk- vfuy dqekj]Jh mn; dqekj flag] Jh fou; dqekj	1000	900
	?kjsyw Lrj ij vUu Hk.Mkj.k	Jh fou; dqekj]Jh mn; dqekj flag]Mk- lq/khj dqekj >k Mk- vfuy dqekj]Jherh uhuk Hkkjrh]fiz;adk oekZ	1000	850
	ljlksa dh mRiknu rduhd	Jh mn; dqekj flag]Mk- lq/khj dqekj >k]fiz;adk oekZ]Mk- vfuy dqekj]Jh fou; dqekj Jherh uhuk Hkkjrh	1000	890
Others (Pl. specify)	Krishi Vigyan Kendra Bokaro At a Glance	Mk- lq/khj dqekj >k]Jh mn; dqekj flag]Mk- vfuy dqekj Jherh uhuk Hkkjrh	500	475
TOTAL			11500	10045

N.B. Please enclose a copy of each. In case of literature prepared in local language please indicate the title in English

(B) Details of HRD programmes undergone by KVK personnel:

S. No.	Name of programme	Name of KVK personnel and designation	Date and Duration	Organized by
1.	National Conference of KVKs 2013	Sri Uday Kr. Singh S.M.S. Agron.-cum-I/C Programme Coordinator	23 Oct. 2013 to 25 Oct. 2013	University of Agricultural Sciences, Bangalore, Karnataka
2.	Summer School "Horticulture based crop diversification option for livelihood security in tribal area "	Mrs Neena Bharti, S.M.S. Plant Protection	21 May 2013 to 10 June 2013	ICAR Research Complex for Eastern Region Research Centre Plandu, Ranchi, (Jharkhand)
3.	National Seminar on "Innovation in Traditional Agriculture"	Mrs Nandana Kumari, S.M.S. Home Science	15 Nov. 2013 to 17 Nov. 2013	College of Agriculture of G.B.P.U.A.T., Pantnagar
4.	Wireless Sensor Network Workshop and National Steering Committee meeting	Dr. Sudhir Kr. Jha, S.M.S. Soil Science	27 May 2013 to 29 May 2013	TRA, Jorhat, Asam
5.	Workshop on "Baudhik Sampada Ke Adhikar"		12 Sept. 2013	ICAR Research Complex for Eastern Region Research Centre Plandu, Ranchi, (Jharkhand)
6.	Workshop on Precision farming		18 Nov. 2013 to 19 Nov. 2013	ICAR Research Complex for Eastern Region Research Centre, Patna (Bihar)
7.	Training prog on "Diagnosis of Soil for Production"		10 Jan. 2014 to 12 Jan. 2014	Institute of Forest Productivity, Lalgotuwa, Ranchi

3.7. Success stories/Case studies, if any (two or three pages write-up on each case with suitable action photographs)

3.8. Give details of innovative methodology or innovative technology of Transfer of Technology developed and used during the year

3.9. Give details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photographs)

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK

3.10 Indicate the specific training need analysis tools/methodology followed by the KVK

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

Sl. No	Name of the Equipment	Qty.

3.11.b. Details of samples analyzed so far :

Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized
Total				

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

No of training programme	No of demonstrations	No of plant material produced	Visit by the farmers	Visit by the officials

3.13 Technology week celebration- Technology week celebrated from 09-14 December 2013.

Type of activities	No. of activities	Number of participants	Related crop/livestock technology
Workshop, Kisan gosthi, technology exhibition, video show , farmers scientist interaction etc.		750	

3.14. RAWE programme - is KVK involved?

No of student/ARS trained	No of days stayed

3.15. List of VIP visitors including the officials of ZPD and DEE

Date	Name of the person	Purpose of visit
19.03.2014	Dr. R.P. Singh 'Ratan' DEE, BAU Ranchi	SAC meeting
	Dr. S.K.Roy Principal Scientist, ZPD, Zone-II, ICAR, Kolkata	
	Dr. B.K. Bhagat Additional Director, ZRS, Dumka	
	Sri K.N.Das DDM, NABARD, Bokaro	
	Sri K. Bhattacharya LDM, Bokaro	
	Sri Parash Oraon DAO, Bokaro	

4.0 IMPACT

4.1. Impact of KVK activities (Not to be restricted for reporting period).

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)

NB: Should be based on actual study, questionnaire/group discussion etc. with ex-participants

4.2 Cases of large scale adoption
(Please furnish detailed information for each case)

Horizontal spread of technologies	
Technology	Horizontal spread

4.3 Details of impact analysis of KVK activities carried out during the reporting period

4.4 Details of innovations recorded by the KVK

Thematic area	
Name of the Innovation	
Details of Innovator	
Back ground of innovation	
Technology details	
Practical utility of innovation	

4.5 Details of entrepreneurship development

Entrepreneurship development	
Name of the enterprise	
Name & complete address of the entrepreneur	
Intervention of KVK with quantitative data support:	
Time line of the entrepreneurship development	
Technical Components of the Enterprise	
Status of entrepreneur before and after the enterprise	
Present working condition of enterprise in terms of raw materials availability, labour availability, consumer preference, marketing the product etc. (Economic viability of the enterprise):	
Horizontal spread of enterprise	

4.6 Any other initiative taken by the KVK

5.0 LINKAGES

5.1 Functional linkage with different organizations

3									
4									
5									
6									
7									
	Total								

6.2 Performance of instructional farm (Crops)

Name Of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.(q)	Cost of inputs	Gross income	

6.3 Performance of Production Units (bio-agents / bio pesticides/ bio fertilizers etc.,)

Sl. No.	Name of the Product	Qty (Kg)	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1.					

6.4 Performance of instructional farm (livestock and fisheries production)

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1.							
2.							
3.							

6.5 Utilization of hostel facilities

Accommodation available (No. of beds)

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
	780	52	
Total :			

(For whole of the year)

6.5 Utilization of staff quarters

Whether staff quarters has been completed: Not completed

No. of staff quarters:

Date of completion:

Occupancy details:

Months	Q I	Q II	Q III	Q IV	Q V	Q VI

7.FINANCIAL PERFORMANCE

7.1 Details of KVK Bank accounts

Bank account	Name of the bank	Location	Account Number

7.2 Utilization of funds under FLD on Oilseed (Rs. In Lakhs)

Item	Released by ICAR		Expenditure		Unspent balance as on -
	Kharif	Rabi	Kharif	Rabi	

7.3 Utilization of funds under FLD on Pulses (Rs. In Lakhs)

Item	Released by ICAR		Expenditure		Unspent balance as on 1 st April 2013
	Kharif	Rabi	Kharif	Rabi	

7.4 Utilization of funds under FLD on Maize (Rs. In Lakh)

Item	Released by ICAR		Expenditure		Unspent balance as on 1 st April 2012
	Kharif	Rabi	Kharif	Rabi	
TOTAL					

7.5 Utilization of KVK funds during the year 2013 -14 (Not audited)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				

1	Pay & Allowances			
2	Traveling allowances			
3	Contingencies			
A				
B				
C				
D				
E				
F				
G				
H				
I				
J				
TOTAL (A)				
B. Non-Recurring Contingencies				
1				
2				
3				
4				
TOTAL (B)				
C. REVOLVING FUND				
GRAND TOTAL (A+B+C)				

7.6. Status of revolving fund (Rs. in lakh) for last three years

Year	Opening balance as on 1 st April	Income during the year	Expenditure during the year	Net balance in hand as on 1 st April of each year (Kind + cash)
2011-12				
2012-13				
2013-14				

7.6.(i) Number of SHGs formed by KVKs (ii) association of KVKs with SHGs formed by other organizations indicating the area of SHG activities.

7.7 Details of marketing channels created for the SHGs

7.8. Special programme on Food and Nutrition :

7.9. Community Radio Station :

7.10. Joint activity carried out with line departments and ATMA

Name of activity	Season	With line department	With ATMA	Both

8. Other information

8.1. Prevalent diseases in Livestock/Crops

Name of the disease	Crop/animal	Date of outbreak	Number of death/ % crop loss	Number of animals vaccinated

--	--	--	--	--

8.2. Nehru Yuva Kendra (NYK) Training

Title of the training programme	Period		No. of the participant		Amount of Fund Received (Rs)
	From	To	M	F	

8.3. PPV & FR Sensitization training Programme

Date of organizing the programme	Resource Person	No. of participants	Registration (crop wise)	
			Name of crop	No. of registration

8.4. KMAS /SMS Portal

KISAN MOBILE ADVISORY SERVICE

No. of calls	No. of farmers covered	No. of messages	Types of messages (No.)					
			Crop	Livestock	Weather	Marketing	Awareness	Other

8.5. SMS PORTAL – Mobile no. of 1000 farmers uploaded for SMS portal

Date of start of functioning of SMS portal

No. of messages	No. of calls	No. of farmers covered	Types of messages (No.)					
			Crop	Livestock	Weather	Marketing	Awareness	Other
26		35334	Paddy , Maize, Vegetable					

8.6. Programme with Seema Suraksha Bal (BSF)

Title of Programme	Date	No. of participants

8.7. a. Utilization of HRD fund (Rs 0.50 Lakh provided to KVKs)

Training programme/ Seminar/ Symposia/ Workshop etc attended	Duration	Name of the participants	Designation	Organizer of the training Programme	Amount spent for the purpose (Rs.)

b. HRD fund utilized for other purposes

Head	Amount (Rs.)

--	--

8.8. Performance of Automatic Weather Station in KVK

Date of establishment	Source of funding i.e. IMD/ICAR/Others (pl. specify)	Present status of functioning

8.9. IPNI Trail (**Applicable for KVKs identified under IPNI trial**)

- I Name of Crop - Wheat
- II No. of farmers involved -8
- III Area (ha.) - 5
- IV Date of sowing -14th to 18th Dec 2013
- V Crop Season- Rabi 2013-14

VI Result of trial with photographs however detailed results/observation should be sent as per performance after crop harvest

VII Amount Spent

Table 1: Farmers' Information:

Farmer's Name	Contact No.	Village	District	State	Latitude of the field	Longitude of the field
Ramcharan Mahto	9939150931	Hanslata (Kasmar)	Bokaro	Jharkhand		
Fulu Mahto	9631066966	Kamhar (Kasmar)	Bokaro	Jharkhand		
Ramesh Verma	9835766497	Kamhar (Kasmar)	Bokaro	Jharkhand		
Shankar Mahto	8235003087	Kamhar (Kasmar)	Bokaro	Jharkhand		
Thakur Mahto	9931462028	Chandipur (Kasmar)	Bokaro	Jharkhand		
Mihilal Gope	9955899593	Tilbul, Dedhe (Gomia)	Bokaro	Jharkhand		
Nityanand Yadav	9931587609	Tilbul, Dedhe (Gomia)	Bokaro	Jharkhand		
Kailash Mahto	9162970511	Konarbera (Petarwar)	Bokaro	Jharkhand		

Table 2: Agronomic Parameters:

Farmer's Name	Village	Crop (maize/wheat)	Nutrient Expert						Farmers Practice					
			Grain Yield (ton/ha)	Straw Yield (ton/ha)	Plant Height (cm)	No. of tillers (ave. of 5 plants)	No. of Panicles (ave. of 5 plants)	No. of Effective Tillers/sqm	Grain Yield (ton/ha)	Straw Yield (ton/ha)	Plant Height (cm)	No. of tillers (average of five plants)	No. of Panicles (average of five plants)	No. of Effective Tillers/sqm
Ramcharan Mahto	Hanslata (Kasmar)	Wheat	3.7	5.9	85.2	7.2	5.2	325.2	2.3	3.7	72.6	5.5	4.1	285.2
Fulu Mahto	Kamhar (Kasmar)	Wheat	3.8	6.1	87.0	7.4	5.3	327.0	2.4	3.6	73.5	5.6	4.2	288.4
Ramesh Verma	Kamhar (Kasmar)	Wheat	3.5	5.5	82.5	7.0	5.1	321.0	2.0	3.3	72.0	5.4	4.2	280.0
Shankar Mahto	Kamhar (Kasmar)	Wheat	3.3	5.3	84.0	7.2	5.1	319.1	2.1	3.3	70.5	5.3	4.0	281.6
Thakur Mahto	Chandipur (Kasmar)	Wheat	3.2	5.3	81.6	7.3	5.3	315.5	2.0	3.2	71.0	5.2	4.2	280.0
Mihilal Gope	Tulbul, Dedhe (Gomia)	Wheat	3.1	5.1	80.5	7.0	5.0	315.0	1.9	3.0	70.0	5.1	4.1	278.5
Nityanand Yadav	Tulbul, Dedhe	Wheat	3.0	5.0	80.0	7.0	5.2	315.0	2.0	3.0	71.2	5.2	4.2	280.0

8.10. Achievement under TSP Project (Saraikella, Godda, Sahibganj, Dumka, Giridih,, Pakur)

Name of the village adopted under TSP	Block	Population of the village			ST Population of the village			Percentage of ST population to total population
		M	F	T	M	F	T	

Details of Activities under TSP Project

Activities		No. of participants			Approx. expenditure (Rs.)
		M	F	T	
No. of on-farm trials					
Frontline demonstrations					
Farmers trained					
No of extension activities					
Input made available					
Seed (q)					
Planting material (No)					
Livestock strains and finger lings					
No of poultry, duck, pig, goat provided					
No of farm implements provided					
Others, if any, please specify					
Exposure visit					
Exhibition					
Kisan Mela					

8.11 PROGRESS REPORT OF NICRA KVK (Technology Demonstration component) 2013-14
(Applicable for KVKs identified under NICRA)

Natural Resource Management

Name of intervention undertaken	Numbers under taken	No of units	Area (ha)	No of farmers covered / benefitted	Remarks

Crop Management

Name of intervention	Area	No of farmers	Remarks

undertaken	(ha)	covered / benefitted	

Livestock and fisheries

Name of intervention undertaken	Number of animal covered	Number of units	Area (ha)	No of farmers covered / benefitted	Remarks

Institutional interventions

Name of intervention undertaken	No of units	Area (ha)	No of farmers covered / benefitted	Remarks

Capacity building

Thematic area	No. of Courses	No. of beneficiaries		
		Males	Females	Total

Extension activities

Thematic area	No. of activities	No. of beneficiaries		
		Males	Females	Total

Detailed report should be provided in the circulated Performa

8.12. National Initiative on Fodder Technology Demonstration (NIFTD) (Applicable for KVKs identified under NIFTD)

Name of the fodder crop	Date of sowing	Area (ha)	No. of farmers involved	Demonstration Yield (q/ha)			Check Yield			% increase
				H	L	A	H	L	A	

Economic of Demonstration

Name of the fodder crop	Demonstration Cost/Rs/ha			Check Cost (Rs/ha)		
	Gross cost	Gross return	BC ratio	Gross cost	Gross return	BC ratio

8.13. Awards/Recognition received by the KVK

Sl. No.	Name of the Award	Year	Conferring Authority	Amount	Purpose

Award received by Farmers from the KVK district

Sl. No.	Name of the Award	Name of the Farmer	Year	Conferring Authority	Amount	Purpose

April 2013

Thematic area	Topic	No. of Course	Other			SC			ST			Grand Total		
			M	F	T	M	F	T	M	F	T	M	F	T
ICM	Production technology of Summer maize	1	0	36	36	0	0	0	0	0	0	0	36	36
INM	Integrated Nutrient management in paddy	1	18	0	18	0	0	0	7	0	7	25	0	25
ICM	Production technology of SRI	1	0	0	0	0	0	0	26	0	26	26	0	26
Soil and Water Testing	Method of soil sampling	1	22	0	22	0	0	0	15	0	15	37	0	37
Production & Management(Spices)	Practice and management of ginger and turmeric	1	32	0	32	0	0	0	0	0	0	32	0	32
Total		5	72	36	108	0	0	0	48	0	48	120	36	156

May 2013

Thematic area	Topic	No. of Course	Other			SC			ST			Grand Total		
			M	F	T	M	F	T	M	F	T	M	F	T
Seed Production	Seed Production paddy	1	10	0	10	0	0	0	11	0	11	21	0	21
Lac Culture	Utilization of indigenous host plant or lac cultivation	1	3	12	15	0	2	2	5	7	12	8	21	29
Repair & maintenance of farm machinery	Farm mechanization in paddy cultivation & drum seeder	1	1	16	17	0	0	0	1	0	1	2	16	18
ICM	Cultivation practice of Kharif pulses	1	36	0	36	2	0	2	0	0	0	38	0	38
Bio Control	Benefit and use of rhizobium culture in pulse crops	1	42	0	42	0	0	0	0	0	0	42	0	42
IPM	Control of sheath blight in maize and paddy	1	37	0	37	0	0	0	0	0	0	37	0	37
SWC	Low cost water harvesting technique	1	49	0	49	0	0	0	0	0	0	49	0	49
Total		7	178	28	206	2	2	4	17	7	24	197	37	234

Capacity building	Different income generation activity for women	1	0	51	51	0	0	0	0	0	0	0	51	51
Weed management	Weed management in kharif crops	1	29	0	29	0	0	0	0	0	0	29	0	29
INM	Nutrient management in paddy	1	32	0	32	0	0	0	0	0	0	32	0	32
ICM Horticulture	Off season vegetable cultivation for income generation	1	24	0	24	0	0	0	0	0	0	24	0	24
IPM	Control of sucking pest	1	23	0	23	0	0	0	0	0	0	23	0	23
SWC	Low cost of water harvesting technique	1	26	0	26	0	0	0	0	0	0	26	0	26
Farm Mechanization	Farm mechanization in paddy cultivation	1	25	0	25	0	0	0	0	0	0	25	0	25
Preservation	Preservation of locally available food and vegetable	1	0	32	32	0	0	0	0	0	0	0	32	32
Capacity building	Different income generation activity for women	1	0	25	25	0	0	0	0	0	0	0	25	25
Disease Management in Goat	Disease Management in goat & pig	1	16	0	16	0	0	0	0	0	0	16	0	16

Total**11****175****130****305****0****0****0****0****0****0****175****130****305****August 2013**

Thematic area	Topic	No. of Course	Other			SC			ST			Grand Total		
			M	F	T	M	F	T	M	F	T	M	F	T
Seed Treatment	Seed Treatment	1	12	11	23	2	0	2	0	0	0	14	11	25
ICM	Cultivation practice of rabi pulses	1	25	3	28	0	0	0	0	0	0	25	3	28
Capacity building	Different type of stiches of embroidery	1	0	29	29	0	0	0	0	0	0	0	29	29
Production Organic Inputs	Production and use of organic inputs	1	0	0	0	0	1	1	4	20	24	4	21	25
Disease Management	Goatry management piggery management	1	0	0	0	0	0	0	17	4	21	17	4	21
Preservation	Sweet and sour tomato chutney	1	0	0	0	0	23	23	0	0	0	0	23	23
SWC	Soil and water conservation technique	1	10	0	10	0	0	0	28	0	28	38	0	38

Role of Hormone	Role of Harmon in vegetable crops	1	43	0	43	3	0	3	0	0	0	46	0	46
Total		8	90	43	133	5	24	29	49	24	73	144	91	235

September 2013

Thematic area	Topic	No. of Course	Other			SC			ST			Grand Total		
			M	F	T	M	F	T	M	F	T	M	F	T
SWC	Rain water harvesting technique	1	27	0	27	0	1	1	1	0	1	28	1	29
INM	Cultivation practice of wheat and INM in wheat	1	4	2	6	2	0	2	21	0	21	27	2	29
ICM Horticulture	Cultivation practice and management of broccoli and cabbage	1	23	0	23	0	3	3	2	0	2	25	3	28
Value addition	Preservation of locally available fruit and vegetable	1	0	0	0	0	0	0	0	14	14	0	14	14
Nutrition Security	Proper pre-cooking and cooking practice for nutrient saving during processing	1	0	29	29	0	0	0	0	0	0	0	29	29
Seed Treatment	Seed treatment campaign	1	0	42	42	0	2	2	0	0	0	0	44	44
IPM	IPM in fruit crops	1	0	30	30	0	0	0	8	0	8	8	30	38
Total		7	54	103	157	2	6	8	32	14	46	88	123	211

October -2013

Thematic area	Topic	No. of Course	Other			SC			ST			Grand Total		
			M	F	T	M	F	T	M	F	T	M	F	T
IPM	Integrated pest management in paddy and cultivation practice of rabi vegetable	1	17	3	20	4	0	4	1	4	5	22	7	29
Capacity building	Different income generation activity	1	0	14	14	0	0	0	16	0	16	16	14	30
Mushroom production	Mushroom Production technology	1	10	18	28	0	0	0	0	0	0	10	18	28
Preservation	Preservation of locally available uncultivable fruit	1	0	23	23	0	0	0	0	0	0	0	23	23
ICM	Production technology SWI wheat	1	30	0	30	0	0	0	4	0	4	34	0	34
Micronutrient deficiency	Control of different micronutrient disorders in vegetables crop	1	31	0	31	0	0	0	5	0	5	36	0	36
Total		6	88	58	146	4	0	4	26	4	30	118	62	180

November 2013

Thematic area	Topic	No. of Course	Other			SC			ST			Grand Total		
			M	F	T	M	F	T	M	F	T	M	F	T
	Production technology of Rabi Crops	1	12	14	26	0	0	0	0	2	2	12	16	28
	Cultivation practice of rabi seeds crops	1	2	27	29	0	0	0	0	0	0	2	27	29
	Use of micro irrigation system in vegetable	1	0	0	0	0	0	0	0	0	0	0	0	0
	Cultivation practice Rangini Lac	1	0	0	0	0	0	0	0	0	0	0	0	0
	Mushroom production technology	1	0	0	0	0	0	0	0	0	0	0	0	0
	Cultivation practice of leguminous vegetable	1	0	0	0	0	0	0	0	0	0	0	0	0
	Integrated nutrient management in major cereal crops	1	0	0	0	0	0	0	0	0	0	0	0	0
	Sulphur management in all seeds crops	1	0	0	0	0	0	0	0	0	0	0	0	0
Total		8	14	41	55	0	0	0	0	2	2	14	43	57

December 2013

Thematic area	Topic	No. of Course	Other			SC			ST			Grand Total		
			M	F	T	M	F	T	M	F	T	M	F	T
Exotic Vegetable	Cultivation practice of broccoli and red cabbage	1	24	6	30	0	0	0	0	0	0	24	6	30
ICM Horticulture	Cultivation practice of potato	1	0	24	24	0	0	0	0	0	0	0	24	24
Cropping System	Intercropping system in upland conditions	1	10	4	14	0	0	0	6	0	6	16	4	20
Topic	Topic	1	5	9	14	2	0	2	12	0	12	19	9	28
Production and management technology spice	Cultivation practice of onion and garlic	1	40	0	40	0	0	0	0	0	0	40	0	40
Nursery raising	Nursery raising off season vegetable	1	32	0	32	0	0	0	0	0	0	32	0	32
Management of problematic soil	Management of and acid soil	1	32	0	32	0	0	0	0	0	0	32	0	32
SWC	Efficient water management in cereal crops	1	33	0	33	0	0	0	0	0	0	33	0	33
IPM	Control of pest in arhan	1	29	0	29	0	0	0	0	0	0	29	0	29
IPM	Control of tretment in wheat and pulses	1	32	0	32	0	0	0	0	0	0	32	0	32
Total		10	237	43	280	2	0	2	18	0	18	257	43	300

January 2014

Thematic area	Topic	No. of Course	Other			SC			ST			Grand Total		
			M	F	T	M	F	T	M	F	T	M	F	T
Nursery raising	Nursery raising	1	25	0	25	0	0	0	0	0	0	25	0	25
Use of plastic	Use of plastic in agriculture	1	12	13	25	0	0	0	3	0	3	15	13	28
PHT	Use of food grain storage technique	1	9	9	18	0	3	3	3	0	3	12	12	24
Health education	Home made preventive measure for Anemia	1	0	10	10	0	0	0	0	0	0	0	10	10
Mushroom production	Mushroom production for rural youths	1	0	0	0	0	0	0	6	24	30	6	24	30
Installation and maintenance	Use of micro irrigation system	1	4	26	30	0	0	0	0	0	0	4	26	30
SWC (Ag. Engg.)	Efficient water management in cereal crops	1	0	22	22	0	0	0	0	0	0	0	22	22
Production of bio-control	Production of bio-pesticides	1	0	0	0	0	0	0	11	3	14	11	3	14
Preservation	Preservation of seasonal fruit and vegetable	1	0	24	24	0	0	0	0	0	0	0	24	24
Total		9	50	104	154	0	3	3	23	27	50	73	134	207

February, 2014

Thematic area	Topic	No. of Course	Other			SC			ST			Grand Total		
			M	F	T	M	F	T	M	F	T	M	F	T
Mushroom production	Mushroom production	1	0	5	5	0	0	0	0	24	24	0	29	29
Lac culture	Lac cultivation of Rangini lac	1	9	21	30	0	0	0	0	0	0	9	21	30
Vermi culture	Vermi compost production	1	0	28	28	0	0	0	0	0	0	0	28	28
Small scale processing	Primary processing	1	0	29	29	0	0	0	0	0	0	0	29	29
Total		4	9	83	92	0	0	0	0	24	24	9	107	116

March, 2014

Thematic area	Topic	No. of Course	Other			SC			ST			Grand Total		
			M	F	T	M	F	T	M	F	T	M	F	T
ICM	Production technology of summer maize	1		15	15	-	-	-	-	10	10	-	25	25
Cultivation of vegetables	Management of cucurbitaceous vegetable	1	18	-	18	-	-	-	12	-	12	30	-	30
ICM	Production technology of sweet corn & baby corn	1	23	-	23	-	-	-	7	-	7	30	-	30
Off season vegetable	Production technology of summer season cauliflower	1	18	6	24	-	-	-	9	-	9	27	6	33
Management of problematic soils	Acid soil management through sweet potato cultivation	1	23	-	23	-	-	-	8	-	8	31	-	31
Goatry management	Goatry management	1	-	22	22	-	-	-	12	-	12	-	34	34
Resource conservation technology	Summer ploughing	1	24	-	24	-	-	-	8	-	8	32	-	32
Formation & management of SHGs	Formation & management of SHGs	1	-	24	24	-	-	-	-	10	10	-	34	34
IPM	Pest management of summer vegetable	1	23	-	23	-	-	-	10	-	10	33	-	33
IDM	Disease management of summer vegetable	1	-	23	23	-	-	-	-	8	8	-	31	31
Productivity enhancement in crops & vegetables	Recommended technology for Bokaro district.	1	28	-	28	-	-	-	-	-	-	28	-	28
Total		11	157	90	247				66	28	94	211	130	341

CONTENT

SL. No.	PARTICULARS	PAGE NO.
1.	General information about KVK	1-7
2.	Details of district	8-11
3.	Technical Achievement	11
4.	OFT	12-33
5.	FLD	34-43
6.	Training	44-51
7.	Extension Activity	52
8.	Production and supply of technological products	53-54
9.	Literature Developed	54-55
10.	HRD programme under gone by KVK personnel	55-56
9.	Linkage	58
10.	IPNI Trail	64-66
11.	Annexure of training programme	70-78