

PROFORMA FOR ANNUAL REPORT 2016-17

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, Nafed complex, Village & Post -Ujwa, Nazafgarh, New Delhi - 110073	011- 65638199	011- 28525129	<i>kvkujwa@yahoo.com</i> <i>Website:</i> <i>www.kvkdelhi.org</i>

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

Address	Telephone		E mail
	Office	FAX	
National Horticultural Research & Development Foundation (NHRDF), 47, Pankha Road Institutional Area, Janakpuri, New Delhi, Pin: 110058	011-28522211, 28524150	011- 28525129	<i>delhi@nhrdf.com</i>

1.3. Name of the Programme Coordinator with phone, mobile No & e-mail

Name of the Programme Coordinator	Telephone / Contact		
	Residence	Mobile	Email
Dr.P.K.Gupta	011- 28080454	8888867619	<i>drpkgupta11@gail.com</i>

1.4. Year of sanction: 1995

1.5. Staff Position (as on 31st March 2017)

Sl. No.	Sanctioned post	Name of the incumbent	Age	Discipline with highest degree obt.	Pay Band & Grade Pay (Rs.)	Present basic (Rs.)	Date of joining in KVK	Permanent /Temporary	Category (SC/ST/OBC/ Others)
1	Programme Coordinator	Dr.P.K.Gupta	46	Horticulture	37400-67000 +GP 9000	37400 +9000	28/2/2017	Temporary	Others
2	Subject Matter Specialist	Ritu Singh	43	Home Science	15600-39100 +GP 5400	23700 +5400	10.02.05	-do-	-do-
3	Subject Matter Specialist	Dr. D. K. Rana	41	Plant Pathology	15600-39100 +GP 5400	19680 +5400	5.05.10	-do-	-do-
4	Subject Matter Specialist	Rakesh Kumar	42	Horticulture	15600-39100 +GP 5400	23700+ 5400	22.09.05	-do-	-do-
5	Subject Matter Specialist	Vacant*	-	Animal Husbandry	15600-39100 +GP 5400	-	-	-do-	-do-
6	Subject Matter Specialist	Vacant*	-	Agriculture Extension	15600-39100 +GP 5400	-	-	-	-
7	Subject Matter Specialist	Vacant*	-	Agronomy	15600-39100 +GP 5400	-	-	-	-
8	Programme Assistant	Brijesh Yadav	34	Soil Science	9300-34800 +GP 4200	10130 + 4200	17.02.14	-do-	-do-
9	Computer Programmer	Manju	35	Computer Science	9300-34800 +GP 4200	12930 +4200	2.05.08	-do-	-do-
10	Farm Manager	Vacant*	-	Agriculture	9300-34800 +GP 4200	-	-	-	-
11	Accountant / Superintendent	V. K. Dixit	54	Administration and accounts	9300-34800 +GP 4200	18760+ 4200	21.10.05	-do-	-do-
12	Stenographer	Atma Ram	49	Administration	5200-20200 +GP 1900	8920 +1900	10.02.05	-do-	-do-
13	Driver	Rajesh Kumar	42	Jeep Driver	5200-20200 +GP 1900	8600 + 1900	02.02.05	-do-	-do-
14	Driver	Krishan	46	Tractor Driver	5200-20200 +GP 1900	7930+ 1900	02.05.08	-do-	-do-
15	Supporting staff	Vacant*	-	Administration	4440- 7440 +GP 1300	-	10.02.05	-do-	-do-
16	Supporting staff	Ramesh Chander	45	Administration	4440- 7440 + GP 1300	7140+ 1300	10.02.05	-do-	-do-

*Recruitment process of vacant posts to be completed up to June, 2017

1.6. Total land with KVK (in ha)

:

S. No.	Item	Area (ha)
1	Under Buildings	0.5
2.	Under Demonstration Units	1.0
3.	Under Crops	12.0
4.	Orchard/Agro-forestry	0.4
5.	Others (specify)	1.0

1.7. Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	17.2.2011	548.3	54,38,664/-			
2.	Farmers Hostel							
3.	Staff Quarters							
	1							
	2							
	3							
	4							
	5							
	6							
4.	Demonstration Units							
	1							
	2							
	3							
	4							
5	Fencing							
6	Rain Water harvesting system							
7	Threshing floor	ICAR	17.2.2011	222.3	1,92,031/-			
8	Farm go down	ICAR	31.3.2011	35.0	1,99,869/-			

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Tractor	1997	231242	1047**	Not good
Scooter	1995	21818	200*	Not good
Motorcycle	2000	47063	51784	Not good
Jeep	2005	491892	227619	Not good
Jeep	2017	800000	0	Delivery awaited
Tractor	2017	700000	20	Excellent

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Air conditioner - 1	1999	27500	Working
Harrow - 1	1999	8600	Working
Refrigerator - 1	1999	9400	Working
Cassette Amplifier Player	1999	4370	Working
Over Head Projector - 1	1995	23520	Working
Slide Projector - 1	1995	11200	Working
Video Cassette Recorder - 1	1997	13000	Working
Television - 1	1997	19890	Working
Fax Machine - 1	1997	13000	Working
Type writer - 1	1996	9855	Working
Seed drill machine - 1	1997	6150	Working

Computer - 2	2000	49500	Not working
Computer -1	2010	25725	Working
Computer -1	2011	24210	Working
Photocopier machine - 1	1998	116610	Working
CD player - 1	2002	8628	Working
Video camera - 1	2002	59990	Not Working
Digital Still camera - 1	2006	24900	Not Working
LCD multi media player	2007	97000	Good
Speaker Sound Colum- 2	1999	2043	Working
R.O.-1	2014	15500	Working
Water Cooler-1	1999	20000	Not Working
Finger Print Attendance Machine-1	2014	11250	Working
Heat Convector-2	2014	1800	Working
Refrigerator-1	2011	11200	Working
Room Cooler-1	2000	6100	Not Working
Room Cooler-3	2012	20402	Working
Telephone-1	2013	1800	Working
Printer-1	2012	5350	Working
UPS-1	2013	2100	Working
Trolley-1	2016	158832	Working
Plastic palates-8	2016	29560	Working
Water Cooler with RO-1	2016	42550	Working
Desert Cooler-4	2009	18000	Not Working
Desert Cooler-5	2014	25594	Working
Microphone-1	1999	1278	Working
Heat Convector	2000	1875	Working
Cultivator-1	1997	1672	Working
Tractor trolley-1	1998	11000	Working
Screen-1	1995	1120	Working
Modem-1	1999	3900	Not Working
Modem-1	2007	2850	Not Working
Printer -1	2009	1850	Not Working
Printer -1	2010	7035	Working
UPS-1	2009	1700	Not Working
UPS-2	2009	6195	Not Working
UPS -1	2011	1785	Not Working
Soil Testing kit-1	2009	1000	Working
Scanner -1	2010	4148	Working
Speaker-1	2010	1733	Working
Photocopier Machine-1	2011	35000	Working
Gen Set -1	2011	59000	Working
Laptop -1	2011	36170	Working
Submercible Pump-1	2011	148713	Not Working
Small autoclave-1	2012	67280	Working
Hot air oven-1	2012	45016	Working
Laminator flow -1	2012	78874	Working
Colony counter-1	2012	6156	Working
B.O.D. incubator-1	2012	107730	Working
Microscope-1	2012	37822	Working
Refrigerator -1	2012	32600	Working
Electric balance-1	2012	42750	Working
Water distillation-1	2012	25650	Working
pH meter-1	2012	19687	Working
EC meter-1	2012	21038	Working
Spectrophotometer-1	2012	39150	Working
Flame photometer-1	2012	60750	Working
Computer-1	2012	34000	Working
Air conditioner -1	2012	33975	Working

Laptop-1	2012	37000	Working
UPS-1	2012	2199	Working
Sprit lamp-2	2012	157	Working
Hygrometer-1	2012	473	Working
Planker (wood pata with chain)	2012	2300	Not Working
Planker (wood pata with chain)	2016	8947	Working
Mrida Parikshak Soil Testing Mini Lab	2015	75000	Working
Mrida Parikshak Soil Testing Mini Lab	2016	75000	Working

1.8. A). Details SAC meeting* conducted in the year 2016-17

S No.	Date	Name and Designation of Participants	No. of absentees	Salient Recommendations	Action taken
1.	3.3.2017	<ul style="list-style-type: none"> • Dr. Bijender Singh President, NHRDF • Sh. R. K. Yadav, Ex-PC, KVK, Ujwa, New Delhi • Dr. N.K.Verma, Pr. scientist, IARI, New Delhi • Office of the Joint Director (Agril.) Govt. NCT, Delhi • Office of the Director, Directorate of Animal Husbandry, Delhi • Sh. Alok Kr. Singh Asst. Director, All India Radio, New Broadcasting House, Sansad Marg, New Delhi • Sh. J.P.Sharma Office of Director (Horticulture), Delhi Parks & Garden society, Deptt. Of environment, Delhi Secretariat building, I P estate, New Delhi • Smt. Sudesh Rani, Nangloi Delhi • Smt. Annu Gulati, Paschim Vihar, Delhi • Mrs. Ritu Singh SMS (HS), KVK, Ujwa, New Delhi 	4	<p>KVK & line department should work collectively for any extension activity</p> <p>Stories of more successful entrepreneurs of KVK should be sent to AIR for their wider broadcast.</p> <p>The soil and water samples of farmers which come through state agriculture department will be tested free of cost by KVK.</p> <p>Under on farm trials improved varieties suited to the NCT region should be selected.</p> <p>More emphasis to promote organic farming in vegetable crops and use of biofertilisers should be encouraged</p> <p>It was suggested that cultivation of Marigold should be promoted for</p>	<p>Line departments are roped in for extension activities of KVK.</p> <p>The successful entrepreneurs of KVK has been introduced to All India radio</p> <p>Noted for compliance</p> <p>CSSRI, Karnal and IARI, New Delhi has been contacted in this regard and based on their advice the trials are planned</p> <p>SMS (PP) has included such activities it in AAP 2017-2018.</p> <p>SMS (Hort) has included it in AAP 2016-17.</p>

	<ul style="list-style-type: none"> • Sh. Rakesh Kumar SMS(Hort.), KVK, Ujwa, New Delhi • Dr. Devender Rana SMS (PP), KVK, Delhi • Mrs. Manju PA (Comp), KVK, Delhi • Sh. Brijesh Yadav, PA (SS), KVK, Ujwa, New Delhi • Sh. V. K. Dixit OSCA , KVK, Ujwa, New Delhi • Dr. P.K. Gupta, PC, Member Secretary, KVK, Ujwa, New Delhi 	<p>higher income among marginal farmers</p> <p>Demonstration on terrace gardening/urban kitchen gardening should be promoted</p> <p>Front line demonstration on use of mulching in vegetables should be included.</p>	<p>SMS (HS)/ SMS (Hort)has included it in AAP 2017-18.</p> <p>SMS (Hort) has included it in AAP 2016-17.</p>
--	--	---	--

** Attach a copy of SAC proceedings along with list of participants*

2. DETAILS OF DISTRICT (2016-17)

2.1 Major farming systems/enterprises (based on the analysis made by the KVK)

S. No	Farming system/enterprise	
1	Irrigated (bore well)	Bajra/Fodder-Mustard/Wheat; Paddy-wheat; Vegetables-Vegetables
2	Irrigated (canal)	Paddy-wheat, Vegetable-Vegetable
3	Tank Irrigated	-
4	Rain fed	Fallow-Mustard
5	Enterprises	Animal Husbandry/Poultry/Mushroom/Bee keeping

2.2 Description of Agro-climatic Zone & major agro ecological situations (based on soil and topography)

S. No	Agro-climatic Zone	Characteristics
1	Trans- Gangatic Plains region (Zone VI)	Semi-Arid, Low rainfall, high temperature during summer (up to 48 degree C) Very low temperature during winter (up to 2 degree C), frost occur once or twice in the season.
2	Agro ecological situation	Characteristics
	Agro-eco situation-9 Agro-ecological region -4, Agro-ecological sub region - 4.1	Alluvial derived soil comprise the northern Indo-Gangatic plains

2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
1	Inceptisols and entisol	Sandy loam - Loam, Light texture, low water holding capacity, wide range of crops can be grown but constraint is saline irrigation water.	49702

2.4. Area, Production and Productivity of major crops cultivated in the district

S. No	Crop	Area (ha)	Production (MTs)	Productivity (Qtls /ha)
1.	Paddy	6035	25904	42.92
	Wheat	19360	85558	44.19
	Barley	64	186	29.06
	Bajra	1520	3817	25.13
	Maize	35	783	22.37
	Jowar	3242	29384	9.06
	Gram	41	54	13.1
	Potato	436	9273	21.26
	Oilseed	--	---	--
	S. Cane	--	--	--
2.	Vegetable (Gross area)+	22387	391901	175.0
3.	Flowers (Gross area)+	5995	--	--

Source: Development Department, Govt. of NCT Delhi.

2.5. Weather data

Month	Rainfall (mm)	Mean monthly Temperature °C		Mean monthly Relative Humidity (%)	
		Minimum	Maximum	Morning	Evening
April, 2017	-	22.44	37.5	65.3	23.6
May, 2017	32.3	26.2	39.9	66.1	27.6
June, 2017	92	26.7	36.8	74.7	40.29
July, 2017	215.3	27.49	35.44	88.8	59.74
August, 2017	102	27.4	34.9	87.5	61.74
September, 2017	-	25.6	33.1	89.2	54.6
October, 2017	-	19.33	33.5	86.8	34.2
November, 2017	-	13.3	36.2	92.3	40.7
December, 2017	-	9.24	23.59	92.3	46.2
January, 2018	-	7.1	22.1	97.2	59.2
February, 2018	-	10.7	25.1	93	43.5
March, 2018	-	16.7	32.7	84.0	31.3
Total	-				
Mean					

Production and productivity of livestock, Poultry, Fisheries etc. in the district

Category	Population	Production	Productivity
Cattle		86411	
<i>Crossbred</i>	48012	576144lit.	12 lit/animal/day
<i>Indigenous</i>	19055	95275 lit.	5 lit/animal/day
Buffalo	162142	1297136 lit.	8 lit/animal/day
Sheep			
<i>Crossbred</i>	620	9300 kg meat	15 kg/animal
<i>Indigenous</i>	312	3744 kg meat	12 kg/animal
Goats	30470	262042 kg meat	8.6 kg/animal
Pigs			
<i>Crossbred</i>			
<i>Indigenous</i>			
Rabbits			
Poultry			
Hens	30742	46113kg meat	1.5 kg/bird
<i>Desi</i>			
<i>Improved</i>			
Ducks			
Turkey and others			

Category	Area	Production	Productivity
Fish	11 ha.	16500 kg./year	1500 kg./ha/year
<i>Marine</i>			
<i>Inland</i>			
Prawn			
Scampi			
Shrimp			

2.7 Details of Operational area / Villages (2016-17)

Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
Najafgarh Narela	Najafgarh, Palam Narela	Kair, Shikarpur, Dhansa, Ghogha, Dariya pur kalan,	Wheat, Paddy, Bajra, Fodder, Mustard, vegetables & value addition in agril produce / Dairy animals	<ul style="list-style-type: none"> • Salinity of water. • Poor soil fertility • Disease & pest infestation. • Low productivity in dairy animals. • Post harvest losses in cereals and vegetables crops. • Wide spread micro-nutrient deficiency among rural youths & rural women. • Endo-ecto parasites in animals. • Drudgery and safety concerns in farm work. • Non availability of quality seeds and agricultural inputs. • Lower realization from farm produce. 	<ul style="list-style-type: none"> • Integrated disease & pest management. • Weed management. • Popularization of improved varieties of Paddy, wheat & mustard • Soil fertility management. • Integrated Nutrient Management in vegetables. • Balance feeding in dairy animals. • Location specific drudgery reduction. • Value addition of locally grown crops. • Nutritional awareness

2.8 Priority/thrust areas

Crop/Enterprise	Thrust area
Wheat & Mustard	Popularization of HYV, Water salinity management, Weed management, Storage loss minimization techniques, promotion of organic farming
Paddy	Weed management, Integrated Pest Management, Nutrient Management
Vegetables (cucurbits, cauliflower, onion & tomato)	Integrated Pest Management, Biological control of pest & diseases, Post harvest management, weed and Nutrient Management, seed treatment, nursery raising, promotion of organic farming
Animal Husbandry	Nutrient, Disease & Feed Management in milch animals
Fruits (aonla, karonda, guava & papaya)	Selection of good planting material, disease management & value addition
Women in Agriculture	Women empowerment, preservation of fruits & vegetables, strengthening of SHG's, Health and nutrition awareness and promotion of kitchen garden/terrace garden in rural & urban areas.
Agri-based enterprise	Entrepreneurship development in agriculture (value addition, dairy, nursery raising of vegetable crops, mushroom cultivation & bee keeping)

3. TECHNICAL ACHIEVEMENTS

3. A. Details of target and achievements of mandatory activities by KVK during 2016-17

OFT (Technology Assessment and Refinement)				FLD (Oilseeds, Pulses, Cotton, Other Crops/Enterprises)			
1				2			
Number of OFTs		Number of Farmers		Number of FLDs		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
12	9	43	31	140	140	157	157

3. A.1 FLDs Conducted under CFLDs on Oilseed

FLD (Oilseeds)			
Number of FLDs		Number of Farmers	
Targets	Achievement	Targets	Achievement
50	50	50	50

3. A.2 FLDs Conducted under CFLDs on Pulses

FLD (Pulses)			
Number of FLDs		Number of Farmers	
Targets	Achievement	Targets	Achievement
-	-	-	-

Training (including sponsored, vocational and other trainings carried under Rainwater Harvesting Unit)					Extension Activities			
3					4			
Number of Courses			Number of Participants		Number of activities		Number of participants	
Clientele	Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
Farmers	67	60	1395	1221	944	947	3085	8026
Rural youth	9	11	220	205				
Extn. Functionaries	9	3	175	53				

Seed Production (Qtl.)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
82.0	84.60	1400	1447

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
-	-	2400	2442

3.B. Abstract of interventions undertaken

S. No	Thrust area	Crop/Enterprise	Identified Problem	Interventions										
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products	
													No.	Kg
1.	Popularization of HYV	Wheat, mustard, paddy	Low productivity of prevailing Varieties in Wheat, mustard, paddy	-	Improved variety of paddy, HYV of wheat, Varietal Evaluation of mustard	4	2	1	7	2.0 6.80 1.0	-	-	-	-
2.	Integrated Pest Management	Paddy, Wheat, Onion, Okra, Mustard & cauliflower, tomato	Low yield, poor quality and pesticide residue in produce	Performance evaluation of Choloro pyriphos & Imidacloproprid as seed treatment against termite control in wheat in Delhi condition	Integrated pest management in paddy	2	-	-	4	-	-	-	-	10

3	Integrated disease management	Paddy, tomato	Poor yield due to severe disease onset	Performance evaluation of <i>Trichoderma viride</i> as soil, seed and seedling treatment against damping off disease control in tomato in Delhi condition Performance evaluation of Zinc Sulphate for controlling Khaira disease in paddy in Delhi condition	IDM in mustard	1	1	-	3	-	-	-	-	40
4	Promoting integrated nutrient management technologies	Tomato, paddy, wheat, mustard, fruits & vegetables & flowers	Low yield and high cost due to Imbalanced use of nutrients	Effects of NAA & CaCl ₂ in tomato	-	2	1	-	3	600 gm CaCl NAA 30ml	-	-	-	-
5	Feeding and Health management in livestock	Buffaloes & cows	Low milk production & heavy worm infestation in buffaloes	Deworming of buffaloes	Calcium supplementation for buffaloes	2	1	-	3	-	-	50 lit of calcium	-	-

Management										
Resource conservation technology										
Small Scale income generating enterprises										
TOTAL										

* *Technology that is refined in collaboration with ICAR/SAU Scientists for improving its effectiveness.*

A.3. Abstract of the number of technologies **assessed** in respect of livestock / enterprises

Thematic areas	Cattle	Poultry	Sheep	Goat	Piggery	Rabbitary	Fisheries	TOTAL
Evaluation of Breeds								
Nutrition Management		1						1
Disease of Management	1							1
Value Addition								
Production and Management								
Feed and Fodder								
Small Scale income generating enterprises								
TOTAL	1	1						2

A.4. Abstract on the number of technologies **refined** in respect of livestock / enterprises

Thematic areas	Cattle	Poultry	Sheep	Goat	Piggery	Rabbitry	Fisheries	TOTAL
Evaluation of Breeds								
Nutrition Management								
Disease of Management								
Value Addition								
Production and Management								
Feed and Fodder								
Small Scale income generating enterprises								
TOTAL								

3.2. Achievements on technologies Assessed and Refined

3.2.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trail covering all the Technological Options)
Integrated Nutrient Management	tomato	Performance evaluation of Naphthalene Acetic Acid & Calcium Chloride application on nutrient uptake, growth & yield of tomato in Delhi condition	3	3	0.4
Varietal Evaluation					
Integrated Pest Management	wheat	Performance evaluation of Chloropyrifos & Imidacloprid as seed treatment against termite control in wheat in Delhi condition	3	3	2.4
Integrated Crop Management					

<i>Thematic areas</i>	<i>Crop</i>	<i>Name of the technology assessed</i>	<i>No. of trials</i>	<i>Number of farmers</i>	<i>Area in ha (Per trail covering all the Technological Options)</i>
Integrated Disease Management	Paddy	Performance evaluation of Zinc Sulphat for controlling Khaira disease in paddy in Delhi condition	3	3	2.4
	Tomato	Performance evaluation of Trichoderma viride as soil, seed and seedling treatment against damping off disease control in tomato in Delhi condition	3	3	2.4
Small Scale Income Generation Enterprises					
Weed Management	Onion	Performance evaluation of oxyfluroben 23.5% and quizalofop ethyle 5% EC weedicide for weed control in onion in Delhi condition	3	3	0.4
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition	Bajra	Performance evaluation & acceptability of bajra biscuits in different ratio in Delhi condition	3	10	10 no.
Drudgery Reduction	Wheat	Assessment of capron to protect the worker during harvesting, threshing and winnowing	2	5	0.4
Storage Technique					
Mushroom cultivation					
Total					

3.2.2. Technologies Refined under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trail covering all the Technological Options)
Integrated Nutrient Management					
Varietal Evaluation					
Integrated Pest Management					
Integrated Crop Management					
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
Total					

3.2.3. Technologies assessed under Livestock and other enterprises

<i>Thematic areas</i>	<i>Name of the livestock enterprise</i>	<i>Name of the technology assessed</i>	<i>No. of trials</i>	<i>No. of farmers</i>
Evaluation of breeds				
Nutrition management	poultry	Performance evaluation of growth promoter (Vit A. & B Complex) for increasing weight gain in broiler poultry in Delhi condition	3	3
Disease management	cattle	Performance evaluation of Albendazole Dewormer for controlling worms infestation in buffaloes in Delhi condition	3	9
Value addition				
Production and management				
Feed and fodder				
Small scale income generating enterprises				
Total				

3.2.4. Technologies Refined under Livestock and other enterprises

<i>Thematic areas</i>	<i>Name of the livestock enterprise</i>	<i>Name of the technology assessed</i>	<i>No. of trials</i>	<i>No. of farmers</i>
Evaluation of breeds				
Nutrition management				
Disease management				
Value addition				
Production and management				
Feed and fodder				
Small scale income generating enterprises				
Total				

B. Details of each On Farm Trial to be furnished in the following format

Details of On Farm Trials

On Farm Trial: 1 (Year: 3rd)

- | | | |
|--|---|---|
| 1) Title | : | Performance evaluation of oxyfluroben 23.5% and quizalofop ethyle 5% EC weedicide for weed control in onion in Delhi condition |
| 2) Problem diagnose/defined: | : | Weed infestation, Low yield of onion |
| 3) Details of technologies selected for assessment /refinement | : | T ₁ - Farmer's Practice (Pendimethilin one hand weeding)
T ₂ - Oxyfluorfen 23.5%EC @ 1ml/L water + Quizalofop Ethyl 5%EC @ 2ml/L water at 30-35 days after DAT |
| 4) Source of technology | : | NHRDF |
| 5) Production system thematic area | : | Paddy-Rabi onion |
| 6) Thematic area | : | Weed Management |
| 7) Performance of the Technology with performance indicators | : | Broadleaf and grassy weeds were controlled 66.66 and 86.66 per cent and increase yield 255 & 286.66 quntal respectively. |
| 8) Final recommendation for micro level situation | : | To be assessed |
| 9) Constraints identified and feedback for research | : | - |
| 10) Process of farmers participation and their reaction | : | - |

B). Results of On Farm Trials

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Rabi Onion	irrigated	Weed infestation	Performance evaluation of Oxyfluorfen 23.5% and quizalofop ethyle 5% EC weedicide for weed control in onion in Delhi condition	03	T ₀ - Farmer's Practice (Pendimethlin one hand weeding)	Weed control efficiency %	T ₀ - 66.66%	Broad leaf and grassy weeds were controlled 66.66 and 86.66 per cent and increase yield 255 & 286.66qtl respectively	Farmers liked the chemical as they applied the chemical only once that effectively controlled both type of weeds
		Low yield of onion			Yield (qt./ha)	T ₀ -255 q			
					T ₁ - Oxyfluorfen 23.5%EC @ 1ml/Lwater + Quizalofop Ethyl 5%EC @ 2ml/L water 30-35 days after DAT	Weed control efficiency %	T ₁ - 86.66 %		
						Yield (qt./ha)	T ₁ - 286.66q		

* No. of farmers

Technology Assessed	*Production per unit(qtl)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
T ₁ - Farmer's Practice (Pendimethilin one hand weeding)	T ₁ .255	131500/-	2.813:1
T ₂ - Oxyfluorfen 23.5%EC @ 1ml/Lwater + Quizalofop Ethyl 5%EC @ 2ml/L water 30-35 days after DAT	T ₂ .286.66	154328/-	3.057:1

*Field crops – kg/ha, * for horticultural crops -= kg/t/ha, * milk and meat – litres or kg/animal, * for mushroom and vermi compost kg/unit area.

** Give details of the technology assessed or refined and farmer's practice

On Farm Trial -2 (Year-3rd)

- 1) Title : Performance evaluation of Albendazole Dewormer for controlling worms infestation in buffaloes in Delhi condition
- 2) Problem diagnose/defined : Worms are the major endoparasites which badly affect health and milk production in buffaloes
- 3) Details of technologies selected for assessment /refinement : T₀- No deworming
T₁- 2 times deworming at an interval of 6 months
T₂- 4 times deworming at an interval of 3 months
- 4) Source of technology : HAU, Hisar
- 5) Production system thematic area : Buffaloes
- 6) Thematic area : Disease Management
- 7) Performance of the Technology with performance indicators : Milk production of buffalo increased to 6.8 liter/day (9.67%) in T₂ as compared to 6.5 (4.83%) liter/day in T₁ & 6.20L/day in T₀.
- 8) Final recommendation for micro level situation : NA
- 9) Constraints identified and feedback for research : NA.
- 10) Process of farmers participation and their reaction : In initial phase animals were facing problem of dysentery and low milk production but after deworming milk production increased and buffaloes got rid of dysentery .

Results

<i>Crop/enterprise</i>	<i>Farming situation</i>	<i>Problem definition</i>	<i>Title of OFT</i>	<i>No. of trials</i>	<i>Technology Assessed</i>	<i>Parameters of assessment</i>	<i>Data on the parameter</i>	<i>Results of assessment</i>	<i>Feedback from the farmer</i>
1	2	3	4	5	6	7	8	9	10
Buffalo	Irrigated	Worms are the major endoparasites which badly effect health and milk production in buffaloes	Performance evaluation of Albendazole Dewormer for controlling worms infestation in buffaloes in Delhi condition	3	T ₀ -No use of dewormer (Farmer's practice) T ₁ - 2 times deworming with albendazole at an interval of 6 month T ₂ - 4 times deworming with albendazole at an interval of 3 month	Milk production	T ₀ - 6.20 l/d T ₁ - 6.50 l/d T ₂ - 6.80 l/d	Milk production of buffalo increased to 6.8 liter/day (9.67%) in T ₂ as compared to 6.5 (4.83%) liter/day in T ₁ & 6.20L/day in T ₀	In initial phase animals were facing problem of dysentery and low milk production but after use of dewormer buffaloes milk Production increased and get rid of dysentery

<i>Technology Assessed</i>	<i>Source of Technology</i>	<i>Production</i>	<i>Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)</i>	<i>Net Return (Profit) in Rs. / day</i>	<i>BC Ratio</i>
11	12	13	14	15	16
T ₀ . No use of dewormer (Farmer's practice)		6.20	Milk production (l/day)	102.80	1.60:1
T ₁ - 2 times deworming with albendazole at an interval of 6 month	CCS HAU, Hisar	6.50	Milk production (l/day)	115.50	1.67:1
T ₂ - 4 times deworming with albendazole at an interval of 3 month	GBP UA&T, Pantnagar	6.80	Milk production (l/day)	128.20	1.74:1

On Farm Trial -3 (Year- 3rd)

- 1) Title : Performance evaluation of *Trichoderma viride* as soil, seed and seedling treatment against damping off disease control in tomato in Delhi condition
- 2) Problem diagnose/defined: Incidence of damping off disease in tomato
- 3) Details of technologies selected for assessment /refinement :
 - T₀- Farmer's Practice (no seed and soil treatment)
 - T₁- Seed treatment with *Trichoderma viride* @ 5g/kg. seed and soil treatment @ 10g/m²nursery area with decomposed FYM
 - T₂- Seed treatment with *Trichoderma viride* @ 5g/kg. seed and soil treatment @ 10g/m²nursery area with decomposed FYM + dipping of seedling in 5g/liter water solution for 15 minutes before transplanting.
- 4) Source of technology : NCIPM, Pusa, New Delhi
- 5) Production system thematic area : Vegetable
- 6) Thematic area : Integrated Disease Management
- 7) Performance of the Technology with performance indicators : Decrease in damping off disease in tomato due to application bio fungicide *Trichoderma viride*
- 8) Final recommendation for micro level situation : NA
- 9) Constraints identified and feedback for research : NA
- 10) Process of farmers participation and their reaction : Seed and soil treatment is effective for seedling stage

Results

<i>Crop/enterprise</i>	<i>Farming situation</i>	<i>Problem definition</i>	<i>Title of OFT</i>	<i>No. of trials</i>	<i>Technology Assessed</i>	<i>Parameters of assessment</i>	<i>Data on the parameter</i>	<i>Results of assessment</i>	<i>Feedback from the farmer</i>
1	2	3	4	5	6	7	8	9	10
Tomato (<i>Lycopersicon esculentum</i>)	Irrigated	Damping off	Performance evaluation of <i>Trichoderma viride</i> as soil, seed and seedling treatment against damping off disease control in tomato in Delhi condition	3	T ₀ - Farmer's Practice (no seed and soil treatment)	Yield q/ha Incidence %	T0-215.70q T0- 11.9%	Decrease in damping off disease in tomato due to application bio fungicide <i>Trichoderma viride</i>	-
					T ₁ - Seed treatment with <i>Trichoderma viride</i> @ 5g/kg. seed and soil treatment @ 10g/m ² nursery area with decomposed FYM	Yield q/ha Incidence %	T1-235.20q T1-5.4%		
					T ₂ - Seed treatment with <i>Trichoderma viride</i> @ 5g/kg. seed and soil treatment @ 10g/m ² nursery area with decomposed FYM + dipping of seedling in 5g/liter water solution for 15 minutes before transplanting.	Yield q/ha Incidence %	T2-250.80q T2 -3.9%		

<i>Technology Assessed</i>	<i>Source of Technology</i>	<i>Production</i>	<i>Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)</i>	<i>Net Return (Profit) in Rs. / unit</i>	<i>BC Ratio</i>
11	12	13	14	15	16
Farmer's Practice (no seed and soil treatment)	NCIPM, Pusa, New Delhi	215.70	q/ha.	139100	2.81:1
Seed treatment with <i>Trichoderma viride</i> @ 5g/kg. seed and soil treatment @ 10g/m ² nursery area with decomposed FYM		235.20	q/ha.	158600	3.07:1
Seed treatment with <i>Trichoderma viride</i> @ 5g/kg. seed and soil treatment @ 10g/m ² nursery area with decomposed FYM + dipping of seedling in 5g/liter water solution for 15 minutes before transplanting.		250.80	q/ha.	174200	3.27:1

On Farm Trial -4 (Year-2nd)

- 1) Title : Performance evaluation of Chloropyriphos & Imidacloprid as seed treatment against termite control in wheat in Delhi condition
- 2) Problem diagnose/defined: Low yield due to insect infestation
- 3) Details of technologies selected for assessment /refinement :
 T₀- No seed treatment (Farmer's practice)
 T₁- Seed treatment with Chloropyriphos 20EC @ 4.5 ml/kg seed
 T₂- Seed treatment with Imidacloprid 17.8 SL @ 3.5 ml/kg seed
- 4) Source of technology : CCSHAU, Hisar & IARI, Pusa, New Delhi
- 5) Production system thematic area : Wheat-Rice
- 6) Thematic area : Integrated Pest Management
- 7) Performance of the Technology with performance indicators: Seed treatment with Imidacloprid 17.8 SL @ 3.5 ml/kg seed resulted is lowest (4.9%) insect infestation & highest yield (50.10qt/ha) yield followed by seed treatment with Chloropyriphos 20EC @ 4.5 ml/kg seed (5.8%) insect infestation & 48.80 qt/ha yield. The insect infestation was highest 11.8% & yield 46.60 qt/ha in without seed treatment.
- 8) Final recommendation for micro level situation : NA
- 9) Constraints identified and feedback for research : NA
- 10) Process of farmers participation and their reaction : Technology of T₂ is effective & farmer's of this area agree to practice the seed treatment is easy & cheap method for management insect (termite).

Results

<i>Crop/enterprise</i>	<i>Farming situation</i>	<i>Problem definition</i>	<i>Title of OFT</i>	<i>No. of trials</i>	<i>Technology Assessed</i>	<i>Parameters of assessment</i>	<i>Data on the parameter</i>	<i>Results of assessment</i>	<i>Feedback from the farmer</i>
1	2	3	4	5	6	7	8	9	10
Wheat (HD-2967)	Irrigated	Low yield due to insect infestation	Performance evaluation of Chloropyriphos & Imidacloprid as seed treatment against termite control in wheat in Delhi condition	3	T ₀ - No seed treatment (Farmer's practice) T ₁ -Seed treatment with Chloropyriphos 20EC @ 4.5 ml/kg seed T ₂ -Seed treatment with Imidacloprid 17.8 SL @ 3.5 ml/kg seed	Insect infestation (%) Yield (qt/ha)	T ₀ - 11.8% T ₁ - 5.8% T ₂ -4.9% T ₀ - 46.60q T ₁ - 48.80q T ₂ -50.10q	The insect infestation was lowest (4.9%) & highest (50.10qt/ha) yield in T ₂ followed by T ₁ (5.8%) insect infestation & (48.8 qt/ha) yield.	Technology of T ₂ is effective & farmer's of this area agree to practice the seed treatment is easy & cheap method for management insect (termite)

<i>Technology Assessed</i>	<i>Source of Technology</i>	<i>Production</i>	<i>Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)</i>	<i>Net Return (Profit) in Rs. / unit</i>	<i>BC Ratio</i>
11	12	13	14	15	16
T ₀ - No seed treatment (Farmer's practice)		46.60	qtl/ha	75725	2.19:1
T ₁ - Seed treatment with Chloropyriphos 20EC @ 4.5 ml/kg seed	CCSHAU	48.80	qtl/ha	78925	2.29:1
T ₂ - Seed treatment with Imidacloprid 17.8 SL @ 3.5 ml/kg seed		50.10	qtl/ha	81412	2.35:1

On Farm Trial 5 (Year-3rd)

- 1) Title : Performance evaluation of growth promoter (Vit A. & B Complex) for increasing weight gain in broiler poultry in Delhi condition.
- 2) Problem diagnose/defined : Slow weight gain of birds due to nutritional deficiency
- 3) Details of technologies selected for assessment /refinement : T₀- No use of growth promoter
T₁- Vitamin A (50 ml/ 1000 birds) for 15 days
T₂- Vitamin A 50 ml + Vitamin B complex 70 ml/1000 birds for 15 days
- 4) Source of technology : CARI, Barielly
- 5) Production system thematic area : Brouiller birds
- 6) Thematic area : Nutrition Management
- 7) Performance of the Technology with performance indicators: Weight gain of broiler birds were increased 1.750 kg (11.46%) in T₂ as compared to 1.635 kg (7.03%) in T₁ & 1.570kg in T₀.
- 8) Final recommendation for micro level situation : NA
- 9) Constraints identified and feedback for research : NA
- 10) Process of farmers participation and their reaction : After use of growth promoter in broiler birds increase in the weight gain of bird was observed

Results

<i>Crop/enterprise</i>	<i>Farming situation</i>	<i>Problem definition</i>	<i>Title of OFT</i>	<i>No. of trials</i>	<i>Technology Assessed</i>	<i>Parameters of assessment</i>	<i>Data on the parameter</i>	<i>Results of assessment</i>	<i>Feedback from the farmer</i>
1	2	3	4	5	6	7	8	9	10
Broiler poultry	Irrigated	Slow weight gain of birds due to nutritional deficiency.	Performance evaluation of growth promoter (Vit A. & B Complex) for increasing weight gain in broiler poultry in Delhi condition	3	T ₀ -No use of Growth promoter (Farmer's practice) T ₁ -Use of Vitamin A (5 ml/100 birds) for 15 days T ₂ - Use of Vitamin A (5 ml/100 birds) & B Complex (7 ml/100 birds) for 15 days	Weight gain kg	T ₀ - 1.570kg T ₁ - 1.635kg T ₂ - 1.750kg	Weight gain of broiler birds were increased 1.750 kg (11.46%) in T ₂ as compared to 1.635 kg (7.03%) in T ₁ & 1.570kg in T ₀	After use of growth promoter in broiler birds increase in the weight gain of bird was observed.

<i>Technology Assessed</i>	<i>Source of Technology</i>	<i>Production</i>	<i>Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)</i>	<i>Net Return (Profit) in Rs. / 1000 birds</i>	<i>BC Ratio</i>
11	12	13	14	15	16
T ₀ -No use of Growth promoter (Farmer's practice)		1.570	Kg	34600/-	1.56:1
T ₁ -Use of Vitamin A (5 ml/100 birds) for 15 days	CARI, Bareilly, U.P	1.635	Kg	42426/-	1.48:1
T ₂ - Use of Vitamin A (5 ml/100 birds) & B Complex (7 ml/100 birds) for 15 days	CDPO, Chandigarh	1.750	Kg	47500/-	1.41:1

On Farm Trial: 6 (Year-3rd)

- 1) Title : Performance evaluation & acceptability of bajra biscuits in different ratio in Delhi condition
- 2) Problem diagnose/defined : Poor consumption of bajra
- 3) Details of technologies selected for assessment /refinement : A simple low cost technology has been assessed to popularize the consumption of bajra in biscuit form using different combination.
T₁-Bajra (50%)+Maida (50%) biscuit
T₂-Atta (50%)+Bajra (50%) biscuit
T₃- Besan (50%)+ Bajra (50%)
- 4) Source of technology : CCS HAU, Hisar
- 5) Production system thematic area : Irrigated
- 6) Thematic area : Value Addition
- 7) Performance of the Technology with performance indicators : It was observed that bajra+ besan biscuit in 50% combination (T3) was liked very much by 65% in taste as compared to T3 Bajra+ Atta which was liked by 60% of respondents followed by T1 (bajra+Maida) which was only liked by 50% of the respondents.
- 8) Final recommendation for micro level situation : To be assessed
- 9) Constraints identified and feedback for research : -
- 10) Process of farmers participation and their reaction : Participatory approach and efficiency was reported by the users.

B). Results of On Farm Trials

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Value addition	-	Low realization for bajra crop	Performance evaluation & acceptability of bajra biscuits in different ratio in Delhi condition	3	T1: Maida (50%)+ Bajra (50%)	Organoleptic acceptability in terms of taste (%) Organoleptic acceptability in terms of colour (%)	50% 55%	It was observed that bajra+ Besan biscuit in 50% combination (T3) was liked very much by 65% in taste as compared to T2 Bajra+Atta which was liked by 60% of respondents followed by T1 (Bajra+Maida) which was only liked by 50% of the respondents	Majority of the population showing keen interest in bajra biscuits and it can become effective tool in improving the nutritional status of the masses.
					T2- Wheat (50%) + Bajra (50%)	Organoleptic acceptability in terms of taste (%) Organoleptic acceptability in terms of colour (%)	60% 70%		
					T3- Bajra (50%)+Besan (50%)	Organoleptic acceptability in terms of taste (%) Organoleptic acceptability in terms of colour (%)	65% 60%		

* No. of farmers

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
	-	-	-
	-	-	-

*Field crops – kg/ha, * for horticultural crops -= kg/t/ha, * milk and meat – litres or kg/animal, * for mushroom and vermi compost kg/unit area.

** Give details of the technology assessed or refined and farmer's practice

On Farm Trial: 7 (Year-2nd)

1. Title : Performance evaluation of Naphthalene Acetic Acid & Calcium Chloride application on nutrient uptake, growth & yield of tomato in Delhi condition
2. Problem diagnose/defined: Poor flower setting & physiological disorder (Blossom end rot)
3. Details of technologies selected for assessment /refinement :
 There is no use of NAA and CaCl₂ in tomato
 T₀- Farmer's Practice (No use of growth regulator)
 T₁- NAA 0.02% at the time of first flower blooming
 T₃- NAA 0.02%+ CaCl₂ 0.5% at the time of first flower blooming
4. Source of technology : Indian Agriculture Research Institute, New Delhi
5. Production system thematic area : Irrigated
6. Thematic area : Nutrient Management
7. Performance of the Technology with performance indicators : The application of NAA 0.02%+ CaCl₂ 0.5% at the time of first flower blooming resulted in control blossom end rot and higher yield (237.33 qt/ha) as compare to control (220 qt/ha)
8. Final recommendation for micro level situation :
 feedback for research : To be assessed
9. Constraints identified and feedback for research : Not available locally and quantity required in very less amount
10. Process of farmers participation and their reaction : Generally farmer did not use the micro nutrients. After brief discussion with farmers about importance of micro nutrient in crops. They were ready to use and find positive result on crop.

B). Results of On Farm Trials

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Tomato	Irrigated	Poor fruit setting & physiological disorder	Performance evaluation of Naphthalene Acetic Acid & Calcium Chloride application on nutrient uptake, growth & yield of tomato in Delhi condition	3	T ₁ : Farmer's Practice (No use of growth regulator)	Yield: qtl/ha Plant height (cm)	T ₁ : 220 T ₁ :72	The application of NAA 0.02%+ CaCl ₂ 0.5% at the time of first flower blooming resulted in control blossom end rot and higher yield (237.33 qt/ha) as compare to control (226.66 qt/ha)	
					T ₂ - NAA 0.02% at the time of first flower blooming	Yield: qtl/ha Plant height (cm)	T ₂ : 226.66 T ₂ :78		
					T ₃ - NAA 0.02%+ CaCl ₂ 0.5% at the time of first flower blooming	Yield: qtl/ha Plant height (cm)	T ₃ : 237.33 T ₃ : 82		

* No. of farmers

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
T1- T ₁ : Farmer's Practice (No use of growth regulator)	T ₁ : 220	70000	1.885:1
T2- T ₂ - NAA 0.02% at the time of first flower blooming	T ₂ : 226.66	72996	2.158:1
T3- T ₃ - NAA 0.02%+ CaCl ₂ 0.5% at the time of first flower blooming	T ₃ : 237.33	90265	2.410:1

*Field crops – kg/ha, * for horticultural crops -= kg/t/ha, * milk and meat – litres or kg/animal, * for mushroom and vermi compost kg/unit area.

** Give details of the technology assessed or refined and farmer's practice

On Farm Trial: 8 (Year-3rd)

- 1) Title : Performance evaluation of Zinc Sulphate for controlling Khaira disease in paddy in Delhi condition
- 2) Problem diagnose/defined: Paddy crop damage by khaira disease has been observed in the area.
- 3) Details of technologies selected for assessment /refinement :
 - T₀ – Farmers Practice (No use of Zinc Sulphate)
 - T₁ - Spray of Zinc Sulphate (33%) @ 0.5 % Concentration..
 - T₂ - Basal Doses of Zinc Sulphate @ 25 kg/ha
 First Spray 40 days after transplantation and Second Spray after 60 days after transplantation in Paddy Crop.
- 4) Source of technology : Division of Soil Science and Agricultural Chemistry, IARI, Pusa New Delhi.
- 5) Production system thematic area : Wheat-paddy
- 6) Thematic area : Integrated Disease Management
- 7) Performance of the Technology with performance indicators : -
- 8) Final recommendation for micro level situation : NA
- 9) Constraints identified and feedback for research : Application of ZnSO₄ is favorable to control khaira disease in paddy due to deficiency of Zn in soil therefore, zinc should be applied in soil.
- 10) Process of farmers participation and their reaction : Khaira disease is common in different parts of the country. In Delhi region farmers also face this problem. Farmers require economical chemical of ZnSO₄ and easily availability in the market.

B). Results of On Farm Trials

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Paddy (Oryza sativa)	Irrigated	Occurrence of Khaira Disease in paddy crop	Performance evaluation of Zinc Sulphat for controlling Khaira disease in paddy in Delhi condition	3	T ₀ - Farmers Practice	Incidence of Khaira disease	T ₀ -19.3	Application of ZnSO ₄ (Basal dose) @ 25kg/ha and yield of 47.5 q/ha followed by spray of ZnSO ₄ (0.5%) & yield of 46.3 q/ha.	ZnSO ₄ is effective and easily available at reasonable rate in market.
					T ₁ - Spray ZnSo4 (0.5%)	Incidence of Khaira disease	T ₁ - 8.3		
					T ₂ - Basel dose ZnSo4	Incidence of Khaira disease	T ₂ -5.6		
						Yield (q/ha)	T ₀ -45.4		
						Yield (q/ha)	T ₁ - 46.3		
						Yield (q/ha)	T ₂ - 47.5		

* No. of farmers

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
T ₀ - Farmers Practice	45.4	60215/-	2.71:1
T ₁ - Spray ZnSo4 (0.5%)	46.3	62105/-	2.76:1
T ₂ - Basel dose ZnSo4 (25kg/ha)	47.5	64625/-	2.83:1

*Field crops – kg/ha, * for horticultural crops -= kg/t/ha, * milk and meat – litres or kg/animal, * for mushroom and vermi compost kg/unit area.

** Give details of the technology assessed or refined and farmer's practice

On Farm Trial: 9 (Year-1st)

- 1) Title : Assessment of capron to protect the worker during harvesting, threshing and winnowing
- 2) Problem diagnose/defined: Traditionally the cover use by farm women, protect them partially against the dust during harvesting, threshing and winnowing.
- 3) Details of technologies selected for assessment
/refinement : T1-Specially designed Capron
T2-Conventional head and mouth cover (F.P.)
T3-None of the above
Source of technology : CCSHAU,Hisar
Production system thematic area : Wheat-bajra
- 4) Thematic area :
- 5) Performance of the Technology with performance indicators : Use of capron reduced biomechanical, physiological and physical stress amongst farm women while threshing wheat crop. Size and shape of capron were such that fastening of it to the body was comfortable to the user as well as was found to bring value for the money and time. Improved tool factors in the capron were found very useful for the users as it protected mouth, eyes, hair, clothes as well. Capron also prevented itching on body caused by dust and dirt.
- 6) Final recommendation for micro level situation : The capron is a highly acceptable replacement of 'traditional practice i. e. dhatha' in the field situation.
- 7) Constraints identified and feedback for research : Especially demanded by male farmers as it was also found very useful by male members. Farmers' participatory approach and usage efficiency was reported by the users.

B). Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Wheat	Irrigated	Traditionally the cover use by farm women, protect them partially against the dust during harvesting, threshing and winnowing.	Assessment of capron to protect the worker during harvesting, threshing and winnowing	5	T1-Specially designed Capron T2- Conventional head and mouth cover (F.P.) T3-None of the above	- - -	Use of caprons reduced biomechanical, physiological and physical stress amongst farm women while threshing & winnowing wheat crop. Size and shape of caprons were such that fastening of it to the body was comfortable to the user as well as was found to bring value for the money and time.	Improved tool factors in the caprons were found very useful for the users as it protected mouth, eyes, hair, clothes as well. Capron also prevented itching on body caused by dust and dirt.	Especially demanded by male farmers as it was also found very useful by male members. Farmers' participatory approach and usage efficiency was reported by the users

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14

**Field crops – kg/ha, * for horticultural crops -= kg/t/ha, * milk and meat – litres or kg/animal, * for mushroom and vermi compost kg/unit area.*

*** Give details of the technology assessed or refined and farmer's practice*

3.2 Summary of Front Line Demonstrations conducted in 2016-2017

Sl. No.	Category	Crop	Variety/ breed	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration		
					Proposed	Actual	SC/ST	Others	Total
1	Oilseeds	Mustard	RH 749	IDM in mustard	4	4	-	10	10
		Mustard	RH 749	Improved variety of mustard	-	10	2	23	25
		Mustard	RH 406	Improved variety of mustard	-	10	-	25	25
2	Cereals	Paddy	Pusa-1509	Improved variety	-	9.6	1	23	24
		Paddy	Pusa-1121	Improved variety	-	6.4	-	16	16
		Paddy	Pusa-1121	Integrated pest management	4	4	-	10	10
		Wheat	HD-3086	HYV of wheat- HD-3086	-	2.0	-	5	5
		Wheat	HD-3086	HYV of wheat HD- 3086 with bio-fertilizers (Azotobactor+ PSB)	-	2.0	-	5	5
		Wheat	HD-3086	HYV of wheat HD-3086 under tillage with rotavator	-	2.8	-	7	7
3	Dairy	Buffalo	Local	Calcium supplementation	10 no	10 no	3	7	10
4	Others (specify) Nutritional Kitchen Gardeneing	Kharif season vegetable	Pusa kitchen garden kit	Kitchen gardening for nutritional security	0.2	0.2	-	10	10
5	Others (specify) Nutritional Kitchen Gardeneing	Rabi season vegetable	Pusa kitchen garden kit	Kitchen gardening for nutritional security	0.2	0.2	-	10	10

PART 4 - FRONTLINE DEMONSTRATIONS

4.A. Summary of FLDs implemented during 2016-17

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement	
									Proposed	Actual	SC/ST	OBC	Others		Total
1	Oilseeds	Irrigated	Rabi 2016-17	Mustard	RH 749	-	IDM	IDM in mustard	4	4	-	3	7	10	-
		Irrigated	Rabi 2016-17	Mustard	RH 749	-	ICM	Improved variety	-	10	2	12	11	25	-
		Irrigated	Rabi 2016-17	Mustard	RH 406	-	ICM	Improved	-	10	-	15	10	25	-
2	Pulses	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Cereals	Irrigated	Kharif 2016-17	Paddy	Pusa-1509	-	ICM	Improved variety	-	9.6	1	20	3	24	-
		Irrigated	Kharif 2016-17	Paddy	Pusa-1121	-	ICM	Improved variety	-	6.4	-	12	4	16	-
		Irrigated	Kharif 2016-17	Paddy	Pusa-1509	-	IPM	IPM	-	4	-	7	3	10	-
		Irrigated	Rabi 2016-17	Wheat	HD-3086	-	ICM	HYV of wheat HD-3086	-	2.0	-	3	2	5	-
		Irrigated	Rabi 2016-17	Wheat	HD-3086	-	ICM	HYV of wheat HD-3086 with biofertilisers (Azotobacter+P SB)	-	2.0	-	5	-	5	-
		Irrigated	Rabi 2016-17	Wheat	HD-3086	-	Resource conservation technologies	HYV of wheat HD-3086 under tillage with rotavator	-	2.8	-	7	-	7	-
4	Millets														
5	Vegetables														
6	Flowers														

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration				Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	OBC	Others	Total	
7	Fruit														
8	Spices and condiments														
9	Commercial														
10	Medicinal and aromatic														
11	Fodder														
12	Dairy	Irrigated	Kharif 2016-17	Buffalo	Local	-	Feed management	Calcium supplementation in dairy animals	10no.	10 no.	3	4	3	10	-
13	Poultry														
14	Piggery														
15	Sheep and goat														
16	Button mushroom														
17	Vermicom post														
18	IFS														
19	Apiculture														
20	Implement s														
21	Others (specify) Nutritional Kitchen Gardening	Irrigated	Kharif 2016-17	Kharif season vegetable	Pusa kitchen garden kit	-	Nutritional Gardening	Kitchen gardening for nutritional security	0.2	0.2	-	10	10	-	
		Irrigated	Rabi 2016-17	Rabi season vegetable	Pusa kitchen garden kit	-	Nutritional Gardening	Kitchen gardening for nutritional security	0.2	0.2	-	10	10	-	

4.A. 1. Soil fertility status of FLDs plots during 2016-17

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/breed	Hybrid	Thematic area	Technology Demonstrated	Status of soil (Kg/Acre)			Previous crop grown
									N	P	K	
	Oilseeds	Irrigated	Rabi 2016-17	Mustard	RH-749		ICM	Improved variety	344.4	21.3	188.5	Fallow
		Irrigated	Rabi 2016-17	Mustard	RH-406		ICM	Improved variety	313.0	23.3	245.7	Fallow
		Irrigated	Rabi 2016-17	Mustard	RH-749		IDM	Improved variety	323.9	29.9	195.7	Fallow
	Pulses											
	Cereals	Irrigated	Kharif 2016-17	Paddy	Pusa-1509	-	ICM	Improved variety	290.8	36.2	189.4	Wheat
		Irrigated	Kharif 2016-17	Paddy	Pusa-1121	-	ICM	Improved variety	305.6	39.0	202.2	wheat
		Irrigated	Kharif 2016-17	Paddy	Pusa-1509	-	IPM	IPM	256.3	42.6	208.8	
		Irrigated	Rabi 2016-17	Wheat	HD-3086	-	ICM	HYV of wheat HD-3086	204.6	32.5	182.3	Fallow
		Irrigated	Rabi 2016-17	Wheat	HD-3086	-	Integrated crop management	HYV of wheat HD-3086 with biofertilisers (Azotobacter+PSB)	204.6	32.5	182.3	Fallow
		Irrigated	Rabi 2016-17	Wheat	HD-3086	-	Resource conservation technologies	HYV of wheat HD-3086 under tillage with rotavator	204.6	32.5	182.3	Fallow
	Millets											
	Vegetables											
	Flowers											
	Fruit											
	Spices and condiments											
	Commercial											
	Medicinal and aromatic											
	Fodder											
	Plantation											
	Dairy											
	Poultry											
	Piggery											
	Sheep and goat											
	Button mushroom											
	Vermicompost											
	IFS											

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/breed	Hybrid	Thematic area	Technology Demonstrated	Status of soil (Kg/Acre)			Previous crop grown
									N	P	K	
	Apiculture											
	Implements											
	Others (specify) Nutritional Gardening	Irrigated	Kharif 2016-17	Kharif season vegetables	Pusa kitchen garden kit	-	Kitchen gardening for nutritional security	Kitchen gardening for nutritional security		-	-	Fallow
		Irrigated	Rabi 2016-17	Rabi season vegetable	Pusa kitchen garden kit	-	Kitchen gardening for nutritional security	Kitchen gardening for nutritional security	-	5.9	208.7	Kharif vegetables

B. Results of Frontline Demonstrations

4.B.1. Crops

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	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
							H	L	A										
Oilseeds	IDM in mustard	RH 749	-	Irrigated	10	4	26.90	23.30	25.40	22.9	6.27	17900	91440	73540	5.10:1	17400	78540	61140	4.51:1
	Improved variety of mustard	RH 749	-	Irrigated	25	10	26.4	23.9	25.4	22.9	10.9	17680	91692	73902	5.15:1	17400	78540	61140	4.51:1
	Improved variety of mustard	RH 406	-	Irrigated	25	10	24.2	22.4	23.55	22.9	10.9	17680	84780	67100	4.90:1	17400	78540	61140	4.51:1
Paddy	IPM – Pusa 1121	Pusa-1121	-	Irrigated	10	4	52.50	49.60	50.65	49.60	2.1	52500	116495	63995	2.21:1	53100	114080	60980	2.14:1
	Pusa 1121	Pusa-1121	-	Irrigated	16	6.4	51.30	48.10	50.50	40.10	24.9	52250	113850	61350	2.16:1	53100	88220	35120	1.68:1
	Pusa 1509	Pusa-1509	-	Irrigated	24	9.6	54.80	49.40	52.10	40.10	29.9	52500	104200	51700	1.98:1	53100	88220	35120	1.68:1
Wheat	HYV of wheat-HD 3086	HD-3086	-	Irrigated	5	2.0	42.20	42.90	42.40	39.70	6.8	40100	68900	28800	1.71:1	40200	64512	24312	1.60:1
	HYV of wheat-HD 3086 with bio-fertilizers (Azotobactor+PSB)	HD-3086			5	2.0	43.50	43.20	43.30	39.70	9.0	40100	70362	30262	1.77:1	40200	64512	24312	1.60:1
	HYV of wheat-HD 3086 with rutavator	HD-3086	-	Irrigated	7	2.8	43.15	43.05	43.20	39.70	8.8	40100	70200	30100	1.75:1	40200	64512	24312	1.60:1
Millets																			
Vegetables	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	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
							H	L	A										
Flowers																			
Fruit																			
Spices and condiments																			
Commercial																			
Medicinal and aromatic																			
Kharif season vegetable	Kitchen gardening for nutritional security	Pusa Kitchen Garden Kit	-	-	10	200m ²	148 qtl/ha	124 qtl/ha	136 qtl/ha	-	-	1500/Unit	5200/Unit	3700/Unit	3.46:1	-	-	-	-
Rabi season vegetable	Kitchen gardening for nutritional security	Pusa Kitchen Garden Kit	-	-	10	200m ²	182 qtl/ha	159 qtl/ha	170 qtl/ha	-	-	1250/Unit	4500/Unit	3250/Unit	3.60:1	-	-	-	-

5.B.2. Livestock and related enterprises

Type of livestock	Name of the technology demonstrated	Breed	No. of Demo	No. of Units	Yield (l/day)				% Increase	*Economics of demonstration Rs./Day)				*Economics of check (Rs./Day)			
					Demo			Check if any		Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	A	L										
Dairy	Calcium Supplementation to buffaloes	Local	10	10	7.7	7.3	6.2	6.7	8.9%	171.00	365.00	194.00	2.13:1	165.00	337.00	172.00	2.04:1

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

** BCR= GROSS RETURN/GROSS COST

4. B.3. Fisheries NA

Type of Breed	Name of the technology demonstrated	Breed	No. of Demo	Units/ Area (m ²)	Yield (q/ha)			% Increase	*Economics of demonstration (Rs./unit) or (Rs./m ²)				*Economics of check (Rs./unit) or (Rs./m ²)				
					Demo				Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
					H	L	A										
Common carps																	
Others (pl.specify)																	

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

** BCR= GROSS RETURN/GROSS COST

H-High L-Low, A-Average

Data on additional parameters other than yield (viz., reduction of percentage diseases, effective use of land etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Check if any

4.B.4. Other enterprises

Enterprise	Name of the technology demonstrated	Variety/ species	No. of Demo	Units/ Area (m ²)	Yield (q/ha)			% Increase	*Economics of demonstration (Rs./unit) or (Rs./m ²)				*Economics of check (Rs./unit) or (Rs./m ²)				
					Demo				Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
					H	L	A										
Button mushroom																	
Vermicompost																	
Apiculture																	
Others (pl.specify)																	

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

** BCR= GROSS RETURN/GROSS COST

H-High L-Low, A-Average

Data on additional parameters other than yield (viz., additional income realized, employment generation, quantum of farm resources recycled etc.)

Data on other parameters in relation to technology demonstrated		
Parameter with unit	Demo	Local

4.B.5. Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	4	236	
2	Farmers Training	7	142	
3	Media coverage	4	-	
4	Training for extension functionaries	-	-	
5	Others (Please specify) i)Kisaan Gosthi ii) Field visit iii) Extension literature	2 29 4 4	107 35 100 3800	Kisaan Gosthi on importance of calcium feeding & improved package of practices of mustard was organized in different villages.

5. Achievements on Training (Including the sponsored, vocational, FLD and trainings under Rainwater Harvesting Unit) :

A) ON Campus

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
(A) Farmers & Farm Women										
I Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Water management										
Seed production										
Nursery management										
Integrated Crop Management										
Fodder production										
Production of organic inputs										
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops										
Off-season vegetables	1	15	-	15	4	-	4	19	-	19
Nursery raising										
Exotic vegetables like Broccoli										
Export potential vegetables										
Grading and standardization										
Protective cultivation (Green Houses, Shade Net etc.)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards	1	15	-	15	3	-	3	18	-	18
Cultivation of Fruit										
Management of										

young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
f) Spices										
Production and Management technology										
Processing and value addition										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
III Soil Health and Fertility Management										
Soil fertility management										
Soil and Water Conservation										
Integrated Nutrient	1	14	4	18	2	-	2	16	4	20

Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Soil and Water Testing	2	26	2	28	4	1	5	30	3	33
IV Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Disease Management										
Feed management	1	15	-	15	2	-	2	17	-	17
Production of quality animal products										
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	1	8	11	19	1	-	1	9	11	20
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Gender mainstreaming through SHGs	1		25	25		1	1		26	26
Storage loss minimization techniques										
Value addition	1		14	14		2	2		16	16
Income generation activities for empowerment of rural Women										

Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care	1	20	14	34	5	1	6	25	15	40
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										
Small scale processing and value addition										
Post Harvest Technology										
VII Plant Protection										
Integrated Pest Management										
Integrated Disease Management	2	34	-	34	3	-	3	36	-	36
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish										

and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
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										
X Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										

TOTAL	12	147	70	217	24	5	29	170	75	245
(B) RURAL YOUTH										
Mushroom Production	1	18	-	18	2	-	2	20	-	20
Bee-keeping	1	17	-	17	3	-	3	20	-	20
Integrated farming										
Seed production										
Production of organic inputs										
Integrated Farming										
Planting material production										
Vermi-culture	1	12	-	12	8	-	8	20	-	20
Sericulture										
Protected cultivation of vegetable crops										
Commercial fruit production										
Repair and maintenance of farm machinery and implements										
Nursery Management of Horticulture crops	1	19	-	19	4	-	4	23	-	23
Training and pruning of orchards										
Value addition	2	9	29	38	-	3	3	9	32	41
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										

Small scale processing										
Post Harvest Technology	1	3	18	21	-	1	1	3	19	22
Tailoring and Stitching										
Rural Crafts										
TOTAL	7	78	47	125	17	4	21	95	51	146
(C) Extension Personnel										
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management	1	10	-	10	-	-	-	10	-	10
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										
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	1	-	22	22	-	5	5	-	27	27
Production and use of organic inputs										
Gender mainstreaming through SHGs										
TOTAL	2	10	22	32	-	5	5	10	27	37

B) OFF Campus

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
(A) Farmers & Farm Women										
I Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Water management										
Seed production										
Nursery management										
Integrated Crop Management										
Fodder production										
Production of organic inputs										
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops	3	37	-	37	20	-	20	57	-	57
Off-season vegetables										
Nursery raising	2	26	-	26	13	-	13	39	-	39
Exotic vegetables like Broccoli	1	8	-	8	10	-	10	18	-	18
Export potential vegetables										
Grading and standardization	1	18	-	18	4	-	4	22	-	22
Protective cultivation (Green Houses, Shade Net etc.)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards	1	16	-	16	5	-	5	21	-	21
Cultivation of Fruit										
Management of young plants/orchards										

Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
c) Ornamental Plants										
Nursery Management										
Management of potted plants	1	15	-	15	3	-	3	18	-	18
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
f) Spices										
Production and Management technology										
Processing and value addition										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
III Soil Health and Fertility Management										
Soil fertility management	1	13	-	13	2	-	2	15	-	15
Soil and Water Conservation	1	18	-	18	3	-	3	21	-	21
Integrated Nutrient Management	1	15	-	15	2	-	2	17	-	17
Production and use										

of organic inputs										
Management of Problematic soils	1	15	-	15	3	-	3	18	-	18
Micro nutrient deficiency in crops	1	17	-	17	4	-	4	21	-	21
Nutrient Use Efficiency	1	13	-	13	2	-	2	15	-	15
Soil and Water Testing	8	129	-	129	45	5	50	174	5	179
IV Livestock Production and Management										
Dairy Management										
Poultry Management	1	16	-	16	2	-	2	18	-	18
Piggery Management										
Rabbit Management										
Disease Management	2	32	-	32	7	-	7	39	-	39
Feed management	2	33	-	33	4	-	4	37	-	37
Production of quality animal products	1	17	-	17	1	-	1	18	-	18
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	2	-	25	25	-	7	7	-	32	32
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing	1	-	13	13	-	4	4	-	17	17
Gender mainstreaming through SHGs	1	-	19	19	-	3	3	-	22	22
Storage loss minimization techniques	3	-	62	62	-	13	13	-	75	75
Value addition	2	-	49	49	-	6	6	-	55	55
Income generation activities for empowerment of rural Women	1	-	29	29	-	4	4	-	33	33
Location specific drudgery reduction										

technologies										
Rural Crafts										
Women and child care	1	-	18	18	-	4	4	-	22	22
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										
Small scale processing and value addition										
Post Harvest Technology										
VII Plant Protection										
Integrated Pest Management	7	104	-	104	27	-	27	131	-	131
Integrated Disease Management										
Bio-control of pests and diseases	1	13	-	13	3	-	3	16	-	16
Production of bio control agents and bio pesticides										
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										

Edible oyster farming										
Pearl culture										
Fish processing and value addition										
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										
X Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
TOTAL	48	555	215	770	160	46	206	715	261	976
(B) RURAL										

YOUTH										
Mushroom Production										
Bee-keeping										
Integrated farming										
Seed production										
Production of organic inputs										
Integrated Farming										
Planting material production										
Vermi-culture										
Sericulture										
Protected cultivation of vegetable crops										
Commercial fruit production										
Repair and maintenance of farm machinery and implements										
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Value addition	2	1	29	30	-	8	8	1	38	39
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										
Small scale processing	2	2	16	18	-	2	2	2	18	20

Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
TOTAL	4	3	46	49	-	10	10	3	56	59
(C) Extension Personnel										
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
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										
WTO and IPR issues										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Women and Child care	1	-	15	15	-	1	1	-	16	16
Low cost and nutrient efficient diet designing										
Production and use of organic inputs										
Gender mainstreaming through SHGs										
TOTAL	1	-	15	15	-	1	1	-	16	16

C) Consolidated table (ON and OFF Campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
(A) Farmers & Farm Women										
I Crop Production										
Weed Management										
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Water management										
Seed production										
Nursery management										
Integrated Crop Management										
Fodder production										
Production of organic inputs										
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops	3	37	-	37	20	-	20	57	-	57
Off-season vegetables	1	15	-	15	4	-	4	19	-	19
Nursery raising	2	26	-	26	13	-	13	39	-	39
Exotic vegetables like Broccoli	1	8	-	8	10	-	10	18	-	18
Export potential vegetables										
Grading and standardization	1	18	-	18	4	-	4	22	-	22
Protective cultivation (Green Houses, Shade Net etc.)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards	1	16	-	16	5	-	5	21	-	21
Cultivation of Fruit										
Management of young plants/orchards	1	15	-	15	3	-	3	18	-	18

Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
c) Ornamental Plants										
Nursery Management										
Management of potted plants	1	15	-	15	3	-	3	18	-	18
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
f) Spices										
Production and Management technology										
Processing and value addition										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
III Soil Health and Fertility Management										
Soil fertility management	1	13	-	13	2	-	2	15	-	15
Soil and Water Conservation	1	18	-	18	3	-	3	21	-	21
Integrated Nutrient Management	2	29	4	33	4	-	4	33	4	37
Production and use										

of organic inputs										
Management of Problematic soils	1	15	-	15	3	-	3	18	-	18
Micro nutrient deficiency in crops	1	17	-	17	4	-	4	21	-	21
Nutrient Use Efficiency	1	13	-	13	2	-	2	15	-	15
Soil and Water Testing	10	155	2	157	49	6	55	204	8	212
IV Livestock Production and Management										
Dairy Management	1	16	-	16	2	-	2	18	-	18
Poultry Management										
Piggery Management										
Rabbit Management										
Disease Management	2	32	-	32	7	-	7	39	-	39
Feed management	3	48	-	48	6	-	6	54	-	54
Production of quality animal products	1	17	-	17	1	-	1	18	-	18
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	3	8	36	44	1	7	8	9	43	52
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing	1	-	13	13	-	4	4	-	17	17
Gender mainstreaming through SHGs	2	-	44	44		4	4	-	48	48
Storage loss minimization techniques	3	-	62	62	-	13	13	-	75	75
Value addition	3	-	63	63	-	8	8	-	71	71
Income generation activities for empowerment of rural Women	1	-	29	29	-	4	4	-	33	33
Location specific drudgery reduction										

technologies										
Rural Crafts										
Women and child care	2	20	32	52	5	5	10	25	37	62
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										
Small scale processing and value addition										
Post Harvest Technology										
VII Plant Protection										
Integrated Pest Management	7	104	-	104	27	-	27	131	-	131
Integrated Disease Management	2	34	-	34	3	-	3	36	-	36
Bio-control of pests and diseases	1	13	-	13	3	-	3	16	-	16
Production of bio control agents and bio pesticides										
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										

Edible oyster farming										
Pearl culture										
Fish processing and value addition										
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										
X Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
TOTAL	60	702	285	987	184	51	235	885	336	1221
(B) RURAL										

YOUTH										
Mushroom Production	1	18	-	18	2	-	2	20	-	20
Bee-keeping	1	17	-	17	3	-	3	20	-	20
Integrated farming										
Seed production										
Production of organic inputs										
Integrated Farming										
Planting material production										
Vermi-culture	1	12	-	12	8	-	8	20	-	20
Sericulture										
Protected cultivation of vegetable crops										
Commercial fruit production										
Repair and maintenance of farm machinery and implements										
Nursery Management of Horticulture crops	1	19	-	19	4	-	4	23	-	23
Training and pruning of orchards										
Value addition	4	10	59	69	-	11	11	10	70	80
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										
Small scale processing	2	2	16	18	-	2	2	2	18	20

Post Harvest Technology	1	3	18	21	-	1	1	3	19	22
Tailoring and Stitching										
Rural Crafts										
TOTAL	11	81	93	174	17	14	31	98	107	205
(C) Extension Personnel										
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management	1	10	-	10	-	-	-	10	-	10
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										
WTO and IPR issues										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Women and Child care	1	-	15	15	-	1	1	-	16	16
Low cost and nutrient efficient diet designing	1	-	22	22	-	5	5	-	27	27
Production and use of organic inputs										
Gender mainstreaming through SHGs										
TOTAL	3	10	37	47	-	6	6	10	43	53

Note: Please furnish the details of above training programmes as Annexure in the proforma given below

Date	Clientele	Title of the training programme	Discipline	Thematic area	Duration in days	Venue (Off / On Campus)	Number of other participants			Number of SC/ST			Total number of participants		
							Male	Female	Total	Male	Female	Total	Male	Female	Total
5/4/16	PF	Integrated pest management of okra	Plant Protection	IPM	one	Off campus	15	-	-	3	-	-	18	-	18
18/4/16	PF	Grain storage techniques	Home science	Storage loss minimisation techniques	one	Off campus	-	19	19	-	3	3	-	22	22
20/4/16	PF	Scientific storage of food grains	Home science	Storage loss minimisation techniques	one	Off campus	-	31	31	-	6	6	-	37	37
25/4/16	PF	Management of broiler poultry in summer	Animal Husbandry	Poultry mgt	one	Off campus	16	-	16	2	-	2	18	-	18
27/4/16	PF	Grading, sorting and safe storage of onion	Horticulture	Grading & standardization	one	-do-	18	-	18	4	-	4	22	-	22
3/5/16	PF	Storage of food grains	Home science	Storage loss minimisation techniques	one	Off campus	-	22	22	-	-	-	-	22	22
7/5/16	PF	Nursery mgt of vegetable crops	Horticulture	Nursery raising	one	-do-	13	-	13	8	-	8	21	-	21
7/5/16	PF	Food safety	Home science	Minimization of nutrient loss in processing	one	-do-	-	31	31	-	4	4	-	35	35
17/5/16	PF	Use of green manure to improve soil fertility and soil physical properties	Soil Science	Management of Problematic soils	one	-do-	15	-	15	2	-	2	17	-	17
18/5/16	PF	New orchard establishment and after care	Horticulture	Management of young plants/orchards	one	-do-	16	-	16	5	-	5	21	-	21
18/5/16	PF	Nursery raising of kharif season	Horticulture	Nursery raising	one	-do-	13	-	13	5	-	5	18	-	18

		vegetables													
19/5/16	PF	Vaccination of dairy animals	Animal Husbandry	Disease Management	one	-do-	14	-	14	3	-	3	17	-	17
24/5/16	PF	Method and collection of soil and water sample	Soil Science	Soil and Water Testing	one	-do-	15	-	15	4	-	4	19	-	19
25/5/16	PF	Method and collection of soil and water sample	Soil Science	Soil and Water Testing	one	-do-	29	-	29	5	-	5	34	-	34
30-31/5/16	RY	Preparation of juices & squash from fruit juice/pulp	Home science	Value addition	two	On campus	6	12	18	-	2	2	6	14	20
8/6/16	PF	Use of drudgery reduction its tools in household and farm activity	Home science	Location specific drudgery reduction technologies	one	-do-	21	-	21	-	4	4	-	25	25
18/6/16	PF	Method and collection of soil and water sample	Soil Science	Soil and Water Testing	one	-do-	13	-	13	2	-	2	15	-	15
24/6/16	PF	Use of green manure to improve soil fertility and soil physical properties	Soil Science	Management of Problematic soils	one	-do-	25	-	25	5	-	5	30	-	30
29/6/16	RY	Organic feeding of dairy animals	Animal Husbandry	Dairying	one	-do-	16	-	16	2	-	2	18	-	18
4/7/16	PF	Mango preservation	Home science	Value addition	one	On campus	-	16	16	-	-	-	-	16	16
5/7/16	PF	Use of biofertilizer in paddy crop	Soil Science	Soil fertility mgt.	One	Off campus	15	-	15	2	-	2	17	-	17
12/7/16	PF	Pest mgt of moong	Plant Protection	IPM	one	-do-	7	-	7	12	-	12	19	-	19
16/7/16	PF	Green fodder production round the year	Animal Husbandry	Feed management	one	-do-	18	-	18	-	-	-	18	-	18
27/7/16	PF	Method and collection of soil and water	Soil Science	Soil and Water Testing	one	-do-	16	-	16	2	-	2	18	-	18

		sample													
29/7/16	PF	Integrated pest management in paddy	Plant Protection	IPM	one	On campus	28	-	28	3	-	3	31	-	31
10/8/16	PF	Metabolic disease of dairy animals	Animal Husbandry	Disease Management	one	Off campus	14	-	14	4	-	4	18	-	18
18/8/16	PF	Effective control measure of stem borer in paddy	Plant Protection	IDM	one	-do-	17	-	17	-	-	-	17	-	17
19/8/16	PF	Production technology of kharif season okra	Horticulture	Production of low volume and high value crops	one	-do-	3	-	3	15	-	15	18	-	18
24/8/16	PF	Management of guar		Crop Diversification	one	-do-	16	-	16	2	-	2	18	-	18
24/8/16	PF	Method and collection of soil sample	Soil Science	Soil and Water Testing	one	-do-	17	-	17	5	-	5	22	-	22
25/8/16	PF	Method and collection of soil sample	Soil Science	Soil and Water Testing	one	-do-	15	-	15	20	-	20	35	-	35
30/8/16	PF	Women empowerment through skill up gradation	Home science	Income generation activities for empowerment of rural Women	one	-do-	-	29	29	-	4	4	-	33	33
5/9/16	PF	Method and collection of soil sample	Soil Science	Soil and Water Testing	one	-do-	17	-	17	5	-	5	22	-	22
6/9/16	RY	Awareness programme on food adulteration	Home science	Women & child care	one	On campus	20	14	34	5	1	6	25	15	40
15/9/16	PF	Preparation of balanced ration for dairy animals	Animal Husbandry	Feed management	one	-off campus -	15	-	15	2	-	2	17	-	17
17/9/16	EF	Protecting nutrient loss while cooking	Home science	Protecting nutrient loss while cooking	one	On campus	-	-	22	22	-	5	5	-	27
18/9/6	RY	Production technology	Horticulture	Production of	one	-do-	17	-	17	2	-	2	19	-	19

		of rabi season vegetables		low volume and high value crops											
14/10/16	RY	Method and collection of soil sample	Soil Science	Soil and Water Testing	one	-on campus -	13	5	18	2	-	2	15	5	20
14/10/16	RY	Production technology exotic vegetable	Horticulture	Exotic vegetables	one	Off campus	8	-	8	10	-	10	18	-	18
3/11/16	PF	Method and collection of soil sample	Soil Science	Soil and Water Testing	one	-do -	15	-	15	3	-	3	15	3	18
4/11/16	PF	Kitchen gardening	Home science	Household food security through kitchen gardening	one	On campus	2	11	13	-	1	1	2	12	14
7/11/16	PF	Roles of banks in women empowerment	Home science	Entrepreneurial development of farmers/ youths	one	-do-	-	26	26	-	1	1	-	27	27
16/11/16	PF	Integrated pest management of mustard	Plant Protection	IPM	one	On campus	18	-	18	2	-	2	20	-	20
2/12/16	PF	Post harvest management in cauliflower	Home science	Post harvest technology	one	Off campus	-	13	13	-	4	4	-	17	17
15/12/16	PF	Balance use of fertilizer in wheat crop	Soil Science	Soil fertility mgt.	One	-do-	18	-	18	2	-	2	20	-	20
15/12/16	PF	Insect management of bio pesticide in vegetable crops	Plant Protection	IPM	one	-do-	16	-	16	3	-	3	19	-	29
30/12/16	PF	Swachtha abhiyan	Home science	Personal hygiene & sanitation	One	-do-	-	46	46	-	6	6	-	52	52
3/1/17	PF	Integrated pest management of wheat	Plant Protection	IPM	one	-do-	19	-	19	1	-	1	20	-	20
13/1/17	PF	Method demo on soil & water collection	Soil Science	Soil and Water Testing	one	-do -	20	-	20	3	-	3	20	3	23

16/1/17	PF	Balance use of fertilizer in wheat crop	Soil Science	Soil fertility mgt.	One	-do-	15	-	15	5	-	5	20	-	20
21/1/17	PF	Processing & value addition of aonla	Home science	value addition	One	-do-	-	30	30	-	2	2	-	32	32
23/1/17	PF	Soil & water management	Soil Science	Management of Problematic soils	One	-on campus -	18	-	18	3	-	3	21	-	21
25/1/17	PF	Production technology of rabi onion	Horticulture	Production and Management technology	one	Off campus	17	-	17	3	-	3	20	-	20
30/1/17	RY	Personnel hygiene & sanitation	Home science	Personal hygiene & sanitation	One	-do-	-	18	18	-	4	4	-	22	22
14/2/17	PF	Method demo on soil & water collection at farmers field	Soil Science	Soil and Water Testing	one	-do -	10	-	10	2	-	2	12	-	12
16/2/17	RY	Care & management of potted ornamental plants	Horticulture	Management of potted plants	one	On campus	15	-	15	3	-	3	18	-	18
21/2/17	RY	Honey production technology with special Apis melifera	Plant Protection	Bee-keeping	one	On campus	20	-	20	-	-	-	20	-	20
23/2/17	EF	Balanced diet and nutritional deficiency in children	Home science	Women & child care	One	Off campus	-	15	15		1	1	-	16	16
27/2/17	RY	Value addition of tomato	Home science	Value addition	one	Off campus	-	19	19	-	4	4	-	23	23
10/3/17	PF	INM in vegetables	Horticulture	INM	one	Off campus	17	-	17	2	-	2	19	-	19
20-24/3/17	EF	Soil & water testing	Soil Science	Soil and Water Testing	one	-do -	10	-	10	-	-	-	10	-	10
30/3/17	PF	Importance of formation of SHG's	Home science	Gender mainstreaming through SHGs	one	-do -	-	19	19	-	3	3	-	22	22

(D) Vocational training programmes for Rural Youth

Crop / Enterprise	Date	Training title*	Identified Thrust Area	Duration (days)	No. of Participants			Self employed after training			Number of persons employed elsewhere
					Male	Female	Total	Type of units	Number of units	Number of persons employed	
Fruits	30-31/5/16	Preparation of drinks and squashes from fruit juices/pulps	Value addition	2	6	14	20	Small scale	One	-	-
vegetables	21-23/7/2016	Skill up gradation of women groups in pickle making	Value addition	3	-	19	19	House hold level	-	-	-
Horticultural crops	23-27/7/2016	Gardening and nursery raising of Horticultural crops.	Nursery raising	5	25	-	25	Farmer's level	5	-	-
Cereals	20-21/10/2016	Preparation of nutritive bakery products	Protecting nutrient loss while processing	2	1	19	20	-	-	-	-
Dairy animals	23-28/9/2016	Dairy farming a profitable business to agriculture	Dairying	5	29	1	30	2-3 animals unit	3	2	1
Fruits & vegetables	17-26/11/2016	Preservation of fruit and vegetables	Value addition	10	3	19	22	Home scale level	2	2	-
Apiculture	5/1/2017-10/1/2017	Bee Keeping	Bee keeping	5	19	1	20	Small apiary with 10 boxes	-	-	-
Vermiculture	17/2/2017-20/2/2016	Vermicompost production	Vermicomposting	4	20	-	20	-	-	-	-
Mushroom production	21/10/2016-25/10/2016	Mushroom production technology	Mushroom Production	5	20	-	20	1 Small scale 50 Sqm	1	-	-

*training title should specify the major technology /skill transferred

(E) Sponsored Training Programmes conducted by KVK

Sl. No	Date	Title	Discipline	Thematic area	Duration (days)	Client (PF/R Y/EF)	No. of courses	No. of Participants									Sponsoring Agency	Amount of fund received (Rs.)
								Others			SC/ST			Total				
								Male	Female	Total	Male	Female	Total	Male	Female	Total		
1	11/11/16	Diversification in Agriculture for doubling the farm income	Horticulture	Crop diversification	1	PF, RY & EF	1	66	2	68	2	-	2	68	2	70	NCRI, Hyderabad	22000/-
2	20-24/3/17	Soil & water testing	Soil Science	Soil and Water Testing	4	EF	1	10	-	10	-	-	-	10	-	10	Development deptt. Govt. of NCT Delhi	25000/
Total							2	76	2	78	2	-	2	78	2	80	-	47000/

(F) Skill Development Training under ASCI Conducted by selected KVKs

Sl. No	Date	Title	Discipline	Thematic area	Duration (days)	Client (PF/R Y/EF)	No. of courses	No. of Participants								
								Others			SC/ST			Total		
								Male	Female	Total	Male	Female	Total	Male	Female	Total
1	9/1-15/3/17	Gardener	Horticulture	Gardening	50	RY	1	17	2	19	1	-	1	18	2	20
2	3-31/3/17	Mushroom grower	Plant protection	Mushroom production	28	RY	1	18	-	18	-	2	2	18	2	20
Total																

6. Extension Activities (including activities of FLD programmes)

Sl. No.	Nature of Extension Activity	Topic / crop	No. of activities	Participants											
				Farmers (Others) (I)			SC/ST (Farmers) (II)			Extension Officials (III)			Grand Total (I+II+III)		
				M	F	Tot.	M	F	Tot.	M	F	Tot.	M	F	Tot.
1.	Field Day	Kitchen garden 18/2/17	1	13	36	59	2	6	8	-	3	3	15	55	70
2.	Field Day	Mustard 4/3/17	1	56	-	56	12	-	12	1	-	1	69	-	69
3.	Field day	Wheat 22/3/17	1	27	-	27	12	-	12	3	-	3	42	-	42
	Field day	Calcium feeding in dairy animal	1	-	55	55	-	-	-	-	-	-	-	55	55
4.	Total		4	96	91	187	26	6	32	4	3	7	126	110	181
5.	Kisan Mela	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total														
6.	Kisan Ghosthi	Calcium feeding Improved package of practices for mustard	2	4	40	44	-	10	10	-	5	5	4	55	59
				47	-	47	4	-	4	1	-	1	52	-	52
7.	Exhibition	Pradhan mantri fasal bima	4	896	231	1127	86	14	100	71	2	73	1053	247	1300

		yojana, Agronomy congress, farmer's trg, Krishi mela & agri summit													
8.	Film Show	Nursery raising, vermicomposting, mushroom production, onion production, drudgery reducing tools, gardening, successful entrepreneurs etc.	15	275	34	309	37	15	52	2	2	4	314	51	365
9.	Method Demonstrations	Soil testing, value addition, nursery raising in poly house, bee keeping, dairy ration etc.	48	242	205	458	62	40	102	11	32	43	315	277	592
10.	Farmers Seminar	Pradahnm antri fasal bima yojana, & Awareness programme on Safe & Judicious use of pesticide	2	513	164	677	288	15	303	10	-	10	811	179	990
11.	Workshop	Rabi diwas	1	90	30	120	23	5	28	4	-	4	117	35	152
12.	Group meetings	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13.	Lectures delivered as resource persons	Vegetable production, soil sampling, IPM & value addition etc.	26	397	295	692	62	34	96	6	8	14	465	337	802
14.	Newspaper coverage	Trainings news,	28	-	-	-	-	-	-	-	-	-	-	-	-

		weather update etc.													
15.	Radio talks		4	-	-	-	-	-	-	-	-	-	-	-	-
16.	TV talks		26	-	-	-	-	-	-	-	-	-	-	-	-
17.	Popular articles		5	-	-	-	-	-	-	-	-	--	-	-	-
18.	Extension Literature		3	-	-	-	-	-	-	-	-	-	-	-	-
19.	Advisory Services		45	32	13	45	10	4	14	4	3	7	46	20	66
20.	Scientific visit to farmers field		160	358	4	362	-	4	4	-	-	-	362	4	366
21.	Farmers visit to KVK		605	371	94	476	123	6	129	9	2	11	503	102	605
22.	Diagnostic visits		119	93	8	119	18	-	18	-	-	-	111	8	119
23.	Exposure visits		12	910	52	962	55	35	90	-	-	-	965	87	1052
24.	Ex-trainees Sammelan		-	-	-	-	-	-	-	-	-	-	-	-	-
25.	Soil health Camp		7	60	-	60	15	5	20	5	-	5	80	5	85
26.	Animal Health Camp		-	-	-	-	-	-	-	-	-	-	-	-	-
27.	Agri mobile clinic		-	-	-	-	-	-	-	-	-	-	--	-	-
28.	Soil test campaigns		6	112	9	121	19	5	24	5	-	5	136	14	150
29.	Farm Science Club Conveners meet		12	200	-	200	-	-	-	4	-	4	204	-	204
30.	Self Help Group Conveners meetings		48	-	705	705	-	6	6	-	-	-	-	711	711
31.	Mahila Mandals Conveners meetings		1	13	140	153	-	43	43	-	3	3	13	186	199
32.	Celebration of important days (specify) I	Parthenium Week	1	198	81	279	33	21	54	6	5	11	237	107	344
		ii. National Nutrition Week	2												
		iii. World Soil Day	1												
	Grand Total		1187	4507	2196	6703	861	268	1129	129	65	194	5497	2529	8026

6. B. Kisan Mobile Advisory Services

Kisan Mobile Advisory									
Name of the KVK	No. of farmers Covered	No. of Advisories Sent	Type of messages						
			Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	Any other
Ujwa, Delhi	11864	7	Paddy, wheat & mustard	Cow & buffaloes				√	
	5297	7	Vegetables					√	
	400	1	Moong					√	
	652	1	-	-	-	-		Soil testing	
	236	1	Fruits	-	-	-	-	√	

6.C. DETAILS OF TECHNOLOGY WEEK CELEBRATIONS during 2016-17 NA

No. of Technology week celebrated	Types of Activities	No. of Activities	Number of Participants	Related crop/livestock technology
	Gosthies			
	Lectures organised			
	Exhibition			
	Film show			
	Fair			
	Farm Visit			
	Diagnostic Practicals			
	Distribution of Literature (No.)			
	Distribution of Seed (q)			
	Distribution of Planting materials (No.)			
	Bio Product distribution (Kg)			
	Bio Fertilizers (q)			
	Distribution of fingerlings			
	Distribution of Livestock specimen (No.)			
	Total number of farmers visited the technology week			

7. Production and supply of Technological products

A) SEED MATERIALS

Major group/class	Crop	Variety	Quantity (qtl.)	Value (Rs.)	Provided to No. of Farmers
CEREALS	Wheat	HD2967	67.6	202680	169
OILSEEDS	Mustard	Pusa Vijay	11.28	84600	564
PULSES					
VEGETABLES	Palak	Pusa All Green	5.70	42750	57
FLOWER CROPS					
OTHERS (Specify)					

B) PLANTING MATERIALS

Major group/class	Crop	Variety	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
Fruits					
Spices					
Vegetables	Brinjal		602		
	Chili		145		
	Cauliflower		120		
	Cabbage		105		
	Red Cabbage		65		
	Broccoli		35		
	Capsicum		265		
	Tomato		110		
Forest Species					
Ornamental Crops					
Plantation Crops					
Others (Specify)					

C) Bio Products

Major Group/Class	Product Name	Species	Quantity		Value (Rs.)	Provided To No. Of Farmers
			No	(Kg)		
Bioagents						
1						
2						
Biofertilizers						
1 Vermi Compost	Vermi Compost			2442	19536	21
2						
Bio Pesticides						
1						
2						

D) Livestock

Sl. No.	Type	Breed	Quantity		Value (Rs.)	Provided To No. Of Farmers
			(Nos)	Kgs		
Cattle						
Sheep And Goat						
Poultry						
Fisheries						
Others (Specify)						

PART 8 – PUBLICATION, SUCCESS STORY, SWTL, TECHNOLOGY WEEK AND DROUGHT MITIGATION

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

(A) KVK News Letter – (Name, Date of start, periodicity, number of copies distributed, etc.)

(B) Literature developed/published

<i>Item</i>	<i>Title</i>	<i>Authors name</i>	<i>Number of copies</i>
Research papers	Research Paper : Assesment of organophosphorés pesticide residue persistance in végétales crop. Internation journal of Life Sciences (2016). Effect of primary nutrientand zinc on nutrient uptake and yield attributes of Maize by	Om Prakash ; Arun A david ; Brijesh yadav, Rakesh kumar ; Sandeep K. Malyan and Devesh Pratap. Jitendra kumar ; Rakesh Kumar ; Brijesh Yadav and Amrendra kumar. (2016)	-
Technical reports	<ul style="list-style-type: none"> • Report on farmers awareness programme on Pradhan Mantri Fasal Bima Yojna • Annual Progress Report 2015-16 • Rabi Diwas • Farmer’s training report sponsored by NCRI, Hyderabad • Awareness programme on Safe & Judicious use of pesticide 	Ritu Singh & R K Yadav All KVK staff Dr. D.K. Rana Ritu Singh Dr. D.K. Rana	3 5 2 4 2
Technical bulletins	Madhumakhi palan Phal sabji parirakshan Verimcomposting	Dr. D.K.Rana Ritu Singh & Rakesh Kumar Brijesh Yadav	500 500 500
Popular articles	<ul style="list-style-type: none"> • Enjoying sweet corn delecacies by March-April (2016). Indian Horticulture. • Mrida prakishan evam tikao kheti. • Dudhru pashuon ki premookh rog va roktham 	Ritu Singh SMS(HS) Dr. D.K.Rana & Mr. Brijesh Yadav Dr. Himanshu Pandey & Dr. D. K. Rana	-
Training Manual	Mushroom production Soil & water testing Gardening Fruit juices & pulp preservation	Dr. D.K.Rana Brijesh Yadav Rakesh Kumar & R.K.Yadav Ritu Singh	30 30 500 25
Extension literature	Sarson main Keet rog niyantran Poshak tatav prebandhan hetu mrida – jal parirakshan Dodharon pashuon ki dekhbhaal	Dr. D.K.Rana Brijesh Yadav Dr. H.Pandey & Ritu Singh	500 500 500 500
Folders /leaflets	Button mushroom uttpadan	Dr. D.K.Rana	500
TOTAL	-	-	45101

(C) Details of Electronic Media Produced

S. No.	Type of media (CD / VCD / DVD / Audio-Cassette)	Title of the programme	Number

9 A. Success stories/Case studies, if any (two or three pages write-up on each case with suitable action photographs)**1. TITLE: SAPLINGS OF LIVELIHOOD - A SUCCESS STORY ON COMMERCIAL NURSERY**

INTRODUCTION: Alipur, a peri urban block of Delhi has immense potential for fruits and vegetable cultivation, but unstable yields and high cost of production are the major problems faced by vegetable growers. The factors responsible for these problems are heavy seedlings mortality, high cost of seed, extra use of seed and unfavorable weather conditions leading to high incidence of diseases. Seeds of hybrid vegetables are sold at very high price, hence converting every individual seed into a healthy seedling becomes essential and this requires intensive nursery management.

Hard work, dedication and some innovative thinking to make use of available resources for getting maximum benefit are practiced by few farmers. Mr. Satyawan from North west district, Delhi is an exception. He did higher secondary and joined family farming as his life motto. He started his path from farming activities which was depending on traditional method of farming. Mr. Satyawan was much more attracted towards vegetable cultivation because it is more remunerative than cereal crop.

KVK INTERVENTION: During the year 2012-2013 Mr. Satyawan came in contact with KVK, there he was advised to go for raising vegetable nursery. KVK conducted training programme on nursery management. During training trainees were trained in field about advanced nursery management technologies like soil solarisation, grafting, sowing, fertilisation, raised beds, pest and disease management activities, etc. With the technical assistance of the Krishi Vigyan Kendra, Ujwa, Delhi, and now he is engaged in raising healthy vegetable nursery of different vegetables. Mr Satyawan while involved in vegetable seedling production observed that in order to get maximum productivity and quality of vegetable crops, seedling should be healthy, vigorous and disease free. It was observed that plants at seedling stage are succulent, highly tender and vulnerable to a number of pests and diseases. The cost of hybrid seed also warrants production of quality seedling under protected condition. Hence, raising of vegetable nursery under poly tunnel condition is useful. Focusing on the same, KVK, Ujwa has planned & conducted vocational training course on 'Establishment of vegetable nursery with special reference to under poly tunnel', Mr. Satyawan was one of the participant in the said course. This technology helps him to grow quality seedlings early, late and at desirable time under adverse climatic conditions, eliminating danger of destruction from hail storm rains etc. Protections against biotic and abiotic stresses become easier under protected structural. The seedlings prepared under the poly tunnel are ready to transplant in 25 - 30 days in comparison to normal season.

OUTPUT: Within one year from establishment of unit Mr. Satyawan has produced around 11, 60000 seedlings of different vegetables and marketed in 2-3 districts of Delhi and 2 tahsils of Sonapat district also. He secured gross income of Rs.8, 70000 /- in a year. The seedlings were prepared as per demand: supply ratio in market and climatic suitability of the crop. The news paper advertisements, visiting cards & board displays on road are important tools used for marketing. The existing customers in different villages were the major mass media through which the popularity of nursery products and consultancy given was made & helpful for business generation. Due to nursery establishment & income generation from that, now he became self employed in his unit. He has engaged 20-25 labours from his own village were got work in his unit. Mr. Satyawan is hard working farmer and he is able to grasp the technologies faster and adopt it. He

is actively involved in all day to day working of the farm and marketing. He can now identify important insect pest of vegetables he is growing and their management practices.

Impact: Mr. Satyawan incorporated the components in such a way that it enhanced productivity and profitability in relation to the farming system model in consultation with KVK, Ujwa. Mr. Satyawan also provides jobs to local people to help him. The key to his success is his eagerness to learn and understand very soon, hard work & positive attitude. He is a model farmer.

"If more families devote their time in farming vegetables on a large scale, they can make income in lakhs annually by growing & marketing their produce in the state," said Satyawan.

2. TITLE: Revenue Generation through Vermicomposting

INTRODUCTION: Vermitechnology is popular because it is a simple methodology with low investment and does not need sophisticated infrastructure. To process one ton of organic matter daily, it would require about 1500 sq meters of space with 6 workers. It would produce about 70 tons of earthworms casting annually. Innovative, interested and talented rural people can be successful entrepreneurs in vermicompost production and accruing profits will enhance their life style and income. They will be able to spend time usefully by getting job opportunities with the help of self-employment schemes.

KVK INTERVENTION: The transfer of vermiculture technology is highly successful and can be widely adopted by the farming community. It has a visible impact on the economic upliftment of them and provided with self employment opportunities to the youth and farmwomen. Few years ago, Mr. Arun Kumar, from village Malikpur visited to KVK and got training in Vermicompost production. He was so happy with guidance of KVK Delhi that he immediately started Vermicompost production at his farm/residence. He got 1kg earthworms (red worms i.e. *Isenia foetida*) from KVK, Ujwa. Earlier he started Vermi composting in open ground under tree shade. The experiment was very successful. The experiment was successful, Next year he established well developed vermi compost unit of 10x3x1 ft with 15 beds and total area of 900 sq ft. The pucca structure is constructed.

OUTCOME: The farmer was happy due to the growing demand for compost from other groups and they were convinced with the superiority of farm produce due to the use of compost in their own fields. The technology of vermin compost production started disseminating to neighbors as well to nearby districts. The unit is closely monitored by KVK through visiting the units frequently, telephonic discussion and consultations as and when required to solve various problems faced by the farmer. Other farmers were also motivated through off campus trainings. KVK also associated with other development departments such as Department of Agriculture, All India Radio, TV, NGO's etc. to spread the message of organic farming and vermicomposting among the farming community. The importance was also highlighted during exhibitions and Kisan melas.

IMPACT: Today, he is producing about 30 qt of vermin compost per year from 15 beds. About 3000 kg vermin compost is sold in the market @ Rs.6.00/kg, earning Rs.60000/3 months.

The impact can be accessed from the fact that the farmer has been able to supplement his income and also develop himself as role model for the unemployed rural youth of the area. He has built up a good rapport with his clients and is a popular person in the block.

3. Processing of pearl millet – An emerging enterprise

INTRODUCTION: The rural Delhi is undergoing tremendous change and unprecedented transformation, especially shift from farm to non-farm economy in NCT region and adjoining areas. Declining land- holding, rainfed conditions in the rural districts and landlessness is cause of concern in the state. This calls for development of farm based social micro enterprises especially value addition of pearl millet and locally produced fruits and vegetables. This can play an

important role by providing health package to the people coupled with their sustainable economic development too. Moreover nutritionally rich high yielding varieties of pearl millet are coming up on a larger area under district. This nutri-millet will provide health package to people by preventing them from micro-nutrient deficiency diseases. Value added products of pearl millet can also provide nutritional security and economic empowerment of rural women.

KVK INTERVENTION: KVK has been conducting trainings, demonstrations and other extension activities on value addition of pearl millet. Rigorous campaigning through trainings, demonstrations, extension literature, exposure visits has been done on nutritional importance of pearl millet as a rich source of protein, calcium, iron, potassium, fiber and other micro-nutrients essential for good health. On farm trial was also conducted on pearl millet/bajra biscuits for assessment and refinement for further modifications. During the year 2012-13 KVK conducted vocational training on processing of pearl millet, sponsored by NABARD, New Delhi. A total of 25 trainees successfully attended the programme. The technique for making pearl millet biscuit attracted the one of trainee Smt. Sunita from village Mitraon and wants to start this as an income generation enterprise. Smt. Sunita running a Self help Group, named Ganga with the support of NGO. She was very keen to involve her group members in this enterprise and in future want to establish this practice as a source of regular income generation enterprise by involving more women. Training and high level motivation encouraged her to start her own entrepreneur of bajra biscuit bakery unit. Smt. Sunita has started with the initial investment of Rs. 4000/ and baked 8kg of bajra biscuits at local bakery. At that time only 10-12 packets were sold in local market and rest were distributed in neighborhood for tasting, since the product was new for the area and was not liked very much by the locals. Smt. Sunita put up this problem to KVK expert, she guided the right procedure for bajra biscuit preparation and refinement in recipe of pearl millet biscuit was done as per the opinion of majority of people and she successfully prepared bajra biscuits as per guidance. During the year 2013-14, KVK, expert motivated her to participate in the Pusa Krishi Vigyan Mela, she participated in the mela by putting up a stall to showcase value added bajra biscuits, with an investment of Rs.5000 – 6000/ the bajra biscuits fetched a good price i.e. Rs.18000- 20000. This initiative brought confidence in Smt. Sunita. After that she put up the stall at Trade Fair and Suruj kund Mela from where she got a good response. With support of KVK she participated in Pusa Horticulture Show in February, 2016, held at IARI, New Delhi. At that show she won first prize for her bajra biscuit, as this was new, nutritious and tasty product in the market.

OUTCOME: During the year 2015-16, she applied for setting up of small scale bakery unit through PMEGP scheme of KVIC, New Delhi and her loan for Rs. 4.0 lakh was sanctioned during the same period. With that she has established her own bakery unit of pearl millet in her village Mitraon. As a result of the above coordinated efforts, a full scale production unit has been established with technological back up/training from KVK, Ujwa. She has carefully developed a low cost technology package, recipes and processing protocols through field trials based on her traditional knowledge/techniques upgraded with modern science technology inputs, availability of raw material in the area and market demand of innovative products.

IMPACT: In a short span of 3 years she has expanded her enterprise tremendously with 15 different types of bajra biscuits like bajra- jeera biscuit, bajra ajwain, bajra til, bajra coconut, bajra besan, sugar free biscuit and bajra chocolate biscuit especially for children etc. At present 1qt of products are generating an annual turnover of Rs. 5 lakh from the unit and providing employment to others.

Her success story has been covered by various print and electronic media like news papers (Hindi), Doordarshan channel.

9.B. Give details of innovative methodology/technology developed and used for Transfer of Technology during the year

- Use of herbicide formulation viz. Sulphosulfuron 75 % + Metsulfuron 5% @ 40 g/ha. and Cloidinofox 15% + Metsulfuron 1% @ 400 g/ha. against control of mixed weed flora in wheat (Spray at 35 DAS)
- Use of *Trichogramma japonicum* found promising for the management of leaf folder and stem borer in paddy @ 1.0 lakh egg/ha.
- Use of *Fertera* found effective on control of stem borer and leaf folder in paddy @ 4 kg /acre (broadcasting at 30 DAT or occurrence of pest)
- Chloentraniiprole found to be useful to control all borer of sugarcane.
- Application of Bispyribac Sodium 10% (Nominee Gold) @ 100ml/acre is found effective in controlling post-emergence weeds in paddy.
- Use of Bufrofenzine @ 330ml/acre is effective in controlling Brown Plant Hopper in paddy
- Production of spring summer season tomato for getting higher rates of produce.
- Adoption of low cost onion storage structures.
- Off season cultivation of bottle gourd and summer squash in low tunnel
- Early cucurbits production by raising seedlings in poly bags under protected structures.
- Use of Propiconazole 20EC found promising for the management of brown spots and sheath blight in paddy @ 200ml/acre (Spray in sept. - oct.).
- Use of Imidachlorpid 17.8EC found effective against leaf curl and white fly in tomato @ 50 ml/acre (Spray at 10 days interval).
- Use of Spinosad 45 EC @ 80 ml/acre is effective in controlling fruit borer in tomato, Brinjal and Okra.
- Use of pheromones traps and a spray of NSKE 5 % @ 5ml /liter water effectively control DBM in cauliflower.
- Use of NSKE 5 % controls DBM in cauliflower
- Seed treatment with Carbendazim 50 WP @ 10gm + 1 g streptomycin for 10 kg seed is effective for control of bakanae disease in paddy.
- Spray of Propiconazole 20EC @ 200ml/acre is found effective for management of rust disease in wheat.
- Two foliar spray of Gibberellic acid (GA₃) @ 50ppm or Ethrel @ 200ppm at two and four leaf stage is helpful in sex modification of flowers to increase fruit yield in bottlegourd.
- Use of Karathane found effective for the management of leaf spots, *Cercospora* spots, flower rot, bud rot and fruit rot in cucurbits @ 200 ml/acre (Spray at 10 days interval).
- Use of Profenophos+DDVP (Dichlorvos) found effective against fruit fly of cucurbits @ 250 ml/acre (spray at the 10 days interval).
- Use of Bifenthrin found promising for the management of termite in wheat @ 400 ml/acre with 20 kg sand, and broadcasting.
- Use of Cartap Hydrochloride 50SP found effective against Red pumpkin beetle in cucurbits @ 300gm/acre (Spray at 10 days interval).
- Three foliar spray of Boron 0.3% + Calcium chloride 0.2% + Ferrous ammonium sulphate 0.3% during preblossoming stage at 15 days interval prevent flower & fruit drop and fruit cracking & rotting in tomato.
- Use of low cost solar dehydrator was found very effective in drying the horticultural crop especially and dry the product much faster rate as compare to open sun drying.
- Bajra biscuit in combination with gram flour is proved to be very nutritious and glutenfree.
- Feeding of mineral mixture @ 40 gm/day/animal reduced the disease incidence in animal and increase milk production.
- Use of steam treated mustard cake in the diet of dairy animal is effective for increasing milk production.

- To prevent burning of crop residue, the residue can should be mixed in the soil with rotavator and apply urea@25-30kg/ha in presence of sufficient moisture, it will help in decomposition of the residue and improve the soil fertility.
- Use of waste decomposer found to be useful for decomposing of farm waste and use as compost in farming.

9.C. 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
1.	Vegetable crop	The farmers puts the Cotton bolls on sticks on the boundary of fields and daily at the time of evening the cottons ball has been dipped in phenyl. Due to smell of phenyl the wild animal specially Neel gai are not entered in the fields	Protection against wild animal
2.	Cucurbits	Gugle smoke use for control of red pumpkin beetle	For control of red pumpkin beetle
3.	Wheat	Use of fresh neem leaves, matchstick, turmeric rhizome to prevent insect infestation during storage of grains	To control insect infestation in wheat during storage
4.	Animal	Use of Tarpin oil for control of Blot problem in Dairy animals	Prevention of Blot problem in Dairy animal
5.	Animal	Use of butter milk as dewormer in dairy animal	Control of worm infestation in dairy animals
6.	Dairy animals	Use of ghee	Proper exit of placenta
7.	Poultry	Use of tamarind water for treatment of Asitis in poultry birds	Prevention the problem of Asitis
8.	Dairy animal	Feeding of Gur with Mustard oil just after the calving for increasing milk production in dairy animals	Increase milk production
9.	Poultry birds	Bunch of neem leaves	Control of de breaking in birds
10.	Orchard	Use of kitchen waste for making spray to control insects	Insect pest control in orchard

9.D. Indicate the specific training need analysis tools/methodology followed for

- **Identification of courses for farmers/farm women**
Need assessment was made based on PRA reports, observations, field visits, interactions with farmers/farm women in meeting, field days etc. and detailed discussion with VLW's of target villages.
- **Identification of courses for rural youth**
Identification of training needs of rural youth is identified through PRA, SWOT and interaction with rural youth, village elders and professional and courses are accordingly identified. The views of officials of line department are also taken in deciding the issues.
- **In-service personnel**
Meeting with Joint Director (Ag.), Delhi Govt., Director Animal Husbandry, Delhi Govt. and the District Officer Social Welfare (South West), Deptt. of Social Welfare, Govt. of Delhi, held every year and the training programmes are organized as per the requirements. Feedback is also collected from participants of in service training course for their future training requirements.

9.E. Field activities

- i. Number of villages adopted : 05 (Kair, Shikarpur, Tigipur, Ghogha)
- ii. No. of farm families selected : 25 farm family from each village
- iii. No. of survey/PRA conducted : Survey conducted in each of above 5 adopted villages

9.F. Activities of Soil and Water Testing Laboratory / Plant Health Clinic

Status of establishment of Lab :

1. Year of establishment :
2. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost
1			
2			
3			
Total			

3. Details of samples analyzed / Soil Health Cards issued during 2016-17 :

Details	No.	No. of Farmers	No. of Villages	Amount realized
Soil Samples				
Water Samples				
Plant Samples				
Soil Health Cards Issued				

4. Status of mini soil testing labs/kit : Present
5. Year of procurement of lab/kit : 2015-16
6. No. of mini labs with the KVK : 1
7. Type of mini labs (Name of lab/Kkt) : Mrida Parishak

8. Details of samples analyzed through mini soil kit / Soil Health Cards issued during 2016-17 :

Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized
Soil Samples	363	358	43	-
Water Samples	86	80	29	
Soil Health Cards Issued	350	347	42	

10. IMPACT**10.1 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)
Dairy farming	35	20	Rs. 5,000/- per animal /year	Rs. 15,000/- per animal /year
Gardeners	25	25	Unemployed	Rs 1.20 lakh/per annum
Preservation & processing of fruits & vegetables	15	30	Nil (Unemployed)	Rs. 65000 /annum
Value addition of pearl millet	25	5	Nil	Rs 5.0 lakh/annum
Bee keeping	53	12	Rs. 35,000/- per annum	Rs.100000/- per annum
Mushroom Cultivation	40	8	Rs. 30,000/- per annum	Rs. 70000/- per annum
Vermi compost production	40	8	Unemployed	Rs. 1,40000/- per annum

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

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

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Dairy farming	35	20	Rs. 5,000/- per animal /year	Rs. 15,000/- per animal /year
Gardeners	25	25	Unemployed	Rs 1.20 lakh/per annum
Preservation & processing of fruits & vegetables	22	30	Nil (Unemployed)	-
Value addition of pearl millet	25	5	Nil	Rs 5.0 lakh/annum
Bee keeping	20	5	Rs. 25,000/- per annum	-
Mushroom Cultivation	20	5	Rs. 40,000/- per annum	Rs.80,000/per annum
Vermi compost production	20	5	-	-

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

1. Title: Promotion of Dairy farming in Peri-urban area of Delhi

Introduction: Dairy farming is an important occupation in peri-urban area of Delhi. Demand for milk is increasing day by day owing to increase in population and disposable income of the individuals. Dairy farming is being adopted as a subsidiary occupation and not as a primary occupation. Since the dairy farming has proved to reduce the income inequality among the farmers and as a instrument for economic and social change for peri-urban masses, there is a need to look the dairy farming activity for viable proposition. Commercial aspect of livestock production is gaining importance due to changes in land utilization pattern, agriculture and socio-economic conditions. Delhi is situated nearby Haryana and demand of milk is more so motivated to farmers to keep high yielding animals.

Interventions by KVK: KVK organized training programmes in dairy farming and motivated farmers to start the dairy farming for self employment and improve the existing management practices for better and sustainable production. Farmers were trained from time to time in all aspect of dairy farming like ideal housing, breeding, feeding practices like (computation of ration, urea treated wheat straw), vaccination against important diseases, regular deworming methods were demonstrated to the dairy farmers. KVK conducted 10 vocational training for rural youth (376 participants) and 35 short duration courses (736 participants) during the years 2006-2014. KVK also arranged exposure visit for the trainees of dairy farming to mother dairy and other dairy farms to motivate them.

Output: After getting the motivation through different trainings, farmers adopted dairy farming as an enterprise. NABARD played crucial role by providing subsidy schemes for purchasing animals, construction for shed etc. to needy and unemployed rural youth. After KVK interventions farmers were convinced to replace local animals with improved breeds particularly Holstein Frisian, Jersey, Murrah through breeding. Hence the productivity of animals was increased. Various technological interventions like balanced feeding, Bypass protein treatment of cakes, Urea treatment of wheat straw, deworming, vaccination are now being practice by the farmers. Presently KVK cluster villages 15 small units (3-5 animals) and 5-6 large unit (More than 15 animals) estab lished, benefit of farmers change Rs 40000/- in small unit per year and 1 lakh in

large unit per year after KVK interventions. 20 percent farmers adopted dairy farming business in the peri-urban area.

Impact: Milk yield of animals were increased 18-20% after keeping improved breeds, use new technologies of dairy farming and employment generate for some other persons

2. TITLE: Case Study on Tenant Farming

Target Group: School dropouts, small & marginal farmers become agripreneurs

Situation:

- Majority of farmers in Delhi are small & marginal farmers.
- Majority of school dropouts in rural Delhi perform trivial jobs like security guards, peon, labourers etc. in city including long duty hours & long travel.
- Many villagers are well educated and settled in city doing well in service/business & their land remains neglected.

KVK Intervention

- KVK, Delhi motivated the school dropouts, small & marginal farmers for taking land on lease from these absentee farmers for farming.
- Majority of farmers were indifferent to the idea. Very few came forward with KVK handholding they have become agripreneurs.

Name of Farmer	Land Cultivation		Major Crops	Net Income (Rs)
	Own land (ha)	lease land (ha)		
Sh. Satyawan, Dariya Pur Kalan	8	10	Paddy, Wheat, Cole crops, tomato fruit crops, cucurbits, onion, okra & vegetable nursery	2460000/-
Sh. Dayanand, Ghumenhera	4	24	Paddy, Wheat, Cole crops, tomato fruit crops, onion, okra	2767100/-
Sh. Mukesh, Kair	2.4	14	Bajra, Jowar, Mustard, Wheat	706344/-
Sh. Jitender, Ujwa	1	12	Bajra, Jowar, Mustard, Wheat, tomato fruit crops, Cucurbits	1489800/-
Sh. Narender, Ghumenhera	2.4	12	Paddy, Wheat, Cole crops, tomato fruit crops, cucurbits, okra	1516980/-
Sh. Surender, Mitraon	1.0	3	Wheat, Mustard, Cole crops & dairy	642920/-
Sh. Anil Chauhan Bakhtawar Pur	0.8	4.8	Cole crops, tomato fruit crops, cucurbits, onion, okra	752440/-
Sh. Dharam Singh, Palla	0	1.6	Cole crops, tomato fruit crops, cucurbits, onion, okra	292500/-
Arvind Beniwal, Palla	0	4	Strawberry	670000/-
Pradeep, Ghumenhera	2	4	Onion, okra, potato, bottle guard, wheat, paddy	610000/-
Chandroop, Ghumenhera	4	10	Onion, okra, potato, bottle guard, sponge guard, chilli, cauliflower, wheat, paddy	1260000/-
Ravinder, Ghumenhera	2	10	Cauliflower, onion, cucumber, wheat, paddy	1125000/-

- **Popularization of Rotavator in Rice-Wheat growing area** – 60% paddy growers saving Rs. 58.56 lakh by using Rotavator for preparation of land beside saving time and better field preparation.
 - **Large scale adoption of high yielding and disease resistant Wheat variety HD 2967** – About 65% Replacement of wheat variety with HD-2967 has increased the farmers yield by an average of 5.25 qtl/ha. It has resulted in additional income of Rs. 10.76 Crore in NCT Delhi.
3. **Impact of diagnostic and advisory services of KVK** –The control measures suggested by KVK scientists cure the problem from 25% heat problem in animals to 97% Post-emergence weed control in paddy.
4. **Popularization of technology through Electronic Media**
During the year 2016-17, KVK emphasized on popularization of technologies through electronic media i.e. news paper, radio and TV coverage. During the year 26 TV talk were recorded for National Chanel in Krishi Darshan Programme. The 4 programmes on crop production, management of dairy animals Storage & processing cereals & millets were broadcasted on All India Radio. 28 programmes were published in reputed news papers of Delhi edition.

11.0 LINKAGES

11.1 Functional linkage with different organizations

Name of organization	Nature of linkage
National Horticultural Research & Development Foundation (NHRDF)	Parent organization of KVK; a duly recognized 'Scientific & Industrial Research Organization' (SIRO by Deptt. of Science & Industrial Research, GOI, and a National Agency for implementation of National Horticulture Mission of GOI. Provides administrable, financial and technical logistics to KVK
CCS Haryana Agricultural University, Hisar	Technical support
Indian Agricultural Research Institute	Conducting training programmes and demonstrations/ Field visits/Resource persons
State Department of Agriculture	Training of extension functionaries
State Animal Husbandry Department	Collaborative animal camps, training of extension personnel's/ Resource persons
National Horticultural Mission (Min. of Agriculture)	Seminars, Farmers' group visits through NHRDF, a National agency.
Khadi & Village Industries Commission, New Delhi	Field visits/Resource persons
National Bank of Agricultural and Rural Development	Participation in meeting, training
Mother Dairy, Delhi	Participation in meeting/ Field visit
Safal, Delhi	Participation in meeting/ Field visit

KVK- Sikohpur, Jhajjar , Mandkola	Field visits/Resource persons
Integrated Child Development Services	Training of AWW and Supervisors
Community Food Nutrition Extension Unit	Collaborative training and extension activities
Municipal Corporation of Delhi	Collaborative programme for the rural community
Directorate of Wheat Research	Conducting Frontline Demonstration
NCIPM	Joint implementation of Project
YWCA, Nazafgarh	Guidance by KVK on income generating activities and SHG strengthening.
The Najafgarh Farmer's Coop. Marketing Society	Technical guidance and farm advisory
Department of Education, Govt. of NCT Delhi	Technical guidance on nutrition education, carrier orientation in agriculture and its allied fields.
Rural Health Training Centre, Min. of Health & Family Welfare, GOI	Orientation of nursing students on KVK activities
Gram Vikas evam Kalayan Association, Delhi	Resource Person & guidance on agri- agro enterprises
Rao Tula Ram Hospital, Jaffarpur, New Delhi	For conducting on farm trials
St. Stephens Hospital, Delhi	For conducting training
DIET, Ghumenheda, New Delhi	For conducting training

11.2 List special programmes undertaken by the KVK, which have been financed by State Govt./Other Agencies

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)

11.3 Details of linkage with ATMA

a) Is ATMA implemented in your district No

S. No.	Programme	Nature of linkage	Remarks

Coordination activities between KVK and ATMA during 2016-17

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	Meetings				
02	Research projects				
03	Training programmes				
04	Demonstrations				

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
05	Extension Programmes				
	Kisan Mela				
	Technology Week				
	Exposure visit				
	Exhibition				
	Soil health camps				
	Animal Health Campaigns				
	FFS				
06	Publications				
	Video Films				
	Books				
	Extension Literature				
	Pamphlets				
	Others News coverage				
07	Other Activities				

11.4 Give details of programmes implemented under National Horticultural Mission NA

S. No.	Programme	Nature of linkage	Constraints if any

11.5 Nature of linkage with National Fisheries Development Board NA

S. No.	Programme	Nature of linkage	Remarks

11.6. Details of linkage with RKVY NA

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks

12. PERFORMANCE OF INFRASTRUCTURE IN KVK

12.1 Performance of demonstration units (other than instructional farm)

Sl. No.	Demo Unit (Mention the name of Demo Unit)	Year of estt.	Area	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1	Vermicompost unit	2012-13	50 m ²	-	Compost	2442 Kg	4400	19536	
2.	Mushroom Production Unit	2012-13	20 m ²	White button mushroom	Mushroom	5.400 kg	300	432	Mushroom Production Unit

12.2 Performance of instructional farm (Crops) including seed production

Name Of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.	Cost of inputs	Gross income	
Cereals	Wheat 25/12/16	17/4/17	2.8	HD-2967	Seed	87 qtl	52000	*	*To be processed, packed & sale as seed
	Wheat 3/12/16	17/4/17	3.8	HD-2967	Grain	140qtl	90000	*	*To be processed, packed & sale as seed
	Wheat 30/12/16	17/4/17	0.2	Varietal demons tartion	Grain				
Pulses									
Pigeonpea									
Oilseeds	Mustard 30/10/16	27/3/17	1.4	Pusa Vijay	Seed(r aw)	21qtl	29750	*	*To be processed, packed & sale as seed
	Mustard 30/10/16	27/3/17	0.3	Pusa Vijay	Grain	4.5qtl	4500	14850	
	Mustard 30/10/16	27/3/17	0.2	RH 749	Grain	4.20qtl	2700	13860	
	Mustard 30/10/16	27/3/17	0.2	RH 406	Grain	3.90qtl	2700	12870	
	Mustard 30/10/16	27/3/17	0.1	Varietal demons tartion	Grain	1.5qtl	1400	4950	
Fibers									
Spices & Plantation crops									
Floriculture									
Fruits									
Vegetables	Palak 10/11/16	*	0.6	Pusa All Green	Seed	-	9500	-	*to be harvest
Others (specify)									

12.3 Performance of production Units (bio-agents / bio pesticides/ bio fertilizers etc.,)

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

12.4 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	

12.5 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 2016			
May 2016			
June 2016			
July 2016			
August 2016			
September 2016			
October 2016			
November 2016			
December 2016			
January 2017			
February 2017			
March 2017			

12.6. Database management

S. No	Database target	Database created by the KVK

12.7 Rainwater Harvesting NA**Training programmes conducted using Rainwater Harvesting Demonstration Unit**

Date	Title of the training course	Client (PF/R/Y/E F)	No. of Courses	No. of Participants including SC/ST			No. of SC/ST Participants		
				Male	Female	Total	Male	Female	Total

Demonstrations conducted using Rainwater Harvesting Demonstration Unit

Date	Title of the Demonstration	Client (PF/R/Y/E F)	No. of Demos.	No. of Participants including SC/ST			No. of SC/ST Participants		
				Male	Female	Total	Male	Female	Total

Seed produced using Rainwater Harvesting Demonstration Unit

Name of the crop	Quantity of seed produced (q)

Plant materials produced using Rainwater Harvesting Demonstration Unit

Name of the crop	Number of plant materials produced

Other activities organized using Rainwater Harvesting Demonstration Unit

Activity	No. of visitors
Visit of farmers	
Visit of officials	

13. FINANCIAL PERFORMANCE

13.1 Details of KVK Bank accounts

Bank account	Name of the bank	Location	Account Number
With Host Institute	-	-	-
	Bank of Baroda	Ujwa, New Delhi	21440100003810
	Bank of Baroda	Ujwa, New Delhi	21440100004152

13.2 Utilization of KVK funds during the year 2016-17 (up to March 2017) in lakhs

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	95.50	92.59	92.59
2	Traveling allowances	1.55	0.00	0.90
3	Contingencies	18.00	0.99	12.00
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)			
B	POL, repair of vehicles, tractor and equipments			
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)			
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)			
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)			
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)			
G	Training of extension functionaries			
H	Maintenance of buildings			
I	Establishment of Soil, Plant & Water Testing Laboratory			
J	Library IFS			
TOTAL (A)		115.05	93.58	105.49
B. Non-Recurring Contingencies				
1	Works			
2	Equipments including SWTL & Furniture			
	a) equipment	1.00		1.0
	b) Tractor	7.00	0.0	7.00
3	Vehicle (Four wheeler/Two wheeler, please specify)			
	a) Jeep	8.0	8.0	8.0
4	Library (Purchase of assets like books & journals)	0.10	0.0	0.10
TOTAL (B)		16.10	8.0	16.10
C. REVOLVING FUND		0	0	0
GRAND TOTAL (A+B+C)		131.15	101.58	121.59

13.3 Status of revolving fund (Rs. in lakhs) for the last four 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
April 2013 to March 2014	54.06	7.68	2.46	59.28
April 2014 to March 2015	59.28	10.67	5.56	64.39
April 2015 to March 2016	64.39	9.40	4.30	69.49
April 2016 to March 2017	68.63	6.72	1.28	74.06

14. Details of HRD activities attended by KVK staff during 2016-17

Name of the staff	Designation	Title of the training programme	Institute where attended	Date
Dr, D.K.Rana,	SMS (PP.)	GAP and value addition	CATAT,IARI, New Delhi	25-27 April, 2016
Sh. R.K.Yadv, & Dr. D.K.Rana	PC SMS (PP)	Zonal Workshop on Action Plan Meeting	CCSHAU, Hisar	2-3 May, 2016
Sh. R.K.Yadv, Rakesh Kumar & Dr. D.K.Rana	PC SMS (Hort) SMS (PP)	Workshop on skill development programme	ATARI, Ludhiana	26-28 October,2016
Dr, D.K.Rana,	SMS (PP.)	Workshop on FLD on oilseeds & pulses	ATARI, Ludhiana	23-24 January,2017
Ritu Singh	SMS (HS)	Stakeholders meeting under gramin krishi mausam sewa	IARI, New Delhi	20 th Feburay, 2017

15. Please include any other important and relevant information which has not been reflected above (write in detail).

During the reported year KVK participated in Unnat Krishi Mela – 2017 at IARI, New Delhi. The event was jointly organized by Ministry of Agriculture and farmer's welfare, ICAR and IARI. KVK, Ujwa, Delhi put the stall during the mela and showcased the various live demonstration technologies like improved structures for storage of onion, low cost mushroom production unit, improved varieties of onion and garlic, wheat and mustard. Various posters, depicting employment generation programs in activities like dairy farming, food processing, bee keeping & mushroom production. One display stand projecting the products of successful entrepreneurs of KVK, so more and farmers can see and encouraged to go for such activities for increasing their income. Approximately 700 farmers, ext. personnel, media persons and scientists were visited the stall and benefitted. **During this mela KVK received best stall award under KVK category.**

In Unnat Krishi Mela – 2017 KVK were encouraged its 7 entrepreneurs (involved in different income generating activities with technical support of KVK) to participate in the Mela by putting up their stalls. **One Entrepreneur, Sh. Vipin Kumar, from Modi Nagar, awarded under innovative farmer category for his unique value added products of aonla. Another farmer Sh. Narender Kumar, from village Tatesar, Delhi, a handicap entrepreneur of KVK also awarded for his courageous involvement in setting up & selling of fruits & vegetables processing unit under the guidance of the KVK.**

Annexure

District Profile - I

Include the details of

1. General census

•	Total Population	1,67,53,235
•	Male	89,76,410
•	Female	77,76,825
•	Literacy Rate	86.34%
•	Sex Ratio	866
•	Total Geographical Area	1, 47, 488 Ha (1, 475 sq.kms)
•	No. of villages	191
•	Gross Cropped area	42084 ha

2. Agricultural and allied census

Area, Production and average yield in kg/ha of major crops in the district (2011-12)

S. N.	Name of Crops	Area (Ha)	Production (MT)	Productivity (Qtl/ha)
1.	I. Paddy	6068	296520	43.22
	II. Wheat	19450	848020	43.60
	III. Barley	65	1830	28.28
	IV. Bajra	1519	38150	18.78
	V. Maize	37	8280	19.50
	VI. Jowar	3319	300820	9.66
	VII. Gram	44	530	14.77
	VIII. Potato	689	146520	164.48
	IX. Oilseed	950	*	*
	X. S. Cane	3	2260	752.35
	Total	32144	1642930	1094.64
2.	Vegetable (Gross area)	13280	145900	*
3.	Flowers (Gross area)	5500	104370	*

Source: Development Department, Govt. of NCT Delhi; * Data for not available with NCT Delhi

3. Agro-climatic zones

S. No	Agro-climatic Zone	Characteristics
1	Trans- Gangatic Plains region (Zone VI)	Semi-Arid, Low rainfall, high temperature during summer (up to 48 degree C) Very low temperature during winter (up to 2 degree C), frost occur once or twice in the season.

4. Agro-ecosystems

S. No	Agro ecological situation	Characteristics
1	Agro-eco situation-9 Agro-ecological region -4, Agro-ecological sub region -4.1	Alluvial derived soil comprise the northern Indo-Gangatic plains

Source: NBSS & LUP, Regional station, IARI, New Delhi

5. Major and micro-farming systems

S. No	Farming system/enterprise
1.	Agriculture + Animal Husbandry
2.	Agriculture + beekeeping
3.	Agriculture + Value addition in fruits and vegetable
4.	Agriculture + Mushroom cultivation

6. Major production systems like rice based (rice-rice, rice-green gram, etc.), cotton based, etc.

S.No.	Production based	Crop based
1	Wheat/mustard based	Paddy - Wheat
		Fodder Sorghum/ Fodder Maize - Wheat
		Fallow - Mustard
		Moong - Wheat
		Arhar - Wheat
2	Vegetable based	Vegetable – Vegetable - Wheat
		Vegetable - Vegetable
		Paddy-Vegetable
		Vegetables - Wheat

7. Major agriculture and allied enterprises

- Cereal production
- Oilseed production
- Vegetable production
- Flower production
- Seed & plant material production
- Mushroom production
- Dairy
- Beekeeping
- Poultry
- Value addition of fruits and vegetables.

Agro-ecosystem Analysis of the focus/target area - II

1. Names of villages, focus area, target area etc.

Shikar Pur. Kair, Tigipur, Ghoghar

Focus Area: Agriculture enterprise and Animal Husbandry based enterprises.

Target Area: Periurban Horticulture

2. Survey methods used (survey by questionnaire, PRA, RRA, etc.) : PRA
3. Various techniques used and brief documentation of process involved in applying the techniques used like release transect, resource map, etc.

KVK has selected 5 villages in NCT Delhi. A structured bench mark survey was conducted to make proper assessment of the existing situation. This includes the assessment of the resource position of the selected villages and the farm families, information on different production systems with technology adoption, resource availability, farming situations, socio-economic status, farmers needs, market facilities, infra structure facilities etc. The data collected with the use of different PRA tools like transect map, chapatti diagram, time analysis survey, problem cause diagram etc. The data collected was supplemented with secondary data collected from village record maintained by the Patwari in block development office and agriculture and allied departments of state Government and statistical abstract.

4. Analysis and conclusions

The problem cause analysis of the selected villages brought out several problems which are being tackled through appropriate interventions by KVK scientists. Suitable scientific interventions were selected for tackling the important problems during 2011-12 in close coordination with local research institutes and line departments.

5. List of location specific problems and brief description of frequency and extent/ intensity/severity of each problem

Problem: The frequency and intensity of the location specific problems are scored on 5 – point scale.

Problem	Frequency	Intensity
1. Weed problem		
a) Fallow land	000	00000
b) Improper crop rotation	00	0000
c) Lack of awareness on weedicide application	000	0000
2. Poor soil health		
a) Imbalance use of fertilizer	00000	00000
b) Brackish water	000	0000
c) Minimum use of FYM	000	0000
3. Low adoptability of seed treatment		
a) Lack of knowledge	0000	0000
b) Unavailability of treated seed	000	000
c) Unavailability of good quality fungicides	000	000
4. Low yield of wheat		

a) Depleting ground water level	0000	0000
b) Brackish water	000	000
c) Heavy weed incidence like <i>Phalaris minor</i> , broad leaf	0000	0000
5. Low yield of Mustard		
a) Heavy insect attack aphid	0000	0000
b) Due to frost in winter prohibits pod formation	0000	0000
c) Heavy termite attack	00	000
6. Heavy incidence of disease & pests in vegetables		
a) Heavy incidence of damping off disease at nursery stage	0000	0000
b) Incidence of red beetle, Downey mildew & fruit fly in bottle gourd	000	000
c) Problem of yellow mosaic virus	000	000
d) Fruit fly, flower & fruit drop in tomato	0000	0000
e) High cost of plant protection	0000	0000
7. Heavy post harvest losses		
a) Lack of awareness regarding correct preservation techniques for horticultural crops	0000	0000
b) Lack of training facility	000	000
c) Low rate of literacy among the farm women	00	00
8. Low use of nutrients in vegetable crops		
a) Lack of awareness on INM	00000	00000
b) Unavailability of good quality nutrients	0000	0000
9. Heavy incidence of disease & pests in Basmati Paddy		
a) Low adoptability of seed treatment	000	0000
b) Heavy incidence of blast & sheath blight disease	0000	0000
c) Heavy incidence of stem borer & leaf folder insect attack	0000	0000
Animal production system:		
9. Low productivity.		
a) Adverse ambient conditions	000	000
b) Poor Feeding	0000	0000
c) Cleanliness	00	00
d) Disease	0000	0000
e) Milking Method	000	000
10. Endo-ecto parasite.		
a) Climate	000	000
b) Dirtiness	000	000
11. Imbalance use of nutrients.		
a) Lack of knowledge	0000	0000
b) Cost	00	00
c) Application & quality of nutrients	000	000
12. Attack of disease like HS, BQ metabolic disease like Bloat, Ketosis, milk fever.		
a) Climatic factor	00	00
b) No use of vaccination	0000	0000
c) Worm infestation	0000	0000
d) Lack of nutrients	000	000
e) Under or overfeeding	000	000
13. Irregular and delayed conception in dairy animals.		
a) No use of mineral mixture	0000	0000
b) Imbalance feeding	000	000
c) Pedigree record	0000	0000

6. Matrix ranking of problems: The matrix rankings of problems are scored on 5-point scale.

S. No.	Problem	Villages				
		Kair	Shikarpur	Tigipur	Ghogha	Samaspur jagir
1.	Salinity of soil and water.	+++++	++	++	++	+
2.	Low soil fertility & health	++++	+++	++	+++	++++
3.	Low yield of wheat	++++	++++	++++	+++	-
4.	Low yield of Mustard.	++++	++	++	++	-
5.	Poor adaptability of seed treatment.	+++++	++++	+++	++++	++++
6.	Non availability of quality seeds.	+++++	+++++	+++++	+++++	+++++
7.	Heavy weed infestation.	++++	+++++	++++	++++	+++++
8.	Disease & pest infestation in vegetables	++	+++++	+++++	+++	+++++
9.	Heavy disease incidence in Basmati rice crop.	-	++++	+++++	++++	-
10.	Low productivity in dairy animals	++++	++++	++++	++++	+++
11.	Imbalance use of nutrients.	++++	+++++	++++	+++++	+++
12.	Poor adaptability of INM.	++++	+++	++++	+++++	+++
13.	Post harvest losses in cereals and vegetables crops.	++++	+++++	+++	+++	++++
14.	Wide spread micro-nutrient deficiency among rural youth & rural women	++++	++	+++	+++	+++
15.	Endo-ecto parasites in animals.	+++	++++	++++	+++++	++++
16.	Drudgery in fodder harvesting.	+++++	++++	++++	++++	+++++
17.	Marketing.	++++	++++	++++	++++	++++

7. List of location specific thrust areas:

- Management of brackish water for use in irrigation.
- Integrated Disease and insect management in cereals and vegetable crops
- Weed management in cereals and vegetables
- Production of off season vegetable crops.
- Soil fertility management.
- INM in vegetables like bottlegourd, tomato & cauliflower.
- Feed management in dairy animals
- Use of women friendly tools to reduce drudgery
- Value addition in fruits and vegetables
- Techniques for minimization of storage loss

8. List of location specific technology needs for OFT and FLD.

- Improved variety for Mustard.
- Improved variety for Wheat.
- INM in cereal and vegetable crops
- IPM in cereal and vegetable crops
- Feed management in dairy animals.
- Location specific drudgery in harvesting & storage
- Post harvest management of horticultural crops

9. Matrix ranking of technology: The matrix rankings of technologies are scored on 5- point scale.

S. no.	Problem	Villages				
		Kair	Shikarpur	Tigipur	Ghogha	Samaspur jagir
1.	Salinity of soil and water	+++++	++	++	++	+
2.	Improved seed variety	++++	+++	+++	+++	+++
3.	Integrated nutrient management in vegetable.	-	++++	+++	++++	+++
4.	IPM in Paddy	-	++++	+++	+++	-
5.	Feed Management	++++	+++	++++	++++	+++
6.	Value addition	+++++	++++	++++	++++	+++++

7.	Weed Management	++++	+++	+++	+++	++
8.	Soil fertility	+++++	++++	+++	+++	++
9.	Seed treatment	+++++	++++	+++	++++	++++
10.	pH losses in cereals & vegetable crops	++++	++++	+++	+++	++++
11.	Disease Management	++++	+++	+++	+++	+++

10. List of location specific training needs:

- Management of brackish water and saline soil.
- Integrated pest management for the crops growing in the area.
- Production of quality seeds.
- Cultivation of off season vegetable crop.
- Market base crop cultivation.
- Round the year fodder availability for dairy animals.
- Drudgery reduction techniques
- Value addition of horticultural crops.
- Reproduction management in dairy animals.
- Technologies for increase milk yield.

Technology Inventory and Activity Chart - III

Technology Inventory and Activity Chart

1. Name of research institutes, research stations, regional centers of NARS (SAU and ICAR) and other public and private bodies having relevance to location specific technology needs:

- IARI, New Delhi
- CCS HAU, Hisar
- NDRI, Karnal
- NCIPM, New Delhi
- CIAE, Bhopal
- CIAH, Lucknow
- GBPUA & T, Pantnagar
- IIVR, Barielly
- IIMR, New Delhi
- NHRDF, New Delhi
- CSSRI, Karnal

Sl. No	Technology	Crop/enterprise	Year of release or recommendation of technology	Source of technology	Reference/citation
1.	Calcium supplementation for milk production	Dairy	2005	NDRI, Karanal	Dairy farming: A technology bulletin modern dairy farming practices.
4.	Deworming	Dairy animals	2000	Veterinary Collage, Udgir, Latur, (MS)	Handbook of veterinary clinicians A.U. Bhikane & S.B. kawitkar
5.	Mineral mixture supplementation for milk production	Dairy	2005	NDRI, Karanal	Dairy farming: A technology bulletin modern dairy farming practices.
7.	Weed management	Onion	1993 and 1999	NHRDF	NHRDF bulletin Onion production in India published in 1993 and reprinted in 1999
8.	Varietal evaluation	Cauliflower, Carrot	2002,2009	IARI, Pusa	Div. of Vegetable, IARI,Pusa
9.	Preparation of bajra biscuit	Post harvest technology of Pearl millet	2003	CCSHAU, Hisar	NATP project on processing of pearl millet for value addition & development of health food. Dr. S. Sehgal, Dr. Asha Kawtra, Deptt of Food & Nut., CoHS
10	Drudgery & cost reduction by the use of wheel hoe	Cauliflower	2010	IARI, New Delhi	Uchh utpadan hetu unnat krishi prodhikiyan, IARI,

					New Delhi
11	Use of evaporative cooled vegetable vending to reduce post harvest losses	Vegetables	2014	IARI, New Delhi	IARI Annual Report 2014-15, New Delhi
12	Improved variety WH 1105	Wheat	2012	HAU, Hisar	HAU, Hisar
13	Improved variety DBW 88	Wheat	2013	DWR	Directorate of wheat research, Karnal
14	Improved variety HD 3086	Wheat	2013	IARI	Div. of genetics & plant breeding, IARI, Pusa
15	Improved variety (HD-2967)	Wheat	2011	IARI	Div. of genetics & plant breeding, IARI, Pusa
16	Improved variety HD 2851	Wheat	2005	IARI	Div. of genetics & plant breeding, IARI, Pusa
17	Improved variety HD-2894	Wheat	2008	IARI	Div. of genetics & plant breeding, IARI, Pusa
18	Integrated disease management	Paddy	2011	IARI	Div. of Soil Sc. & Agril. Chem., IARI, Pusa
19	Improved variety CS 56	Mustard	2008	CSSRI	CSSRI, bulletin
20	Improved variety Pusa Vijay	Mustard	2008	IARI	Div. of genetics & plant breeding, IARI, Pusa
21	Improved variety Pusa 1121	Paddy	2003	IARI	Div. of genetics & plant breeding, IARI, Pusa
22	Improved variety Pusa 1509	Paddy	2013	IARI	Div. of genetics & plant breeding, IARI, Pusa
23	Integrated pest management	Cauliflower	2010	NCIPM New Delhi	Gobhi ki fashal ma samakit jeev parbhandan
24	Integrated pest management	Paddy	2014	NCIPM New Delhi	Integrated pest management of paddy
25	Integrated disease management	Mustard	2012	NCIPM New Delhi	-
26	Management of Bakanae disease (<i>Fusarium moniliforme</i>) in Paddy	Paddy	2011-12	CCSU Hisar	Package & Practice
27	Management of Rust (<i>Puccinia striiformis.</i>) in wheat (<i>Triticum aestivum.</i>)	Wheat	2010	IARI	Plant Pathology
28	Management of damping off disease in tomato nursery	Tomato	2014	NCIPM New Delhi	Tamatar ki fashal ma samakit jeev parbhandan

1. Activity Chart

Crop/Animal/Enterprise	Problem	Cause	Solution	Activity	Reference of Technology
Buffaloes & Poultry	Low milk production of buffaloes & slow weight gain in poultry	<ul style="list-style-type: none"> Imbalance feeding No use of Calcium No Use of growth promotar Lack of Awareness of new technologies 	<ul style="list-style-type: none"> Balanced feeding Supplementation of Calcium Use of growth promoter in poultry. 	<ul style="list-style-type: none"> OFT on Supplementation ion broiler poultry FLD on supplementation of calcium in cows. FLD on breed evaluation of poultry OFT on Deworming of buffaloes Trainings on preparation of balanced ration, Feeding management in buffaloes, metabolic disease of dairy animals, ectoparasite control in dairy animals & vaccination in animals. Kisan Gosthi Method Demonstration. Film Show Popular articles 	<p>Sl. No. 2 of technology inventory</p> <p>Sl. No. 1 of technology Inventory</p> <p>Sl. No. 3 of technology inventory</p> <p>Sl. No. 4 of technology Inventory</p> <p>Sl. No. 5 of technology Inventory</p>
Onion	<p>Nutrient deficiency, Low yield of onion</p> <p>Weed infestation, Low yield of onion</p>	<ul style="list-style-type: none"> No use of wetttable sulphur as foliar spray No judicious use of chemicals for weed control 	<p>1.Application of wetttable sulphur as foliar spray</p> <p>2.weed management</p>	<p>1.OFT on Response of wetttable sulphur on increasing yield in Rabi onion (<i>Allium cepa</i>)</p> <p>2. OFT on To assess the efficacy of oxyfluorfen 23.5%EC and Quizalofop Ethyl 5% EC weedicide as early post emergence in rabi onion</p> <ul style="list-style-type: none"> . Extension littérature distribution 	<p>Sl. No.06 of Technology Inventory</p> <p>Sl. No.07 of Technology Inventory</p>

Cauliflower, Carrot	Low yield Cauliflower, Carrot Heavy weed infestation	<ul style="list-style-type: none"> • Low productivity of old variety • Non availability of HYV. 	Popularization of HYV of Cauliflower, Carrot Popularization of hand wheel hoe for weeding in cauliflower	<ul style="list-style-type: none"> • FLD on Varietal performance of Cauliflower, • FLD on use of wheel hoe in cauliflower Carrot <ul style="list-style-type: none"> • Training on off season Vegetable production. • Extension literature distribution 	<p>Sr. No. 08 of technology Inventory</p> <p>Sr. No. 10 of technology Inventory</p> <p>Sr. No. 08 of technology Inventory</p>
Bajra	Poor consumption of bajra	<ul style="list-style-type: none"> • Lack of knowledge regarding improved processing techniques • Lack of knowledge on nutritional value of local crops 	1. Preparation of different products of bajra	<p>2. OFT on acceptability of bajra biscuit in different ratio</p> <p>3. Method demonstration on improved processing technique</p> <p>4. Extension literature distribution</p>	
Paddy	Prevailing low yield due to khara disease	<ul style="list-style-type: none"> • No judicious use of zinc sulphate 	Use of zinc sulphate to resist khara disease	Use of zinc sulphate to resist khara disease in paddy crop	Sr. No. 18 of technology Inventory
Mustard					
Wheat					

1. Details of each of the technology under Assessment, Refinement and demonstration include

a. Detailed account on varietal/breed characters for each of the variety/breed selected for FLD and OFT

Sr. No.	Crop	Character
1.	Mustard (RH 749)	<ul style="list-style-type: none"> • Recommended for NCR Delhi • High yielding • Heat tolerant
2.	Mustard (RH 406)	<ul style="list-style-type: none"> • Recommended for NCR Delhi • High yielding • Heat tolerant
3.	Wheat HD-3086	<ul style="list-style-type: none"> • Resistance leaf & strip rust • Timely sowing • High yielding
4.	Paddy (Pusa 1121)	<ul style="list-style-type: none"> • Recommended for NCR Delhi • High yielding
5.	Paddy (Pusa 1509)	<ul style="list-style-type: none"> • Recommended for NCR Delhi • High yielding • Early maturity

b. Details of technologies that may include formulation, quantity, time, methods of application of nutrients, pesticides, fungicides etc. for technologies selected under FLD and OFT's

S. No.	Technology	Detail of Technology			
		Var./Chemical	Conc.	Dose	Method of application
Front Line Demonstration					
1.	Calcium supplementation	Osteovert	-	50ml /day for lactating animals	4-6 months for lactating animals
2.					
3.	HYV of mustard	RH 749	-	5kg/ha	Line sowing
4.	HYV of mustard	RH 406	-	5kg/ha	Line sowing
5.	HYV of paddy	Pusa 1121	-	12.5kg/ha	Line Transplanting
6.	HYV of Paddy	Pusa 1509	-	12.5kg/ha	Line Transplanting
7.	Improved variety of Wheat	HD-3086	-	100kg/ha	Line sowing
8.					
On Farm Trial					
9.	Zinc Sulphate for controlling Khaira disease in paddy	Pusa 1121	-	Zinc Sulphate (33%) @ 0.5 Zinc Sulphate were given @ 25 kg/hectare	Spray & Basal Doses
10.	Naphthalene Acetic Acid & Calcium Chloride application on nutrient uptake, growth & yield of tomato	Himsona	-	NAA 0.02% at the time of first flower blooming NAA 0.02%+ CaCl ₂ 0.5% at the time of first flower	Foliar spary
11.	Acceptability of bajra biscuits in different ratio	Proagro 9444	-	Bajra (50%)+Maida (50%) biscuit Atta (50%)+ Bajra (50%) biscuits Besan (50%)+Bajra (50%) biscuits	Mixing of flour in two combination

12.	growth promoter (Vit A. & B Complex) for increasing weight gain in broiler poultry			Vitamin A (50 ml/ 1000 birds) for 15 days Vitamin A 50 ml + Vitamin B complex 70 ml/1000 birds for 15 days	
13.	Choloropyriphos & Imidacloroprid as seed treatment against termite control in wheat	HD-3086		-Seed treatment with Chloropyriphos 20EC @ 4.5 ml/kg seed -Seed treatment with Imidacloroprid 17.8 SL @ 3.5 ml/kg seed	
14.	Trichoderma viride as soil, seed and seedling treatment against damping off disease control in tomato	Himsona	-	<i>Trichoderma viridi</i> @ 5g/kg. seed 5g <i>Trichoderma viridi</i> /liter water solution for 15 minutes before transplanting	Seed treatment & dipping of seedling
15.	oxyfluoroben 23.5% and quizalofop ethyle 5% EC weedicide for weed control in onion	L-28	-	Oxyfluorfen 23.5%EC @ 150ml/ha + Quizalofop Ethyl 5%EC @ 750ml/ha	Spray
16.	Albendazole Dewormer for controlling worms infestation in buffaloes	Local breed	-	2 times deworming 4 times deworming	

c. Details of location/area specificity of recommended technology viz., for each of the variety/breed/technology selected for FLD and OFT

S.No.	Technology	Variety	Recommendation
1.	High yielding Wheat variety	HD-3086	Recommended for North West Plain Zone in timely sown and irrigated condition
2.	HYV of Mustard	RH-749	Recommended for saline soil & water
3.	HYV of Mustard	RH-406	Recommended for saline soil & water
4.	HYV of paddy	Pusa 1121	Recommended for NCR Delhi
5.	HYV of paddy	Pusa 1509	Recommended for NCR Delhi & early maturity
6.	Improved varieties of kitchen garden vegetables	Pusa kitchen garden kit	Recommended for NCR Delhi