

KRISHI VIGYAN KENDRA

MADHOPUR, WEST CHAMPARAN



ANNUAL PROGRESS REPORT

APRIL 2013
TO
MARCH 2014



RAJENDRA AGRICULTURAL UNIVERSITY, BIHAR

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	
KVK, Madhopur; West Champaran; Pin – 845454	06252 -		kvkwestchamparan@rediffmail.com
	280542		

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

Address	Telephone		E mail
	Office	FAX	
RAU, Bihar, Pusa Samastipur' Pin – 848 125	06274 – 240226	06274 – 240255	vcrau@sify.com

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. S.N. Singh	06252 - 280542	9431488038	kvkwestchamparan@rediffmail.com

1.4. Year of sanction of KVK: 2004

1.5. Staff Position (as on 1st April, 2014)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale with present basic	Date of joining/ if vacant since when	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
1	Programme Coordinator / Subject Matter Specialist	Dr. S.N. Singh*	I/C PC	Plant Pathology	15600 – 7000 – 39100	18.07.2001	Permanent	Others
2	Subject Matter Specialist	Dr. Smt. Sunita Kumari	SMS	Home Science	15600-6000-39100	12.07.2007	Permanent	Others
3	Subject Matter Specialist	Sri Manoj Kumar	SMS	Agril. Engineering	15600-6000-39100	13.06.2009	Permanent	Others
4	Subject Matter Specialist	Sri Arun Kumar*	SMS	Horticulture	15600-6000-39100	03.12.2007	Permanent	SC
5	Subject Matter Specialist	Dr. Shivendra Kumar**	SMS	Fisheries	15600-6000-39100	21.10.2009	Permanent	Others
6	Subject Matter Specialist					Vacant from beginning		
7	Subject Matter Specialist					Vacant from beginning		
8	Programme Assistant					Vacant from beginning		

13	Mushroom Production Unit								
14	Shade house								
15	Soil test Lab								
16	Others, Please specify								

* Staff quarters have not been handed over due to non availability of water supply

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total km. Run	Present status
Tractor	2005	5,22,900		Good
Jeep (BOLERO)	2005	4,40,526	154763	Not Good

C) Equipment & AV aids

Name of equipment	Year of purchase	Cost (Rs.)	Present status	Source of fund
Digital Camera (1)	2007	6135/-	Good	ICAR
Generator (1)	2007	72000/-	Good	ICAR
Computer (1)	2007	Purchased bu RAU, Pusa	Good	ICAR
Xerox Machine (1)	2009		Good	ICAR
Video digital Photo Camera	2008		Good	ICAR
L.C.D.	2009		Good	ICAR

D) Farm implements

Name of equipment	Year of purchase	Cost (Rs.)	Present status	Source of fund
Multicrop thresher, Rotavator, Cultivator, Knap Sac Sprayer	2011-12	2,00,000.00	Good	RKVY
Thresher, Rotavator, Power reaper, Zero tillage, weight machine, cultivator, sprayer, disc harrow, winnower	2011-12	4,44,000.00	Good	ICAR

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.	03. 08 .2013	36	Copy attached		
2.					

* **Salient recommendation of SAC in bullet form**

Attach a copy of SAC proceedings along with list of participants

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

Sl. no.	Item	Information
1	Major Farming system/enterprise	Rice- Wheat/ Rice- Sugarcane
2	Agro-climatic Zone	Zone-1
3	Agro ecological situation	Forest areas in more than 91000 ha
4	Soil type	Sandy loam
5	Productivity of major 2-3 crops under cereals, pulses, oilseeds, vegetables, fruits and others	Sugarcane-680 q/ha, Rice- 30 q/ha, Wheat- 29.6 q/ha
6	Mean yearly temperature, rainfall, humidity of the district	Max temp- 42.1°C, Min temp- 07.1 °C, Rainfall-1330mm, RH-80%
7	Production of major livestock products like milk, egg, meat etc.	Cattle (Crossbred)- 12.181 litre: Indigenous- 3.128 litre; Buffalo- 10.470 litre

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

Taluk	Name of the Block	Name of the Village	Major Crops / enterprises	Major Problem Identified	Identified thrust Area
Bettiah	Narkatiyaganj	Saidpur	Sugarcane, Potato, Paddy, Wheat, Maize, fish farming	Poor Ratoon Management, Lack of improved varieties.	Good Ratoon Management of Sugarcane, Supply of Improved varieties of Sugarcane, Paddy and Wheat,
	Majhaulia	Senuaria	Paddy, Wheat, Sugarcane, Bee-keeping, Mushroom cultivation	Lack of improved varieties, lack of skill towards bee keeping, mushroom production.	Supply of Improved varieties of Sugarcane, Paddy and Wheat. Skill oriented training programme
	Nautan	Majharia Kisun	Paddy, sugarcane, Wheat	Old varieties of Paddy, Sugarcane, and Wheat are in use. No Use of Biofertilizer	Promotion of quality seed production.
	Jogapatti	Rampurwa	Paddy, Wheat, Sugarcane, Bee-keeping, Mushroom cultivation	Lack of improved varieties, lack of skill towards bee keeping, mushroom production.	Supply of Improved varieties of Sugarcane, Paddy and Wheat. Skill oriented training programme
	Bagha-II	Nautanwa	Paddy, sugarcane, Wheat	Old varieties of Paddy, Sugarcane, and Wheat are in use. No Use of Biofertilizer	Promotion of quality seed production.

Seed production (q)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
Paddy – 90	40	Mango- 10,000	10,000
Sugarcane - 900	542	Litchi- 2000	2000
Turmeric- 30	25	Guava- 2000	2000
Pigeon Pea-15	Crop is standing		

@ Target should match with your midterm report

3.1 Achievements on technologies assessed and refined

OFT-1:

1.	Title of On farm Trial	Management of top borer, <i>Scirpophaga excerptalis</i> in sugarcane
2.	Problem diagnose	Crop is damaged due to severe infestation of top borer.
3.	Details of technologies selected for assessment/refinement	Farmer's practice- Soil application of carbofuran 3 G @ 1kg a.i. /ha or phorate 10 G @ 3.0 kg a.i./ha in 2 nd week of June Technology option I- Neem plus @ 125 kg/ha (May) + release of <i>Trichogramma chilonis</i> @ 50,000/ha 2 times at 10 days interval (June) + Fipronil 0.3% GR @ 15 kg/ha (July) Technology option-II – Neem plus @ 125 kg/ha (May) + release of <i>Trichogramma chilonis</i> @ 50,000/ha 2 times at 10 days interval (June) + Soil drenching near root zone with chlorantraniprole (Coragen) 18.5 % SC @ 375 ml/ha (July) and subsequently irrigated the field.
4.	Source of Technology	NCIPM , New Delhi
5.	Production system and thematic area	Sugarcane , Integrated Pest Management

6.	Performance of the Technology with performance indicators	1. Percent curved dead heart 2. Yield (ton/ha) 3. Net profit (Rs./ha) 4. B:C Ratio
7.	Final recommendation for micro level situation	The farmers will get maximum yield of sugarcane by reducing the damage done by top borer by adopting technology option II and will get maximum net profit (Rs. 120960/ha.)
8.	Constraints identified and feedback for research	Required number of Tricho-cards is not available at local level. Mass multiplication of <i>Trichogramma chilonis</i> is needed.
9.	Process of farmers participation and their reaction	Through field days and Krishak gosthi farmer's participation was ensured and after visualizing conducted trial they are ready to accept this technology to minimize the top borer infestation.

Thematic area: Integrated Pest Management

Problem definition: Yield of sugarcane is reduced due to severe infestation of top borer

Technology assessed: Biological and chemical pesticides

Table No. 1: Management of Top borer *Scirpophaga excerptalis* in sugarcane:

Technology option	No. of trials	Percent curved dead heart	Yield (t/ha.)	Gross cost of Cultivation	Gross return (Rs. /ha.)	Net Profit (Rs./ha)	B.C. Ratio
Farmer's practice- Soil application of carbofuran 3 G @ 1kg a.i. /ha or phorate 10 G @ 3.0 kg a.i./ha in 2 nd week of June	08	29.63	61.9	72300	157845	85545	2018
		16.36	72.0	77100	183600	106500	2.38
		07.23	79.2	81000	201960	120960	2.49
Technology option I- Neem plus @ 125 kg/ha (May) + release							

of <i>Trichogramma chilonis</i> @ 50,000/ha 2 times at 10 days interval (June) + Fipronil 0.3% GR @ 15 kg/ha (July)							
Technology option-II – Neem plus @ 125 kg/ha (May) + release of <i>Trichogramma chilonis</i> @ 50,000/ha 2 times at 10 days interval (June) + Soil drenching near root zone with chlorantraniprole (Coragen) 18.5 % SC @ 375 ml/ha (July) and subsequently irrigated the field.							
SEM +		02.31	02.11				
C.D. (0.05)		06.92	06.34				

Results: K.V.K. West-Champaran, Bihar has conducted a on farm trial on management of top borer in sugarcane crop of the District. The percent curved dead heart due to infestation of top borer was found minimum i.e. 7.23 % in plots received neem plus@ 125 kg/ha (in June) and releasing of *T.chilonis* @ 50,000/ha (2 times at 10 days interval-in July) & soil drenching with insecticide chlorantraniprole (Coragen) 18.5% E.C. @ 375 ml/ha in the first week of July and recorded highest yield (79.2 t/ha), highest net return (Rs. 1,20,960 per ha) & highest B:C ratio (1.49) and found superior over technology option I and farmers' practices.

OFT- 2:

1.	Title of On Farm Trial	Assessment of weedicides to control <i>P.minor</i> and <i>C. album</i> in wheat
2.	Problem diagnose	Yield is reduced due to severe infestation of weeds.
3.	Details of technologies selected for assessment/refinement	Farmers practice No manual weeding and no use of chemicals. Technology option I- 2,4 D Ethyl Ester 38% E.C. @ 1.25 liter/ha + Sulfo Sulfuron 75% @33 g/ha; one spray after first irrigation 30DAS. Technology option II:- Clodinafop propargyl 15% + Metsulfuran Methyl 1% @ 400 g/ha one spray 30 DAS. Technology option III- Sulfo Sulfuron 75% + Metsulfuran Methyl 5% W.G @ 40 g/ha
4.	Source of technology	R.A.U., Pusa
5.	Production system and thematic area	Rice-Wheat, weed management
6.	Performance of the technology with performance indicators	(i) Weed population/m ² (ii) Dry matter accumulation g/m ² (iii) Yield (q/ha) (iv) Net return (Rs/ha) (v) B:C ratio
7.	Final recommendation for micro level situation	Sulfo Sulfuron + Metsulfuran methyl 5% WG @40 g/ha is highly effective against <i>P.minor</i> and <i>C.album</i>
8.	Constraints identified and feedback for research	Optimum moisture in the field and sunlight should be for 3-4 days after application of the weedicide
9.	Process of farmers participation and their reaction	Through “Field Day” and Krishak Gosthi

Thematic area: Weed Management

Problem definition: Yield of Wheat is reduced due to severe infestation of *Phalaris minor* and *Chinopodium album*

Technology assessed: chemical pesticides

Table No. 2: Assessment of weedicides to control *P. minor* and *C. album* in wheat Farming situation-Irrigated medium low

Variety HD-2733

Technology option	Weed population		Dry matter accumulation		Yield (q/ha)	Cost of cultivation(Rs./ha)	Gross returns(Rs./ha)	Net return(Rs./ha)	B:C ratio
	<i>P.minor</i>	<i>C.album</i>	<i>P.minor</i>	<i>C.album</i>					
Farmers practice No manual weeding and no use	54	31	681	402	Crop is standing				

of chemicals					
Technology option I- 2,4 D Ethyl Ester 38% E.C. @ 1.25 liter/ha + Sulfo Sulfuron 75% @33 g/ha; one spray after first irrigation 30DAS	19	12	252	169	-do-
Technology option II:- Clodinafop propargyl 15% + Metsulfuran Methyl 1% @ 400 g/ha one spray 30 DAS	09	07	73	51	-do-
Technology option III- Sulpho Sulfuron 75% + Metsulfuran Methyl 5% W.G @ 40 g/ha	06	03	48	26	-do-

OFT-3:

1. Title of On Farm Trial: Assessment of water probiotics in fish farming ponds

2. Problem diagnose: Low productivity of the fish pond due to poor water quality.

3. Details of technologies selected for assessment/ refinement:

Poor water quality is the major reason for low productivity of fish pond in the West Champaran district of Bihar. In recent years, there is a great interest in the use of probiotics in aquaculture to improve water quality, inhibit pathogens and promote the growth of farmed fish. Keeping in view of the beneficial effects of probiotics, KVK, West Champaran undertaken an OFT to study the efficacy of water probiotics in fish ponds on growth performance of cultured species and compare the results with those of the untreated pond.

Different selected technologies were:

(i) **Farmers' Practice:** No use of water probiotics

(ii) **Technological option I:** Farmers practice + water probiotics @ 1 Kg/ha (in split dose of 250g/ha/month)

(iii) **Technological option II:** Farmers practice + water probiotics @ 2 Kg/ha (in split dose of 500g/ha/month)

4. Source of Technology: CIFA, Bhubaneswar

5. Production system and thematic area: Composite culture of carp

6. Performance of the technology with performance indicators:

An On Farm Trial (OFT) was conducted by KVK, West Champaran to assess the effect of water probiotics consisting of *Bacillus* spp on fish yield in carp fish farming pond. Trials of 4 months were conducted in 8 farmers' pond (ranging between 0.05-0.1 ha). Fingerlings of Catla (*Catla catla*); Rohu (*Labeo rohita*), Mrigal (*Cirrhinus mrigala*) and Common carp (*Cyprinus carpio*) were stocked at a ratio of 3:4:1.5:1.5 having combined average weight of about 45 gm with stocking density of 8000 fingerlings/ha. Performance indicators were Yield (q/ha), Net return (Rs/ha) & B:C ratio.

7. Final recommendation for micro level situation

Apart from usual farmers' practices of carp culture, addition of water probiotics @ 2 Kg/ha (in split dose of 500g/ha/month) will enhance the survivability and growth of fish and finally increase the productivity which in other hand will maximize the profitability.

8. Constraints identified and feedback for research: N.A.

9. Process of farmer's participation and their reaction: Farmers' were participated on field day organized by KVK appreciated the result and demanded to make available this machine to the farmers by KVK.

Thematic area: Fish Feed Management

Problem definition: Low productivity of the fish pond due to poor water quality

Technology assessed: Use of probiotics

Table no. 3: Details of growth and yield of different technological groups

Technology option	No. of trials	Data related to problem addressed			Yield (q/ha)	Increase in production (%)	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net Return (Rs / ha)	BC Ratio
		Initial Combined Average Weight (gm)	Final Combined Average weight (gm) After 4 month	Survival (%)						
Farmers' Practice: No use of water probiotics	8	45.0	167.0	78	10.42	-	55500	130250	74750	2.34
Technological option I: Farmers practice + water probiotics @ 1 Kg/ha (in split dose of 250g/ha/month)		45.0	193.0	89	13.74	30.91	57000	171750	114750	3.01
Technological option II: Farmers practice + water probiotics @ 2 Kg/ha (in split dose of 500g/ha/month)		45.0	234.0	92	17.22	65.25	58500	215250	156750	3.67
SEm±		4.89	17.46	7.21	1.70	-	-	-	-	-
CD(P=0.05)	12.67	47.32	19.11	4.82	-	-	-	-	-	

Result: It was observed that addition of water probiotics in pond lead to increase in fish production. The gross yields observed were 10.42Q/ha/4 month in Farmer's practice pond; 13.74Q/ha/4 month in the pond treated with water probiotics @ 1 Kg/ha (Technology option I) and 17.22 Q/ha/4 month in the pond treated with water probiotics @ 2 Kg/ha (Technology option II). In the present study, the increase in gross production due to addition of water probiotics was 30.91%, and 65.25% in Technology option I and Technology option II, respectively compared to control. The B:C ratio showed that all treatments were profitable; however Technology option II (3.67) and Technology option I (3.01) were having better B:C ratio in comparison to Farmer's practice (2.34).

OFT – 4:

1. Title of On Farm Trial: Assessment of *Puntius gonionotus* in place of grass carp (*Ctenopharyngodon idella*) in composite fish farming system.

2. Problem diagnose: Less market demand and price of grass carp.

3. Details of technologies selected for assessment/ refinement:

Market price of grass carp is less compare to Indian major carps (Catla, Rohu and Mrigal) and other Chinese carp (Common carp and Silver carp). Therefore, there is need to replace grass carp with another fish which is having similar feeding habit and high market price. In this context, we found that *Puntius gonionotus* is having similar feeding habit to grass carp and its market demand is also high. Therefore, it was expected that introduction of *Puntius gonionotus* in Composite fish farming system will increase the farmer's profitability.

Different selected technologies were:

(i) **Farmers' Practice:** Grass carp @ 750 fingerlings/ha in Composite fish farming pond

(ii) **Technological option I:** *Puntius gonionotus* @ 750 fingerlings/ha in Composite fish farming pond

(iii) **Technological option II:** *Puntius gonionotus* @ 1000 fingerlings/ha in Composite fish farming pond

(iv) **Technological option III:** *Puntius gonionotus* @ 1500 fingerlings/ha in Composite fish farming pond

4. Source of Technology: CIFA, Bhubaneswar

5. Production system and thematic area: Composite Fish Farming

6. Performance of the technology with performance indicators:

KVK, West Champaran conducted an OFT to assess *Puntius gonionotus* in place of grass carp (*Ctenopharyngodon idella*) in composite fish farming system for species diversification and more profitability in composite fish farming. Trials of 6 months were conducted in 8 farmers pond. Fingerlings of Indian Major Carps (Catla, Rohu and Mrigal) and exotic carps (Silver carp, common carp and grass carp) were stocked with the stocking density of 5000 fingerlings/ha. The no. of grass carp in this faming system was 750 fingerlings/ha. In place of 750 fingerlings of grass carp, *Puntius gonionotus* was assessed with 750, 1000 or 1500 fingerlings/ha.

7. Final recommendation for micro level situation

Apart from usual farmers' practices of composite fish farming, introduction of *Puntius gonionotus* @ 1500 fingerlings in place of grass carp will enhance total yield of pond which in other hand will maximize the profitability.

8. Constraints identified and feedback for research: The availability of fingerlings of *Puntius gonionotus* is very difficult.

9. Process of farmers' participation and their reaction: Farmers' were participated on field day organized by KVK appreciated the result and demanded to make available this machine to the farmers by KVK

Thematic area: Composite Fish Culture

Problem definition: Less market demand and price of grass carp

Technology assessed: Inclusion of new species of fish

Table No. 4: Details of growth and yield of different technological groups:

Technology option	No. of trials	Data related to problem addressed		Yield of individual species (q/ha)	Gross return from individual species (Rs./ha)	Total Yield of pond (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs./ha)	Net Return (Rs / ha)	BC Ratio
		Initial Average Weight (gm)	Final Average weight (gm) (After 6 month)							
Farmers' Practice: Grass carp @ 750 fingerlings/ha in Composite fish farming pond	8	35.0	342.0	2.56	25,600	13.63	60,000	1,91,650	1,31,650	3.19
Technological option I: <i>Puntius gonionotus</i> @ 750 fingerlings/ha in Composite fish farming pond		23.0	237.0	1.78	26,700	13.11	60,000	1,96,650	1,36,650	3.28
Technological option II: <i>Puntius gonionotus</i> @ 1000 fingerlings/ha in Composite fish farming pond		23.0	242.0	2.42	36,300	13.58	60,500	2,03,700	1,43,200	3.37
Technological option III: <i>Puntius gonionotus</i> @ 1500 fingerlings/ha in Composite fish farming pond		23.0	227.0	3.40	51,000	14.22	61,250	2,13,300	1,57,050	3.48
SEm±		3.16	19.52	0.38	-	1.29	-	-	-	-
CD(P=0.05)		8.27	46.85	1.33	-	3.42	-	-	-	-

Result: It was found that yield of grass carp (2.56 q/ha) was higher than the *Puntius gonionotus* stocked @ 750 fingerlings/ha (1.78 q/ha) and 1000 fingerlings/ha (2.42 q/ha) but lower than *Puntius gonionotus* stocked @ 1500 fingerlings/ha (3.40 q/ha). Whereas, the gross yield from the grass carp only was lower than the gross yield of *Puntius gonionotus* stocked with either 750, 1000 or 1500 fingerlings/ha. This is due to high market price of *Puntius gonionotus* compare to grass carp. The B:C ratio showed that all treatments were profitable; however Technology option III (3.67) , Technology option II (3.37) and Technology option I (3.28) were having better B:C ratio in comparison to Farmer's practice(3.19).

OFT- 5:

1.	Title of On farm Trial	Drudgery reduction of women engaged in weeding operation in tomato
2.	Problem diagnose	Weeding is a labour intensive agricultural unit operation which involves drudgery.
3.	Details of Technologies selected for assessment/refinement	Farmers practice :- Weeding of tomato by khurpi Technology option I :- Weeding of tomato by double wheeled hoe Technology option II :- Weeding of tomato by cycle operated wheeled hoe
4.	Source of Technology	R.A.U.,Pusa, Bihar
5.	Production system and thematic area	Drudgery reduction in weeding operation.
6.	Performance of the technology with performance indicators	Ergonomic indicators (peak heart rate) and labour requirement (Man day/ha) was observed.
7.	Final recommendation for micro level situation	The technology is suitable for tomato crop and acceptable by farm women
8.	Constraints identified and feedback for research	Weeding efficiency also depends on type of soil, height and weight of weeder, effective cutting width and depth of cut of weeding equipments etc. Besides availability of improved tools in rural area is also a constraint.
9.	Process of farmers participation and their reaction	Demonstration cum training at their field and farmers wanted to adopt the technology.

Thematic area: - Drudgery reduction

Problem definition: - Drudgery reduction of farm women engaged in weeding operation in tomato

Technology assessed: Use of manually operated weeding equipments to reduce drudgery.

Table No. 5: Assessing weeding efficiency and level of drudgery reduction in weeding of tomato:

Technology option	No. of trials	Drudgery level (%)			Labour requirement Mandays/ha	Cost of cultivation (Rs./ha)	Gross return(Rs/ha)	Net return (Rs./ha)	BC ratio
		Light	Moderate	High					
Farmers practice	08	0	20	80	57	52898.00	220000.00	167102.00	3.16
Technology option-I	08	22	58	20	31	44734.00	225000.00	180266.00	4.03
Technology Option-II	08	30	60	10	29	44106.00	225000.00	180894.00	4.10

Results: The table that only 10 percent and 20 percent farm women observed high level of drudgery with technology option II and I respectively. Majority of the weeders observed moderate level of drudgery with these implement, while majority of the women the farmer's practice i.e. weeding by khurpi as highly drudgery prone activity.

OFT-6:

1.	Title of On farm Trial	Evaluation of power weeder for weeding in sugarcane
2.	Problem diagnose	Low yield of sugarcane due to severe infestation of different weeds and manual weeding is not possible due to unavailability of agricultural laborers and manual weeding is costly.
3.	Details of technologies selected for assessment/refinement	Farmers' practice – Two manual weeding Technology Option I – One spray of 2,4 D Ethyl Ester 38% EC @ 1.0 l/ha + One manual weeding Technology Option II – Use of Power Weeder
4.	Source of Technology	SRI, R A U, Pusa
5.	Production system and thematic area	Sugarcane-Sugarcane Farm Mechanization
6.	Performance of the Technology with performance indicators	(i) Yield (q/ha) (ii) Net return(Rs./ha) (iii) B:C ratio
7.	Final recommendation for micro level situation	Power weeding is energy, time, labour saving and economical

8.	Constraints identified and feedback for research	Power weeder is not available in local market. Low cost power weeder and easy to handle should be available in the local market.
9.	Process of farmers participation and their reaction	Actively participated and so many sugarcane growers want to purchase this implement.

Thematic area: - Weed Management

Problem definition: - Due to unavailability of seasonal laborers, timely weeding is not being possible in sugarcane crop and there is direct yield loss

Technology assessed: Use of power Weeder.

Table No. 6: *Evaluation of power weeder for weeding in sugarcane*

Technology option	No. of trials	Yield q/ha	% increase	Cost of cultivation Rs./ha	Gross return Rs./ha	Net return Rs./ha	BCR
Farmers' practice – Two manual weeding	08	678.1		69453	172915	103462	1.67
		721.4	06.38	63221	183957	120736	2.90
		775.2	14.30	60572	197676	137104	3.26
Technology Option I – One spray of 2,4 D Ethyl Ester 38% EC @ 1.0 l/ha + One manual weeding							
Technology Option II – Use of Power Weeder							
SEM ±		05.23					
C D (0.05)		15.07					

Result: - An OFT was conducted by K.V.K., West Champaran, Bihar on weed management of Sugarcane crop. Plot receiving power weeder for weed management resulted maximum yield 775.2 q/ha and realized maximum net return of Rs. 137104/ ha with maximum B:C ratio (3.26) in comparison to technology option I and farmers' practice.

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.	Paddy	Varietal R. Bhagwati	Seed	3.0	4.5	1	16	17	Non availability of seeds
		Varietal Swarna sub-1	Seed	4.0	3.0	2	08	10	
		Varietal R. Sweta	Seed	3.0	4.0	1	10	11	
		R. Kasturi	seed	-	0.6	-	02	02	
2.	Pigeon pea	Varietal NDA-1	seed	2.5	4.0	1	8	9	
3.	Lentil	Varietal HUL 57	Seed + R. Culture	5.0	2.5	3	04	07	
		KLS 218	Seed + R. Culture	-	1.5	-	04	04	
		P. Shivalik	Seed + R. Culture	4.0	3.5	02	12	14	
4.	Yallow Sarson	Varietal YS 66-197-3	Seed + Azotobater	3.0	3.0	02	08	10	
5.	Rai	R. Suflam	Seed + Azotobater	5.0	8.0	03	15	18	
6.	Wheat	H.D. 2733	Seed + PSB Azotobater	3.0	4.0	02	08	10	
		PBW 373	Seed + PSB Azotobater	-	1.0	01	02	03	
		DBW 14	Seed + PSB Azotobater	2.0	1.4	02	04	06	
		WR 544	Seed + PSB Azotobater	-	2.2	01	05	06	

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					
Paddy (R. Bhagwati)	Kharif 2013	Irrigated	Sandy loam	0.18	18.0	204	Wheat	3-7 july 2013	10-12 Nov 2013		
Paddy (Swarna sub-1)	Kharif 2013	Irrigated	Sandy loam	0.20	20.0	194	Wheat	17-22 june 2013	26-30 Nov 2013		
Paddy (R. Sweta)	Kharif 2013	Irrigated	Sandy loam	0.23	21.1	205	sugarcane	26-29 june 2013	14-19 Nov. 2013		

Paddy (R. Kasturi)	Kharif 2013	Irrigated	Sandy loam	0.19	22.0	204	sugarcane	2-7 july 2013	16-20 Nov.2013		
Pigeon pea NDA-1	Kharif 2013	RF	Sandy loam	0.16	20.0	203	Wheat/Fallow	01-07 july 2013	Crop is standing		
Lentil HUL 57	Rabi 2013-14	Irrigated	Sandy loam	0.18	20.0	201	paddy	05-08 Nov.2013	24-28 March 2013		
Lentil K LS 218	Rabi 2013-14	Irrigated	Sandy loam	0.20	26.0	208	paddy	05-08 Nov.2013	22-27 March 2014		
Lentil P. Shivalik	Rabi 2013-14	Irrigated	Sandy loam	0.17	19.0	201	paddy	12-15 Nov.2013	26-30 March 2014		
Yellow sarson (YS-66-197-3)	Rabi 2013-14	Irrigated	Sandy loam	0.18	23.0	196	Paddy	22-30 Oct.2013	01-05 March 2014		
Rai R Suflam	Rabi 2013-14	Irrigated	Sandy loam	0.19	21.0	197	paddy	15-25 Nov.2013	12-14 March 2014		
Wheat (HD 2733)	Rabi 2013-14	Irrigated	Sandy loam	0.25	27.0	193	paddy	01-05 Dec. 2013	Crop is standing		
Wheat (PBW-373)	Rabi 2013-14	Irrigated	Sandy loam	0.24	26.0	203	Paddy	12-15 Nov. 2013	Crop is standing		
Wheat DBW 14)	Rabi 2013-14	Irrigated	Sandy loam	0.19	22.4	205	Paddy	13-17 Nov. 2013	Crop is standing		
Wheat WR 544	Rabi 2013-14	Irrigated	Sandy loam	0.20	20.2	202	Paddy	15-21 Nov..2014	Crop is standing		

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
Yellow Sarson	Varietal Ys-66-197-3	Seed + Azotobater	10	3.0	10.5	8.8	19.30	15950	36750	20800	2.30	15850	30800	14950	1.94
Rai	Varietal R. Suflam	Seed + Azotobater	18	8.0	11.2	8.7	28.73	16000	39200	23200	2.45	15850	30450	14600	1.92

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

** BCR= GROSS RETURN/GROSS COST

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	Varietal NDA-1	Seed	09	4.0	Crop is Standing														
Lentil	Varietal HUL 57	Seed + R. Culture	07	2.5	14.2	10.7	32.7	15000	56800	41800	3.78	14250	42800	28550	3.0				
	Varietal KLS 218	Seed + R. Culture	04	1.5	13.6	11.0	23.63	15560	54400	38840	3.49	14250	44000	29750	3.08				
	Varietal P. Shivalik	Seed + R. Culture	14	3.5	13.1	10.3	27.18	15410	52400	36990	3.40	14250	41200	26950	2.89				
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

Other crops

Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	Area (ha)	Yield (q/ha)		% change in yield	Other parameters		*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demonstration	Check		Demo	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Paddy	Varietal R. Bhagwati	Seed	17	4.5	34.0	22.0	54.5			24105	54400	30295	2.25	23600	35200	11600	1049
	Varietal Swarna sub-I	Seed	10	3.0	48.5	35.1	38.1			24195	60625	36430	2.50	23495	43875	20380	1.86
	Varietal R. Sweta	Seed	11	4.0	42.0	34.0	23.5			24285	52500	28215	2.16	23495	42500	19005	1.80
	Varietal R. Kasturi	Seed	02	0.6	28.1	22.3	26.0			24285	44960	20675	1.85	23600	35680	12080	1.51
Wheat	Varietal HD 2733	Seed+PSB+Azotobacter	10	4.0	Crop is Standing												
	PBW 373	Seed+PSB+Azotobacter	03	1.0													
	DBW 14	Seed+PSB+Azotobacter	06	1.4													
	WR 544	Seed+PSB+Azotobacter	06	2.2													

Other enterprises

Category	Name of the technology demonstrated	No. of Farmer	No. of units	PDI*		% change in major parameter	Yield qt./ha		*Economics of demonstration Rs./ha				*Economics of check Rs./ha.			
				Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
IDM	PGPR+ Hexaconazole	10	-	12.2	28.0	56.42	46.3	39.0	24428	57875	33447	2.36	24748	48750	24002	1.96
Total																

* Per cent Disease Index (Sheath blight of rice Variety MTU-7029)

Other enterprises

Category	Name of the technology demonstrated	No. of Farmer	No. of units	No. of smutted balls/panicle*		% change in major parameter	Yield qt./ha.		*Economics of demonstration Rs./ha				*Economics of check Rs./ha			
				Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
IDM	Carbendazim + Propiconazole	10	-	6	47	87.2	49.3	42.4	24200	61625	37425	2.54	23000	53000	30000	2.30
Total																

*False smut of rice (Variety Hybrid rice Arize-6444)

* 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 of observations	Demonstration	Check
Farm Women					
Pregnant women					
Adolescent Girl					
Other women					
Children					
Neonatal					
Infants					

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			
ornamental fishes													
Portable plastic carp hatchery													
Pen culture of fish and prawn													
Shrimp farming													
Edible oyster farming													
Pearl culture													
Fish processing and value addition													
Others, if any													
IX. Production of Inputs at site													
Seed Production													
Planting material production													
Bio-agents production													
Bio-pesticides production													
Bio-fertilizer production													
Vermi-compost production													
Organic manures production													
Production of fry and fingerlings													
Production of Bee-colonies and wax sheets													
Small tools and implements													
Production of livestock feed and fodder													
Production of Fish feed													
Others, if any													
X. Capacity Building and Group Dynamics													
Leadership development													
Group dynamics													
Formation and Management of SHGs													
Mobilization of social capital													
Entrepreneurial development of farmers/youths													
PPV & FR ACT	01	84	01	85	14	-	14	01	-	01	99	01	100
Others, if any													
XI Agro-forestry													
Production technologies													
Nursery management													
Integrated Farming Systems													
XII. Others (Pl. Specify)													
TOTAL	36	731	171	902	109	39	148	11	06	17	851	216	1067

Rural Youth (on campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST			M	F	T
		M	F	T	M	F	T	M	F	T			
Mushroom Production	04	88	04	92	12	01	13	01	-	01	101	5	106

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			
Bee-keeping	02	41	04	45	06	03	09	01	-	01	48	07	55
Integrated farming													
Seed production													
Production of organic inputs													
Integrated Farming													
Planting material production													
Vermi-culture	02	43	-	43	08	-	08	-	-	-	51	-	51
Sericulture													
Protected cultivation of vegetable crops													
Commercial fruit production													
Repair and maintenance of farm machinery and implements	01	24	-	24	04	-	04	-	-	-	28	-	28
Nursery Management of Horticulture crops													
Training and pruning of orchards													
Value addition													
Production of quality animal products													
Dairying													
Sheep and goat rearing													
Quail farming													
Piggery													
Rabbit farming													
Poultry production													
Ornamental fisheries													
Enterprise development													
Para vets													
Para extension workers													
Composite fish culture													
Freshwater prawn culture													
Shrimp farming													
Pearl culture													
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing													
Small scale processing													
Post Harvest Technology	01	25	-	25	01	-	01	-	-	-	26	-	26
Tailoring and Stitching													
Rural Crafts	01	-	25	25	-	03	03	-	1	1	-	29	29
TOTAL	11	221	33	254	31	07	38	02	01	03	254	41	295

Extension Personnel (on campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST			M	F	T
		M	F	T	M	F	T	M	F	T			
Productivity enhancement in field crops	03	67	08	75	06	-	06	01	-	01	74	08	82
Value addition	01	23	-	23	02	-	02	-	-	-	25	-	25

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				
Others, if any														
f) Spices														
Production and Management technology														
Processing and value addition														
Others, if any														
g) Medicinal and Aromatic Plants														
Nursery management														
Production and management technology														
Post harvest technology and value addition														
Others, if any														
III. Soil Health and Fertility Management														
Soil fertility management														
Soil and Water Conservation														
Integrated Nutrient Management														
Production and use of organic inputs														
Management of Problematic soils														
Micro nutrient deficiency in crops														
Nutrient Use Efficiency														
Soil and Water Testing														
Others, if any														
IV. Livestock Production and Management														
Dairy Management														
Poultry Management														
Piggery Management														
Rabbit Management														
Disease Management														
Feed management														
Production of quality animal products														
Others, if any Goat farming														
V. Home Science/Women empowerment														
Household food security by kitchen gardening and nutrition gardening														
Design and development of low/minimum cost diet														
Designing and	01	-	28	28	-	03	03	-	-	-	-	31	31	

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			
development for high nutrient efficiency diet													
Minimization of nutrient loss in processing	01	-	23	23	-	03	03	-	-	-	-	26	26
Gender mainstreaming through SHGs													
Storage loss minimization techniques													
Enterprise development													
Value addition	02	-	46	46	-	07	07	-	01	01	-	54	54
Income generation activities for empowerment of rural Women	01	-	31	31	-	04	04	-	01	01	-	36	36
Location specific drudgery reduction technologies													
Rural Crafts													
Capacity building													
Women and child care	03	-	74	74	-	12	12	-	01	01	-	87	87
Others, if any	01	-	24	24	-	02	02	-	01	01	-	27	27
VI. Agril. Engineering													
Installation and maintenance of micro irrigation systems													
Use of Plastics in farming practices													
Production of small tools and implements													
Repair and maintenance of farm machinery and implements	01	28	-	28	07	-	07	01	-	01	36	-	36
Small scale processing and value addition													
Post Harvest Technology													
Others, if any	03	79	02	81	13	01	14	01	-	01	93	03	96
VII. Plant Protection													
Integrated Pest Management	07	185	12	197	25	03	28	04	01	05	214	16	230
Integrated Disease Management	09	204	29	233	32	06	38	03	01	04	239	36	275
Bio-control of pests and diseases													
Production of bio control agents and bio pesticides													
Others, if any	01	25	01	26	01	-	01	-	-	-	26	01	27
VIII. Fisheries													
Integrated fish farming													
Carp breeding and hatchery management													
Carp fry and fingerling rearing	01	34	-	34	-	-	-	-	-	-	34	-	34
Composite fish culture &	02	45	01	46	06	-	06	-	-	-	51	01	52

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			
Cold water fisheries													
Fish harvest and processing technology													
Fry and fingerling rearing	01	23	-	23	03	-	03	-	-	-	26	-	26
Small scale processing													
Post Harvest Technology													
Tailoring and Stitching													
Rural Crafts													
Others, if any	03	60	04	64	08	-	08	02	-	02	70	04	74
TOTAL	13	250	52	302	36	07	43	05	02	07	291	61	352

Extension Personnel (Off Campus)

Thematic Area	No. of Courses	No. of Participants									Grand Total		
		Other			SC			ST			M	F	T
		M	F	T	M	F	T	M	F	T			
Productivity enhancement in field crops	04	83	09	92	07	-	07	-	-	-	90	09	99
Integrated Pest Management													
Integrated Nutrient management	02	52	01	53	05	-	05	01	-	01	58	01	59
Rejuvenation of old orchards													
Protected cultivation technology													
Formation and Management of SHGs													
Group Dynamics and farmers organization													
Information networking among farmers													
Capacity building for ICT application													
Care and maintenance of farm machinery and implements	01	24	-	24	04	-	04	-	-	-	28	-	28
WTO and IPR issues													
Management in farm animals													
Livestock feed and fodder production													
Household food security													
Women and Child care													
Low cost and nutrient efficient diet designing													
Production and use of organic inputs													
Gender mainstreaming through SHGs													
Crop intensification													
Others (if any)	03	99	08	107	12	01	13	02	-	02	113	09	122
Total	10	248	18	266	28	01	29	03	-	03	279	19	298

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				
Commercial fruit production														
Repair and maintenance of farm machinery and implements	01	24	-	24	04	-	04	-	-	-	28	-	28	
Nursery Management of Horticulture crops														
Training and pruning of orchards														
Value addition	02	-	42	42	-	07	07	-	02	02	-	51	51	
Production of quality animal products														
Dairying														
Sheep and goat rearing														
Quail farming														
Piggery														
Rabbit farming														
Poultry production														
Ornamental fisheries														
Para vets														
Para extension workers														
Composite fish culture														
Freshwater prawn culture														
Shrimp farming														
Pearl culture														
Cold water fisheries														
Fish harvest and processing technology														
Fry and fingerling rearing	01	23	-	23	03	-	03	-	-	-	26	-	26	
Small scale processing														
Post Harvest Technology	01	25	-	25	01	-	01	-	-	-	26	-	26	
Tailoring and Stitching														
Rural Crafts	01	-	25	25	-	03	03	-	01	01	-	29	29	
Others	03	60	04	64	08	-	08	02	-	02	70	04	74	
TOTAL	24	471	85	556	67	14	81	07	03	10	545	102	647	

through SHGs													
Others	03	99	08	107	12	01	13	02	-	02	113	09	122
TOTAL	15	368	26	394	40	02	42	04	-	04	412	28	440

Pl ease furnish the details of training programmes as Annexure in the Performa given below

Details of training programmes :

Date	Clientele	Title of the training programme	Duration in days	Venue (Off / On Campus)	Number of participants			Number of SC/ST		
					Male	Female	Total	Male	Female	Total
1-2 April	PFW	Fish Pond Management	2	ON	25	00	25	02	00	02
6 April	PFW	IPM in Sugarcane	1	Off	31	01	32	05	00	05
9 April	PW	Dietary management of anemia	1	Off	00	20	20	00	10	10
10 April	PFW	IDM in sugarcane	1	Off	31	01	32	05	00	05
11-13 April	RY	Mushroom production techniques	3	ON	23	02	25	05	00	05
15 April	PF	Farm Machines to be used for crop harvesting	1	Off	34	00	34	09	00	09
17-18 April	PFW	Weed Management in Sugarcane	1	ON	33	01	34	06	01	07
26 April	EF	Green manuring and cultivation of moong	1	Off	29	00	29	02	00	02
6-7 May	PFW	Carp fry and fingerling rearing management	2	ON	19	01	20	02	01	03
8 May	EF	SRI Method in Rice	1	ON	33	00	33	08	00	08
10-11 May	PW	Design & Development of low/minimum cost diet	2	ON	00	17	17	00	03	03
15 May	PFW	IPM in Rice	1	ON	38	01	39	07	00	07
16-18 May	RY	Production techniques of Vermicompost	3	ON	24	00	24	05	00	05
17-18 May	PFW	IDM in Rice	2	ON	23	07	30	06	01	07
21-22 May	PFW	IDM in Rice	2	Off	26	03	29	06	00	06
23-24 May	PFW	Cultivation of submergence Rice	2	ON	23	02	25	04	00	04
27 May	PFW	Cultivation of submergence Rice	1	Off	25	03	28	02	01	03
28-30 May	RY	Bee keeping & its management	3	ON	21	04	25	02	00	02
31 May	EF	Farm Machine to be used for Rice cultivation	1	ON	28	00	28	04	00	04
1 June	EF	SRI method in rice	1	Off	23	08	31	02	01	03
10-12 June	PFW	Value addition of summer season fruits.	3	ON	00	26	26	00	02	02

14 June	PFW	Scientific cultivation of Turmeric	1	ON	25	01	26	02	00	02
17 June	PFW	IPM in Rice	1	Off	05	22	27	03	00	03
17-19 June	RY	Production techniques of vermicompost at commercial level	3	ON	26	00	26	02	00	02
21 June	PFW	IDM in rice	1	OFF	28	01	29	02	00	02
21-22 June	PFW	DSR by Drum seeder & Zero tillage	2	ON	29	00	29	06	00	06
26 June	PFW	Transplanting of paddy by paddy transplanter	1	ON	28	02	30	03	01	04
27 June	PFW	Nursery management of carp fry and fingerling rearing.	1	Off	21	00	21	03	00	03
28-30 June	RY	Induced breeding techniques in carp	3	ON	21	03	24	03	00	03
30 June	PFW	Integrated weed management in Rice	1	Off	26	03	29	03	01	04
01 July	EF	SRI method in Rice	1	OFF	21	00	21	02	00	02
3-4 July	RY	Pest and Disease management for Mushroom	2	ON	23	04	27	02	01	03
8-9 July	RY	Preparation of value added products of Mango	2	ON	00	26	26	00	04	04
12 July	PFW	IPM in Rice	1	OFF	26	03	29	02	00	02
13 July	PFW	IDM in Rice	1	OFF	23	00	23	03	00	03
14 July	PW	Role of women in integrated farming system	1	OFF	00	27	27	00	03	03
17-18 July	PFW	Fish Pond management	2	ON	25	00	25	02	00	02
19-20 July	PFW	Scientific cultivation of Medicinal & Aromatic plants	2	OFF	30	01	31	02	00	02
21 July	PFW	Transplanting of paddy by Paddy Transplanter	1	ON	29	00	29	04	00	04
23 July	PFW	Composite fish culture	1	Off	24	00	24	03	00	03
29-30 July	PFW	DSR by Drum seeder & Zero tillage	2	ON	28	00	28	05	00	05
2-3 August	PFW	IDM in rice	2	OFF	35	03	38	05	01	06
5-6 August	PW	Preparation of weaning food from cereals	2	ON	00	31	31	00	03	03
7 August	PFW	IPM in Rice	1	Off	39	01	40	02	00	02
12-13 August	PW	Preparation of children's clothing	2	ON	00	35	35	00	03	03
20-21 August	PFW	Different methods of sugarcane planting	2	ON	39	00	39	01	00	01
22-24 August	RY	Management of	3	ON	30	00	30	01	00	01

August		Bee's in rainy season								
26 August	PFW	Weed management in rice	1	Off	47	01	48	01	00	01
29-30 August	RY	Rearing of carp and fingerlings	2	ON	26	00	26	03	00	03
31 August	EF	Nursery pond management	1	OFF	23	00	23	02	00	02
2-3 Sep	PFW	Weed management in Sugarcane	2	ON	24	02	26	01	00	01
4 Sep	PFW	Weed management in Rice	1	OFF	32	00	32	03	00	03
5-6 Sep	PFW	IPM in Sugarcane	2	ON	28	01	29	03	01	04
9-10 Sep	PFW	Composite fish culture	2	ON	26	01	27	02	01	03
11 Sep	PFW	Balance diet & Nutritional need during different physiological condition of women	1	OFF	00	33	33	00	04	04
16-17 Sep	PFW	Weed management in Sugarcane	2	OFF	32	01	33	06	01	07
20 Sep	PFW	IPM in Sugarcane	1	ON	25	01	26	02	01	03
20 Sep	RY	Feed management of carp fingerlings	1	OFF	25	00	25	02	00	02
23-25 Sep	RY	Repair & Maintenance of diesel pump set	3	ON	28	00	28	04	00	04
27-28 Sep	EF	IPM in Rice	2	ON	25	00	25	02	00	02
3 Oct	PFW	SRI method in wheat	1	Off	24	01	25	02	00	02
4-5 Oct	EF	SRI method in wheat	1	ON	21	01	22	01	00	01
8 Oct	PFW	Feed management in grow-out fish pond	1	OFF	32	00	32	02	00	02
9-10 Oct	PFW	Use of hand & power operated Plant protection equipments for paddy crop	2	ON	33	00	33	03	00	03
17-19 Oct	PFW	Mithila painting.	3	ON	00	37	37	00	05	05
21-22 Oct	PFW	Use and benefit of power operated tractor drawn harvesting implements in Paddy	2	ON	26	00	26	04	00	04
23-24 Oct	PFW	Scientific cultivation of Rabi crops	2	ON	25	00	25	02	01	03
28-30 Oct	RY	Mushroom production techniques	3	ON	26	04	30	02	01	03
29-30 Oct	RY	Integrated fish farming	2	OFF	21	00	21	02	00	02
31 Oct	PFW	Scientific cultivation of autumn plantation of Sugarcane	1	OFF	24	00	24	02	01	03
1-2 Nov	PFW	Livelihood support through vegetable	2	ON	00	36	36	00	05	05

		processing for women folk								
6-7 Nov	PFW	Scientific cultivation of Wheat	2	ON	27	00	27	03	00	03
11-12 Nov	PFW	Scientific cultivation of Oilseed and pulses	2	OFF	26	01	27	02	01	03
13 Nov	PFW	IPM in Pigeon pea	1	OFF	29	00	29	03	01	04
14 Nov	PFW	Composite fish culture	1	Off	25	00	25	03	00	03
18-20 Nov	RY	Mushroom production and its value addition.	3	ON	19	06	25	03	01	04
21 Nov	PFW	Wheat cultivation by Zero-cum ferti -drill	1	ON	28	00	28	03	00	03
27 Nov	EF	SRI method in Wheat	1	ON	21	00	21	02	00	02
28-29 Nov	RY	Post harvest technology for paddy	2	ON	26	00	26	01	00	01
30 Nov	PFW	Diseases of fish and their management.	1	OFF	27	00	27	02	00	02
4-5 Dec	EF	Use of plant protection equipments	2	ON	25	00	25	05	00	05
11-13 Dec	PFW	Value added products from winter season vegetables	3	ON	00	29	29	00	04	04
14 Dec	PFW	IPM in Oilseeds and pulses	1	OFF	24	01	25	06	01	07
20 Dec	PFW	IDM in oilseeds and pulses	1	OFF	23	00	23	04	00	04
21-22 Dec	PFW	Water and nutrient management in sugarcane crop	2	OFF	27	00	27	05	01	06
23 Dec	PFW	IDM in Sugarcane	1	OFF	27	00	27	03	00	03
23-24 Dec	PFW	Nutrition during early childhood	2	OFF	00	26	26	00	06	06
26-28 Dec	RY	Vermicompost production technique	3	ON	27	00	27	03	00	03
28 Dec	EF	Weed mgt. in Wheat	1	OFF	70	03	73	06	01	07
30-31 Dec	EF	Composite fish culture	2	OFF	26	00	26	06	00	06
1-2 Jan	PFW	Value added products from winter season vegetables	2	OFF	00	28	28	00	01	01
6 Jan	RY	Use of drip irrigation system in vegetable production	1	Off	25	00	25	05	00	05
8 Jan	PFW	Scientific cultivation of Spring planting sugarcane	1	OFF	23	01	24	04	00	04
9 Jan	PFW	IDM in Vegetables	1	OFF	21	00	21	03	01	04
10-11 Jan	PFW	IDM in Rabi crops	2	ON	27	00	27	04	00	04
21 Jan	EF	Scientific cultivation of Spring planting sugarcane	1	OFF	29	00	29	03	00	03
22 Jan	PFW	Ratoon management	1	Off	26	01	27	03	02	05

		in sugarcane								
23-24 Jan	RY	Oyster mushroom cultivation	2	ON	19	05	24	02	01	03
3 Feb	PFW	IDM in Pulses	1	Off	29	01	30	03	02	05
7-8 Feb	RY	Value added products from potato.	2	ON	00	25	25	00	05	05
11 Feb	PFW	IDM in Pulses	1	ON	33	00	33	04	01	05
12-13 Feb	PFW	IDM in fruits and vegetables	2	ON	31	01	32	03	01	04
14 Feb	PFW	IDM in fruits and vegetables	1	Off	28	01	29	04	01	05
14-15 Feb	PFW	Micro irrigation system in vegetable crops	2	OFF	29	00	29	05	00	05
19 Feb	PFW	Ratoon management in sugarcane	1	Off	30	01	31	06	00	06
20 Feb	PFW	Use of weeding machine in sugarcane	1	ON	31	00	31	04	01	05
20-22 Feb	RY	Mushroom Production and processing techniques.	3	ON	31	05	36	02	02	04
24 Feb	PW	Dietary mgt. of malnutrition of school age children	1	OFF	00	28	28	00	03	03
25-26 Feb	PFW	Fruit preservation	2	ON	00	26	26	00	04	04
26-27 Feb	RY	Vermicompost production technique	2	ON	37	01	38	05	00	05
28 Feb	EF	Scientific cultivation of spring sugarcane	1	OFF	29	00	29	02	00	02
1 March	EF	Minimal processing of fruits and vegetables.	1	Off	00	26	26	00	03	03
6 March	PFW	IDM in vegetables	1	ON	34	01	35	06	01	07
6-8 March	RY	Bee keeping	3	ON	26	02	28	04	01	05
7-8 March	PFW	Repair & use of poly tunnel and poly house	2	OFF	30	00	30	03	00	03
10 March	PFW	Management of stored grain pests	1	ON	26	01	27	01	00	01
14 March	PFW	Management of fruiting orchard	1	OFF	29	00	29	05	00	05
15-16 March	RY	Mushroom cultivation technique	2	ON	25	02	27	02	01	03
18 Mar	PFW	IDM in sugarcane	1	OFF	28	00	28	04	00	04
19 Mar	PFW	IPM in sugarcane	1	OFF	33	00	33	08	01	09
20 March	PFW	Water management in sugarcane	1	OFF	36	01	37	08	00	08
24-25 March	RY	Rural handicraft	2	ON	00	29	29	00	04	04
25 Mar	EF	SRI in Wheat	1	OFF	28	00	28	01	00	01
27 March	PFW	Cultivation of summer vegetables	1	OFF	29	00	29	02	00	02
29 Mar	EF	Green Manuring	1	OFF	26	00	26	04	00	04

Farmers Seminar	01	100	08	108	2	-	2	102	8	110
Workshop	-	-	-							
Group meetings	03	91	3	94			1	92	3	95
Lectures delivered as resource persons	21	500	49	549				500	49	549
Advisory Services										
Scientific visit to farmers field	64	250	10	260	1	-	1	251	10	261
Farmers visit to KVK	633	591	38	629	3	1	4	594	39	633
Diagnostic visits										
Exposure visits	01	47	01	48	-	-	-	47	1	48
Ex-trainees Sammelan										
Soil health Camp										
Animal Health Camp										
Agri mobile clinic										
Soil test campaigns										
Farm Science Club Conveners meet										
Self Help Group Conveners meetings										
Mahila Mandals Conveners meetings										
Celebration of important days (specify)										
Any Other (Specify)										
Total										

B. Other Extension activities

Nature of Extension Activity	No. of activities	Farmers			Extension Officials			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Newspaper coverage	39	Mass								
Radio talks	-									
TV talks	04	Mass								
Popular articles	02	Mass								
किसान समाचार	04	3500	431	3941	59	-	59	3559	431	4000

3.5 Production and supply of Technological products

Village seed

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

Ornamental plants				
Medicinal and Aromatic				
Plantation				
Spices				
Turmeric	Rajendra Sonia-	25	1,00,000	
Tuber				
Elephant yams				
Fodder crop saplings				
Forest Species				
Others, pl.specify- Lemon Grass	5,00,000 No		5,00,000	
Citronella	5,00,000 No		5,00,000	
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				
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3.6. (A) Literature Developed/Published (with full title, author & reference)

S. No.	Name of programme	Name of KVK personnel and designation	Date and Duration	Organized by
1.	Orientation course on Advances in Agricultural Technologies for Sustainable growth	Dr. Kumari Sunita (SMS, Home Science)	16 th Sept. to 06 th October,2013	R.A.U.,Pusa
2.	Orientation course on Advances in Agricultural Technologies for Sustainable growth	Dr. Shivendra Kumar (SMS, fisheries)	05 th Dec. to 25 th Dec., 2013	R.A.U.,Pusa
3.	Orientation course on Advances in Agricultural Technologies for Sustainable growth	Eg. Manoj Kumar (SMS, Agril. Eng.)	05 th Dec. to 25 th Dec., 2013	R.A.U.,Pusa
4.				

Item	Title	Authors name	Number	Circulation
Research paper				
Seminar/conference/ symposia papers				
Books				
Bulletins				
किसान समाचार	By KVK		4000	All circulated
Popular Articles				
Book Chapter				
Extension Pamphlets/ literature				
Technical reports				
Electronic Publication (CD/DVD etc)				
TOTAL				

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:

5.			
6.			
7.			

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

Type of activities	No. of activities	Number of participants	Related crop/livestock technology

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
25.03.2014	Dr.V.P.Singh- Director Research, RAU,Pusa	Experimental trial monitoring

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

Name of organization	Nature of linkage
National Horticulture Mission	To establish model nursery, vegetable seed production, training of farmers, supply of planting materials
ATMA, West Champaran	Training of farmers, Infrastructure development, Assessment, refinement, validation and adaptation of trial
Directorate of Sugarcane, Bihar Govt.	Development of seed production programme of Sugarcane
DHO, W. Champaran	Training of farmers, Kisan goshthi
DAO, W. Champaran	Training of farmers, Kisan goshthi and Kisan Mela
DFO, W. Champaran	Training of farmers, Kisan goshthi
DAHO, W. Champaran	Training of farmers, Kisan goshthi
NGO a) Super Kisan Clubs, b) Fakirana Sister Society c) Kisan Jagaran Samittee, Bagaha	Training of farmers, Kisan goshthi
NABARD	Formation of Kisan club, Training of Farmers, Krishan Goshthi.

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)
April 2013	25	03	
May, 2013	49	06	
June, 2013	50	06	
July, 2013	53	06	
August, 2013	56	09	
Sept, 2013	53	06	
October, 2013	51	06	
November, 2013	51	06	
December, 2013	27	03	
January, 2014	49	06	
February, 2014	99	09	
March, 2013	84	09	

(For whole of the year)

6.5 Utilization of staff quarters:

Whether staff quarters have been completed: Construction work completed but there is no water supply so till date not handed over.

No. of staff quarters:

Date of completion:

Occupancy details:

Months	Q I	QII	Q III	QIV	Q V	QVI

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	316173.06	113704.00	227261.00	202616.00
2012-13	4643.06	536876.00	371815.00	169704.00
2013-14	29250.56	252786.00	272898.00	336000.00

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

8.5. 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
List of 1543 farmers is being sent very shortly.								

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
- II No. of farmers involved
- III Area (ha.)
- IV Date of sowing
- V Crop Season
- VI Result of trial with photographs however detailed results/observation should be sent as per performance after crop harvest
- VII Amount Spent

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

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 KVK's 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

Programme Co-ordinator
 Krishi Vigyan Kendra, Madhopur
 West Champaran