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ANNUAL PROGRESS REPORT

(APRIL, 2015 - MARCH, 2016)



**KRISHI VIGYAN KENDRA
HAMIRPUR AT BARA-177044 (HP)**



**DIRECTORATE OF EXTENSION EDUCATION
CSK HIMACHAL PRADESH KRISHI VISHVAVIDYALAYA
PALAMPUR -176062**

ANNUAL REPORT 2015-16

1. GENERAL INFORMATION ABOUT THE KVK

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

Address	Telephone	E mail
<i>KVK Hamirpur at Bara H.P. 177 044</i>	Office 01972-238130	FAX 01972-238130
		kvkhamr@gmail.com

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

Address	Telephone	E mail
	Office	FAX
<i>CHAUDHARY SARWAN KUMAR, HIMACHAL PRADESH KRISHI VISHVAVIDAYALAYA PALAMPUR, DISTRICT - KANGRA (HP) 176062</i>	01894-230465	01894-230511
		vc@hillagric.ernet.in

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr Pardeep Kumar	9418128122	9418128122	pkdogra2007@rediffmail.com

1.4. Year of sanction: Date - 4th October 1988. Letter No.- 5-11/89-KVK

1.5. Staff Position (as on 31st March 2016)

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. Pradeep Kumar	47	Plant Pathology Ph.D.	15600-3900 GP-6000	24860	10.4.06	Temporary	SC
2	Subject Matter Specialist	Dr.Parveen K. Sharma	42	Forestry Ph.D.	15600-3900 GP-6000	24860	10.4.06	Temporary	Other
3	Subject Matter Specialist	Dr Anjana Thakur	38	Entomology Ph.D.	15600-39100 GP- 6000	23080	10.4.06	Temporary	ST

4	Subject Matter Specialist	Dr Dhanbir Singh	39	Soil Science Ph.D.	15600-39100 GP- 6000	23080	9.10.07	Temporary	SC
5	Subject Matter Specialist	Dr C. L. Chauhan	53	Vegetable Science Ph.D.	15600-39100 GP- 6000	41900	2.2.08	Temporary	Other
6	Principal Extension Specialist	Dr. Suresh Upadhaya	58	Animal Sciences	37400-67000 GP-10000	55490		Permanent	Other
7	Subject Matter Specialist	Vacant	-	-	-	-	-	-	-
8	Programme Assistant	Sh Hem Raj Sharma	59	Matric	10300-34800 GP-3600	18240	28.10.80	Permanent	Other
9	Computer Programmer	Smt Rekha Dogra	47	M.Sc. Home Science	10300-34800 GP-7800	28170	16.11.96	Permanent	SC
10	Farm Manager	Sh Dinesh Chand	50	B.Sc. Horticulture	10300-34800 GP-5000	19140	22.03.92	Permanent	Other
11	Accountant / Sr, Assistant	Sh Suresh Kumar	57	Sen. Sec.	10300-34800 GP-4400	12370	27.04.89	Permanent	OBC
12	Stenographer	Smt Sudha Rani	55	Sen. Sec.	4900-10680 GP-1900	11170	18.5.94	Permanent	Others
13	Driver	Sh Virender Kumar	39	Matric	5910-20200 GP-2400	8510	30.1.08	Temporary	OBC
14	Driver	Vacant	-	-	-	-	-	-	-
15	Supporting staff	Prithi Singh	52	Middle	GP 1900	10530	2.04.97	Permanent	Others
16	Supporting staff	Vacant	-	-	-	-	-	-	-

1.6. Total land with KVK (in ha) : 17.58 ha.

S. No.	Item	Area (ha)
1	Under Buildings	2.25 ha
2.	Under Demonstration Units	2.00 ha
3.	Under Crops	6.00 ha
4.	Orchard/Agro-forestry	1.08 ha
5.	Others (specify)	6.25 ha

1.7. Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Lakh.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	2000	688	-	-	-	-
2.	Farmers Hostel	ICAR	Feb,1998	338	-	-	-	-
3.	Staff Quarters							
	6 No. total	ICAR	March,2007	401.67	31.20	-	-	-
4.	Demonstration Units							
	Dairy Unit	DRDA	October,2008	400	16.00			
5	Fencing	ICAR	March,2006	-	1.40	-	-	-
6	Rain Water harvesting system	ICAR	March,2007	-	6.11	-	-	-
7	Threshing floor	ICAR	2013	270	2.0	-	-	-
8	Farm godown	ICAR	2013	30	2.0	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Jeep (Bolero) HP-22A/4839	2007	4,74,711	1,83,000 km	Need Replacement
Tractor Massy Fergusson-HP-22/4954	1993	1,91,725	2500 hrs	Need replacement as it is 20 years old and not economical
Motorcycle Bajaj Discover	2010	49,800	13000 km	Good

C) Equipments & AV aids

APR 2015-16

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Mould board plough	16595.00	25-06-1993	Working
Disk Plough	15955.00	25-06-1993	Working
Trailed Disc harrow	15195.00	25-06-1993	Working
Printer -Dot Matrix Panasonic	16900.00	28-03-2002	Working
Printer -hp Laser Jet	15225.00	07-04-2003	Working
UPS -Pyramid	6950.00	07-04-2003	Unserviceable
Scanner hp Scan jet	9600.00	07-04-2003	Working
Color TV- 21 inch	18361.00	25-02-2002	Working
PA-System	17330.00	16-03-2002	Working
VCP- Onida	9990.00	16-03-2002	Working
Over Head projector	7326.00	24-03-2000	Working
Food Processor -Inalsa	5335.00	22-01-2002	Working
Manual Hindi & English Typewriter	-----	-----	Working
Printer-Fax-Copier-Scanner	9850.00	5-2-2005	Working
Xerox photo copier -Godrej	112000.00	01-03-2002	Working
FAX-Machine	15500.00	06-02-2002	Working
Slide Projector	75000.00	13-06-2002	Not in use
Refrigerator - Kalvinatotr	10000.00	Dec., 2002	Working
Color TV- 17 inch-BPL	5200.00	15-06-2002	Working
Water purifier Aqua guard	6500.00	May 2004	Working
Over Head Projector	8000.00	Jan., 2002	Not in use
Computer	55000.00	04-06-2001	Non serviceable
UPS- PCS	22500.00	04-06-2001	Non serviceable
Printer- Desk Jet	12500.00	04-06-2001	Working
Xerox photo copier -Godrej	112000.00	01-03-2002	Working
ph Meter	14700.00	3-3-2005	Working
Flame Photometer	35000.00	30-3-2005	Working
Spectrophotometer	155000.00	28-3-2005	Working
Balance portable top pan	28850.00	5-3-2005	Working
Shaker	16150.00	15-3-2005	Working
Willy Grinder	14200.00	15-3-2005	Working
Lab Hot plate - Johnson	1650.00	5-3-2005	Working

Fridge –Samsung	14700.00	24-3-2005	Working
Hot air Oven	24500.00	15-3-2005	Working
Kjeldhal Digestion unit	13775.00	15-3-2005	Working
Mixer Grinder – Inalsa	1995.00	5-2-2005	Working
Gas Connection LPG	2496.00	8-2-2005	Working
Water Distillation –All Quartz	79200.00	3-3-2005	Working
Kjeldhal Digestion unit – PT-430/20	6600.00	15-3-2005	Working
Hot Plate	4130.00	15-3-2005	Working
Analytical Balance	56100.00	28-3-2005	Working
Conductivity meter	11800.00	28-3-2005	Working

1.8. A). Details SAC meeting* conducted in the year 2015-16

Sl. No.	Date	Name and Designation of Participants	No. of absentees	Salient Recommendations	Action taken
1.	NIL	-	-	-	
2.					

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

2. DETAILS OF DISTRICT (2015-16)

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

S. No	FARMING SYSTEM/ENTERPRISE
1	Maize – Wheat
2	Maize-Toria-Wheat
3	Tomato-Cauliflower
4	Paddy – Wheat
5	Black Gram-Wheat
6	Okra-Radish-Cauliflower
7	Cucurbits- Cole Crops

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

S. No	Agro-climatic Zone	Characteristics
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1	Zone I - 801-1000 m	High Altitude sandy clay loam
2	Zone II - 651-800 m	Medium Altitude sandy clay loam
3	Zone III - 651-800 m	Medium Altitude gravelly sandy clay loam
4	Zone IV - 400-650m	Low Altitude Sandy loam

2.3 Soil type/s

S. No	Soil type	Characteristics	Area in ha
1	Sandy clay loam	Low water holding capacity, Acidic to neutral pH, low to Medium N, P and K	-
2	Gravelly sandy clay loam	Low water holding capacity due to presence of stones and gravels, Acidic to neutral pH, Medium N, P and K	-
3	Sandy loam	Low water holding capacity, Acidic to neutral pH, Medium N, P and K	-

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

S. No	Crop	Area (ha)	Production (Qtls)	Productivity (Qtls /ha)
1.	Maize	32043	63774.14	19.9
2.	Wheat	34443	44133.08	12.8
3.	Paddy	2022	3164.31	15.6
4.	Pulses	50	2438	5.5
5.	Vegetables	1555	35239	226.6

2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)
		Maximum	Minimum	
April	56.7	36.3	7.2	95
May	24.7	40.3	9.1	96
June	144.5	40.1	3.6	97
July	330.2	30.5	1.7	86
August	186.7	34.6	2.6	100
September	69.5	33.8	17.2	100
October	16	33.3	13.2	98
November	2	27.9	10.2	97
December	0	26.0	4.8	100

January	8.6	16	3.4	100
February	17.2	24	6.3	100
March	63.8	30	-	-

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

Category	Population	Production	Productivity
Cattle			
<i>Crossbred</i>	30385	35000 L/day	6.00(L/Ani/D)
<i>Indigenous</i>	3000	2300 L/day	2.00 (L/Ani/D)
Buffalo	113946	205000 L/day	4.00 (L/Ani/D)
Sheep			
Crossbred	2000		
<i>Indigenous</i>	11564		0.70 (Kg/Ani/Year)
Goats	30984		
Pigs			
<i>Crossbred</i>	134		
<i>Indigenous</i>			
Rabbits			
Poultry			
Hens	5000		1.80 (Kg/bird)
<i>Desi</i>			
<i>Improved</i>			
Ducks			
Turkey and others			

2.7 Details of Operational area / Villages (2015-16)

Sl.No.	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
	Hamirpur	Hamirpur Nadaun Bhoranj Bijhar Sujanpur Tauni Devi	Jhinjkhari, Sasan , Patlander, Gulela, Patta, Putriyal, Chowki Jambala,Utpur	Maize, Wheat, Oilseed & pulses , Vegetables and Horticulture crops	Lack of irrigation facility. Small and scattered land holdings. Knowledge of Integrated Pest Management is low. The practice of decomposition of farm wastes and animal excreta is unscientific. Low milk yield in cattle and buffaloes. Scarcity of green fodder during summer months (April-June). Poor knowledge of protected cultivation. Obnoxious weeds.	Soil and water conservation and improvement of soil health Protected cultivation of high value cash crops Integrated pest and nutrient management in vegetable and cereal crops Introduction of income generation enterprises viz. Mushroom cultivation, Bee keeping, Post-harvest management & value addition for rural youths Promoting vermi-composting and organic farming Introduction of fruits, medicinal and aromatic plants in the existing cropping systems introduction of improved fodder varieties

2.8 Priority/thrust areas

Crop/Enterprise	Thrust area
Maize	Integrated crop management
Wheat	Yellow rust management
Black gram	Integrated crop management
Vegetable (Okra, Elephant foot yam)	Varietal evaluation

3.A. Details of target and achievements of mandatory activities by KVK during 2015-16

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
9	7	30	30	15	19	500	515

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	65	71	1625	1971	600	630	10000	11825
Rural youth	4	1	100	49				
Extn. Functionaries	2	2	25	30				

Seed Production (Qtl.)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
15	17.17	35000	39757

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
5300	5315	90	92 (vermiculture)
		200	218 (Azolla)

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

3.1 Achievements on technologies assessed and refined

A.1 Abstract of the number of technologies assessed* in respect of crops/enterprises

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Varietal Evaluation	2				2					
Seed / Plant production										
Weed Management										
Integrated Crop Management										
Integrated Nutrient Management										
Integrated Farming System										
Mushroom cultivation										
Drudgery reduction										
Farm machineries										
Value addition										
Integrated Pest Management					1					
Integrated Disease Management					2					
Resource conservation technology										

Small Scale income generating enterprises										
TOTAL	2				5					

* Any new technology, which may offer solution to a location specific problem but not tested earlier in a given micro situation.

A.2. Abstract of the number of technologies refined* in respect of crops/enterprises: nil

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Varietal Evaluation										
Seed / Plant production										
Weed Management										
Integrated Crop Management										
Integrated Nutrient Management										
Integrated Farming System										
Mushroom cultivation										
Drudgery reduction										
Farm machineries										
Post Harvest Technology										
Integrated Pest Management										
Integrated Disease 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: nil

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

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

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		Effect of INM on timely sown wheat varieties HPW-368.	3	3	0.5
Varietal Evaluation		Evaluation of different varieties of okra under rainfed conditions.	9	9	1.0

<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>
		Evaluation of Onion Varieties.	4	4	0.5
		Varietal evaluation of newly released timely sown wheat varieties	4	4	1.0
Integrated Pest Management		Evaluation of insecticides for management of aphid in cauliflower	4	4	0.5
Integrated Crop Management					
Integrated Disease Management		Management of powdery in capsicum under protected cultivation.	5	5	0.5
		Management of Phytophthora blight in tomato.	3	3	0.5
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					

<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>
Mushroom cultivation					
Total			30	30	4.5

3.2.2. Technologies Refined under various Crops: nil

<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 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					

<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>
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
Total					

3.2.3. Technologies assessed under Livestock and other enterprises: nil

<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				

3.2.4. Technologies Refined under Livestock and other enterprises: nil

<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

A. Technology Assessment

Trial 1

- 1) Title : Evaluation of different varieties of okra under rainfed conditions.
- 2) Problem diagnose/defined : Poor yield of existing varieties and non descript hybrids growing under rainfed conditions of district Hamirpur.
- 3) Details of technologies selected for assessment
/refinement :
 - i. Palam Komal
 - ii P-8
 - iii Kranti (Farmer Practice
- 4) Source of technology : CSK HPKV Palampur
- 5) Production system
thematic area : Rainfed cash crop based system (Okra-Wheat System)
Thematic area : Varietal evaluation.
Performance of the
Technology with
performance indicators : Result showed that the variety Palam Komal produced highest yield

(195q/ha), B:C ratio (1:3.25) as compared to other varieties P-8 and Kranti.

- 6) Final recommendation for micro level situation : Palam Komal may be recommended for cultivation under rainfed conditions of district Hamirpur as cash crop during Kharif season.
- 7) Constraints identified and feedback for research : The farmers were satisfied with the performance of Palam Komal and preferred to grow
- 8) Process of farmers participation and their reaction : The farmers were provided with all the techniques required for successful cultivation of Okra. Seeds were supplied to the farmers. All the agronomical operations were done by the farmers themselves. Visited farmers fields from time to time for monitoring the crop at different stages of growth.

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
Okra	Rainfed	Poor yield of existing varieties	Varietal evaluation	9	1. Palam Komal	No. of harvesting, No. of fruits/plant	26 33	195 q/ha	Farmers preferred Palam Komal due to higher yields, No. of fruits per palnt and more pickings
					2. P-8	No. of harvesting, No. of fruits/plant	21 26	165 q/ha	
					3. Kranti. (Farmers Practice)	No. of harvesting, No. of fruits/plant	20 24	170 q/ha	

* No. of farmers

Technology Assessed 11	*Production per unit 12	Net Return (Profit) in Rs. / unit 13	BC Ratio 14
1. Palam Komal	195 q/ha	135000	1:3.25
2. P-8	165 q/ha	105000	1:2.75
3. Kranti. (Farmers Practice)	170 q/ha	110000	1:2.83

**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*

Trial 2

- 1). Title : Evaluation of Onion Varieties.
- 2). Problem diagnose/defined : Poor yield of existing/local varieties and non descript hybrids of onion grown in Hamirpur district.
- 3). Details of technologies selected for assessment /refinement :
 - i) Palam Lohit
 - ii) N-53
 - iii) Ceylon (Farmer Practice)
- 4). Source of technology : CSKHPKV Palampur
- 5). Production system thematic area : Irrigated vegetable based system (Okra-Radish-onion System)
- 6). Thematic area : Varietal evaluation.
- 7). Performance of the Technology with performance indicators : Crop in the field
- 8). Final recommendation for micro level situation : crop in the field
- 9). Constraints identified and feedback for research : Crop in the field
- 10). Process of farmers participation and their reaction : Crop in the field

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
Onion	Irrigated	Low productivity of existing varieties/non descript hybrids	Varietal evaluation	4	1. Palam Lohit	Bulb weight		Crop in the field	
					2. N-53	Bulb weight			
					3. Ceylon (Farmers Practice)**	Bulb weight			

* No. of farmers

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
1. Annegiri (Farmers Practice)**			
2. JG-11**			

*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

Trial 3

- 1) Title : **Varietal evaluation of newly released timely sown wheat varieties**
- 2) Problem diagnose/defined : Low productivity of old varieties.
- 3) Details of technologies Selected for assessment/refinement:
 - i. HPW-236 (Farmers Practice)
 - ii. **HPW-368 (NV)**
 - iii **HPW-349 (EV)**
 - iv **HS-507 (EV)**
- 4) Source of technology : CSKHPKV, Palampur
- 5) Production system and thematic area : Rainfed maize- wheat cropping system.
- 6) Thematic area : Varietal evaluation of recently released wheat varieties.
- 7) Performance of the Technology with performance indicators: Results showed that newly released timely sown variety of wheat (HPW-368) recorded highest yield of 32.4 q/ ha with percent increase of 12.9 over control.
- 8) Final recommendation for micro level situation : HPW-368 is also suitable for cultivation in mid hills as a timely sown variety of wheat.
- 9) Constraints identified and Feedback for research : Lack of knowledge and timely unavailability of seed
- 10) Process of farmers participation and their reaction: The Farmers were happy with the performance of newly released variety of Wheat.

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	Rainfed	Low productivity of old varieties due to imbalance or low nutrient application	Varietal evaluation	4	i. HPW-236 (Farmers Practice)	Crop yield	Grain yield	28.7 q/ha	-
					HPW-368 (NV)	-do-	-do-	32.4 q/ha	-
					HPW-349 (EV)	-do-	-do-	31.7 q/ha	-
					HS-507 (EV)	-do-	-do-	31.2 q/ha	-

* No. of farmers

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
HPW-236 (Farmers Practice)	28.7 q/ha	18050	1.72
HPW-368 (NV)	32.4 q/ha	25600	1.94
HPW-349 (EV)	31.7 q/ha	22550	1.90
HS-507 (EV)	31.2 q/ha	21800	1.87

Trial 4

- 1) Title : **Effect of INM on timely sown wheat varieties HPW-368.**
- 2) Problem diagnose/defined : Low productivity of existing varieties due to imbalance or low nutrient application.
- 3) Details of technologies :
Selected for assessment
/refinement :
 - i. 1t FYM + 100 kg Urea ha⁻¹(Farmers Practice).
 - ii. 100 % NPK +10 t FYM ha⁻¹
 - iii 100 % NPK + 15t FYM ha⁻¹
- 4) Source of technology : CSKHPKV, Palampur.
- 5) Production system : Rain-fed Maize- wheat cropping system
- 6) thematic area : **Effect of INM on timely sown wheat varieties HPW-368.**
- 7) Performance of technology with
Performance indicators : Results showed that newly released timely sown variety of wheat (HPW-368) recorded highest grain yield of 32.56q/ ha with application of 100 % NPK + 15t FYM ha⁻¹.
- 8) Final recommendation for
micro level situation : Combined application of 100 % NPK + 15t FYM ha⁻¹ recorded highest crop yield as compared to 100 % NPK + 15t FYM ha⁻¹ and farmers practice 1t FYM + 100 kg Urea ha⁻¹.
- 9) Constraints identified and
Feedback for research :
- 10) Process of farmers
Participation and
their reaction : The Farmers appreciated the response of 100 % NPK + 15t FYM ha⁻¹ on the crop yield on newly released variety of Wheat (HPW-368).

C)Results of On Farm Trial

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	Rainfed	Low productivity of old varieties.	Effect of INM on timely sown wheat varieties HPW- 368.	3	1t FYM + 100 kg Urea ha ⁻¹ (Farmers Practice)	Crop yield	Grain yield	23.8 q/ha	-
					100 % NPK +10 t FYM ha ⁻¹	-do-	-do-	31.3 q/ha	-
					100 % NPK + 15t FYM ha ⁻¹	-do-	-do-	32.56 q/ha	-

* No. of farmers

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
1t FYM + 100 kg Urea ha ⁻¹ (Farmers Practice)	23.8 q/ha	15700	1.78
100 % NPK +10 t FYM ha ⁻¹	31.3 q/ha	21950	1.87
100 % NPK + 15t FYM ha ⁻¹	32.56 q/ha	23840	1.95

*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

*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

Trial 5

- 1) Title : Evaluation of insecticides for management of aphid in cauliflower
- 2) Problem diagnose/defined: Heavy infestation of aphid in late sown group of cauliflower
- 3) Details of technologies selected for assessment /refinement :
 - i. No spray (Farmers Practice)
 - ii. Spray of malathion 50 EC @ 0.05% followed by cypermethrin 10 EC @0.0075% at 15 days interval
 - iii. Spray of NSKE @5%
- 4) Source of technology : CSK HPKV, Palampur
- 5) Production system thematic area : Rainfed
- 6) Thematic area : Integrated Pest Management
- 7) Performance of the Technology with performance indicators : Results showed that insecticidal treatment recorded higher yield over control (25%) and resulted in reduction in aphid infestation over control (37.93%).
- 8) Final recommendation for micro level situation : Aphid can be controlled by spray application of malathion and cypermethrin
- 9) Constraints identified and feedback for research : Nil
- 10) Process of farmers participation and their reaction : Farmers sprayed the crop with appropriate doses and technique and were able to manage aphid and thus harvested more yield

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
Late sown cauliflower	Rainfed	Heavy infestation of aphid	Evaluation of insecticides for management of aphid in cauliflower	5	i. No spray (Farmers Practice)	Yield % aphid infestation	Yield % aphid infestation	Yield: 200q/ha (29% aphid infestation)	Farmers were able to manage aphid and thus harvested more yield
					ii. Spray of malathion 50 EC @ 0.05% followed by cypermethrin 10 EC @0.0075% at 15 days interval			Yield: 230q/ha (18% aphid infestation)	
					iii Spray of NSKE@ 5%			Yield: 210q/ha (23% aphid infestation)	

* No. of farmers

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
i. No spray (Farmers Practice)	200q/ha	120000	2.5
ii. Spray of malathion 50 EC @ 0.05% followed by cypermethrin 10 EC @0.0075% at 15 days interval	230q/ha	147000	2.8
iii Spray of NSKE@ 5%	210q/ha	129000	2.6

Trial 6

- 1) Title : Management of powdery in capsicum under protected cultivation.
- 2) Problem diagnose/defined : Problem of powdery mildew
- 3) Details of technologies selected for assessment
 - a. /refinement : i) Spray of Tebuconazol 25WG @ 1g/l followed by Bavistin@ 1g/l
ii) Spray of Bavistin followed by Mancozeb @2.5g/l®
iii) Farmer practice (Bavistin @ 1g/l)
- 4) Source of technology : CSK HPKV
- 5) Production system & thematic area : Plant protection
- 6) Thematic area : IPM
- 7) Performance of the Technology with performance indicators : Results showed that spray of Tebuconazol 25WG followed by bavistin was most effective in management of powdery mildew in capsicum
- 8) Final recommendation for micro level situation : Spray of Tebuconazol 25WG followed by bavistin can be recommended in management of powdery mildew in capsicum under protected cultivation as an alternative to existing recommendation which is also effective.
- 9) Constraints identified and
- 10) Process of farmers participation and their reaction :Farmers harvested good yield of capsicum by managing powdery mildew problem in polyhouse by adopting the assessed technology.

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
Capsicum	irrigated	Problem of powdery mildew	Management of powdery in capsicum under protected cultivation.	2	1. Spray of Tebuconazol 25WG @1g/l followed by bavistin@1g/l	Per cent disease incidence, Yield (q/250 sq.m.)	33.5 (12%)		
					2. Spray of bavistin followed by mancozeb @2.5g/l		27.0 (17%)		
					3. Farmer practice (Bavistin @1g/l)		24.0 (36%)		

* No. of farmers

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
1. Spray of Tebuconazol 25WG followed by bavistin	33.5	46350	2.22
2. Spray of bavistin followed by mancozeb ®	27.0	40000	2.11
3. Farmer practice (Bavistin @1g/l)	24.0	30000	1.83

Trial 7

1. Title : Management of Phytophthora blight in tomato.
2. Problem diagnose/defined : Problem of Phytophthora blight
3. Details of technologies selected for assessment /refinement :
 - i. Spray of Azoxystrobin 23% followed by Mancozeb @0.25%
 - ii. Spray of copper-oxychloride followed by Mancozeb @0.25% ®
 - iii. Farmer practice (Spray of Mancozeb @0.25%)
4. Source of technology : CSK HPKV and CIB
5. Production system thematic area : Plant protection
6. Thematic area : IPM
7. Performance of the Technology with performance indicators : Results showed that T1 and T2 were equally effective in management of Phytophthora blight in tomato.
8. Final recommendation for micro level situation : Technology option 1 and 2 are equally effective, hence T1 can be suggested as an alternative to recommended practiceT2.
9. Constraints identified and feedback for research : nil
10. Process of farmers participation and their reaction technologies. : Farmers recorded least incidence of disease and higher yield in the assessed

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	Problem of Phytophthora blight	Management of Phytophthora blight in tomato	3	T1	Per cent disease incidence, Yield (q/ha)	385q/ha (12%)	Technology option 1 and 2 proved equally effective	-
					T2		376q/ha (17%)		
					T3		317q/ha (31%)		

* No. of farmers

Technology Assessed	*Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
1.	385	210000	2.15
2.	376	200000	2.90
3.	317	140000	1.74

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	Others	Total	
	Flowers													
	Fruit													
	Spices and condiments													
	Commercial													
	Medicinal and aromatic													
	Fodder													
	Dairy													
	Poultry													
	Piggery													
	Sheep and goat													
	Button mushroom													

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	Others	Total	
	Vermicompost													
	IFS													
	Apiculture													
	Implements													
	Others (specify)													
	Use of low cost pheromone traps for management of fruit flies	Rainfed	Summer/rainy 2015	Bitter gourd	-	-	IPM	Use of low cost pheromone traps for management of fruit flies	3.0	3.8	15	80	95	

4.A. 1. Soil fertility status of FLDs plots during 2015-16

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	Rainfed	Kharif 2015	Sesame	LTK-4		Varietal seed	Varietal seed	180 -	15 .2	120- 136	Wheat
		Rainfed	Zaid-2015	Toria	Bhawani		Varietal seed and INM	Varietal seed and INM	195 -	14 -	104- 130	Maize
		Rainfed	Rabi-2015-16	Brown Sarson	KBS-3		-do-	-do-	212 -	15 -	114- 139	-do-
		Rainfed	Rabi-2015-16	Rabi-2015	GSC-7		-do-	-do-	220 -	17 -	123- 142	-do-
	Pulses	Rainfed	Kharif 2015	Blackgram	UG-218		Varietal seed and INM	Varietal seed and INM	195 -	15 .2	123- 152	Wheat
									234	6		

APR 2015-16

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	
		Rainfed	Rabi-2015-16	Chickpea	GPF-II/HC-II/DKG-986		Varietal seed, INM and IPM	Varietal seed, INM and IPM	240 - 295	16 - 23	133- 156	Maize
	Cereals	Rainfed	Kharif 2015	Maize	KH-517	Hybrid	Varietal introduction and INM	Varietal seed and INM	226 - 292	17 - 26	140- 182	Wheat
		Rainfed	Rabi-2015-16	Wheat	HPW-360(ES)		-do-	Varietal seed and INM	308 -	18 -	140- 184	Maize
		Rainfed	Rabi-2015-16	-do-	HS-542(ES)		-do-	-do-	340	25		
		Rainfed	Rabi-2015-16	-do-	HS-507 (TS)		-do-	-do-				
	Millets											
	Vegetables	Irrigated	Summer 2014-15	Bitter gourd	--	Aman	Varietal evaluation	High yielding varieties	L	M	M	Cauliflower
		Irrigated	Summer 2014-15	Bottle gourd	--	Sharda	Varietal evaluation	High yielding varieties				Cauliflower
		Irrigated	Summer 2014-15	Cucumber	--	Malav	Varietal evaluation	High yielding varieties				Peas
		Rainfed	Kharif 2015	Elephant Foot Yam	Narender-5	--	Introduction	Suitability for monkey menace areas				Wheat
		Irrigated	Rabi 2015-16	Cauliflower	--	F ₁ 626	Varietal evaluation	High yielding varieties				Okra
		Irrigated	Rabi 2015-16	Cabbage	--	F ₁ Chariant	Varietal evaluation	High yielding varieties				Ridge Gourd
	Flowers											
	Fruit											
	Spices and condiments											
	Commercial											
	Medicinal and aromatic											
	Fodder											

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	
	Plantation											
	Dairy											
	Poultry											
	Piggery											
	Sheep and goat											
	Button mushroom											
	Vermicompost											
	IFS											
	Apiculture											
	Implements											
	Others (specify)											

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	Varietal seed	LTK-4		Rainfed	05	1.0	6.3	5.6	6.0	5.1	17.6	30000	60000	30000	2.0	28000	51000	23000	1.82
	Varietal seed and INM	Bhawani		-do-	16	1.2	5.95	5.2	5.55	4.96	11.8	12000	16650	4650	1.38	10000	14880	4880	1.48
	-do-	KBS-3		-do-	27	2.0	6.4	5.8	6.1	5.6	7.01	16000	24400	8400	1.52	15000	22400	7400	1.49
	-do-	GSC-7		-do-	39	2.0	6.9	6.1	6.4	5.95	7.56	16000	25600	9600	1.60	15000	23800	8800	1.58
Pulses	Varietal seed and INM	UG-218		Rainfed	24	3.0	7.2	5.3	6.15	5.45	12.8	22000	36900	14900	1.67	20000	32700	12700	1.63
	Varietal seed, INM and IPM	GPF-II		-do-	19	1.10	12.8	6.9	9.4	6.4	31.9	25000	47000	22000	1.88	22000	32000	10000	1.45
	-do	HC-II		-do-	108	6.22	12.5	6.6	8.8	6.7	31.3	25000	44000	19000	1.76	22000	33500	11500	1.52
	-do-	DKG-986			23	0.88	12.3	6.5	8.6	6.8	26.5	25000	43000	18000	1.72	22000	34000	12000	1.54
Cereals	Varietal introduction and INM	KH-517	Hybrid	Rainfed	13	2.0	30.2	25.6	27.4	25.9	5.8	25000	41100	16100	1.64	24000	38850	14850	1.61
	-do-	HS-542		-do-	26	2.0	33.1	28.3	29.6	25.4	16.5	25000	44400	19400	1.77	22000	38100	16100	1.73
	-do-	HPW-360		-do-	58	5.0	29.5	25.2	27.7	24.1	14.9	25000	41550	16550	1.66	22000	36150	14150	1.64
	-do-	HS-507		-do-	14	2.34	32.5	28.2	30.1	26.4	14.01	25000	45150	20150	1.80	22000	39600	17600	1.80
Millets																			

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										
Vegetables	Varietal evaluation	--	Aman	Irrigated	5	0.4	370	330	355	260	36.53	92000	305000	213000	3.3	88000	222000	134000	2.5
	Varietal evaluation	--	Sharda	Irrigated	5	0.4	335	290	315	240	31.25	88000	315000	227000	3.5	86000	240000	154000	2.8
	Varietal evaluation	--	Malav	Irrigated	6	0.6	190	155	172	118	45.76	68000	172000	104000	2.5	65000	118000	53000	1.8
	Introduction	Narender-5	--	Rainfed	8	0.04	525	460	500	350	42	250000	450000	200000	1.8	215000	370000	155000	1.7
	Varietal evaluation	--	F ₁ 626	Irrigated	12	1.2	205	170	185	125	48	82000	270000	188000	3.3	82000	195000	113000	2.4
	Varietal evaluation	--	F ₁ Charmant	Irrigated	12	0.64	205	165	190	160	18.75	82000	230000	148000	2.8	82000	195000	113000	2.4
Flowers																			
Fruit																			
Spices and condiments																			
Commercial																			
Medicinal and aromatic																			
Fodder																			
Pheromone traps	Use of low cost pheromone traps for management of fruit flies	-	-	Rainfed			180	140	150	120	25	81000	225000	144000	2.78	80000	180000	100000	2.25

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** $BCR = \text{GROSS RETURN} / \text{GROSS COST}$; H – Highest Yield, L – Lowest Yield A – Average Yield

Data on additional parameters other than yield (viz., reduction of percentage in weed/pest/ diseases etc.)

<i>Data on other parameters in relation to technology demonstrated</i>							
<i>Crop</i>	<i>Technology to be demonstrated</i>	<i>Variety/ Hybrid</i>	<i>Parameter with unit</i>			<i>Demo</i>	<i>Check</i>

4.B.2. Livestock and related enterprises: Nil

<i>Type of livestock</i>	<i>Name of the technology demonstrated</i>	<i>Breed</i>	<i>No. of Demo</i>	<i>No. of Units</i>	<i>Yield (q/ha)</i>			<i>% Increase</i>	<i>*Economics of demonstration (Rs./unit)</i>				<i>*Economics of check (Rs./unit)</i>					
					<i>Demo</i>				<i>Check if any</i>	<i>Gross Cost</i>	<i>Gross Return</i>	<i>Net Return</i>	<i>** BCR</i>	<i>Gross Cost</i>	<i>Gross Return</i>	<i>Net Return</i>	<i>** BCR</i>	
					<i>H</i>	<i>L</i>	<i>A</i>											
Dairy																		
Poultry																		
Rabbitry																		

Piggery																	
Sheep and goat																	
Duckery																	
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

Data on additional parameters other than yield (viz., reduction of percentage diseases, increase in conceiving rate, inter-calving period etc.)

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

4. B.3. Fisheries: Nil

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./m2)				*Economics of check Rs./unit) or (Rs./m2)				
					Demo	Check if any			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.)

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

4.B.4. Other enterprises

<i>Enterprise</i>	<i>Name of the technology demonstrated</i>	<i>Variety / species</i>	<i>No. of Demo</i>	<i>Units / Area {m²}</i>	<i>Yield (q/ha)</i>			<i>% Increase</i>	<i>*Economics of demonstration (Rs./unit) or (Rs./m2)</i>				<i>*Economics of check (Rs./unit) or (Rs./m2)</i>				
					<i>Demo</i>				<i>Check if any</i>	<i>Gross Cost</i>	<i>Gross Return</i>	<i>Net Return</i>	<i>** BCR</i>	<i>Gross Cost</i>	<i>Gross Return</i>	<i>Net Return</i>	<i>** BCR</i>
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

Layout and Management of Orchards										
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	1	36	16	52	28	10	38	64	26	90
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 Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Soil and Water Testing										
IV Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Disease Management										
Feed management										
Production of quality animal products										
V Home Science/Women empowerment										
Household food										

security by kitchen gardening and nutrition gardening										
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										
Storage loss minimization techniques										
Value addition										
Income generation activities for empowerment of rural Women										
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care										
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										
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	4	61	31	92	41	31	72	102	62	164
(B) RURAL YOUTH										
Mushroom Production	2	14	7	21	15	13	21	29	20	49
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										
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										
Tailoring and Stitching										
Rural Crafts										
TOTAL	2	14	7	21	15	13	21	29	20	49
(C) Extension Personnel										
Productivity enhancement in field crops										
Integrated Pest Management	1	18	0	0	0	0	0	0	0	18
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology	1	12	0	0	0	0	0	0	0	12
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										
Production and use of organic inputs										
Gender mainstreaming through SHGs										
TOTAL	2	30								30

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	2	33	21	54	11	19	30	44	40	84
Water management										
Seed production										
Nursery management										
Integrated Crop Management	6	38	21	59	11	14	25	49	35	84
Fodder production										
Production of organic inputs										
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops	2	22	6	28	14	6	20	36	12	48
Off-season vegetables	10	187	50	237	70	34	104	257	84	341
Nursery raising	2	37	4	41	22	2	24	59	6	65
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										
Cultivation of Fruit	1	10	0	10	2	0	2	12	0	12
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	1	9	1	10	5	2	7	14	3	17
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	5	56	28	84	32	21	53	88	49	137
Soil and Water Conservation										
Integrated Nutrient Management	1	12	7	19	5	8	13	17	15	32
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Soil and Water Testing	1	18	3	21	10	4	14	28	7	35
IV Livestock Production and Management										
Dairy Management	1	5	9	14	6	12	18	11	21	32
Poultry Management										
Piggery Management										
Rabbit Management										
Disease Management										

Feed management	1	0	0	0	4	9	13	4	9	13
Production of quality animal products										
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
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										
Storage loss minimization techniques										
Value addition	12	0	264	274	0	143	143	0	407	407
Income generation activities for empowerment of rural Women	2	0	30	30	0	11	11	0	41	41
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care										
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	11	116	43	159	66	38	104	182	81	263
Integrated Disease Management	6	63	28	91	38	14	52	101	42	143
Bio-control of pests and diseases	1	17	6	23	9	2	11	26	8	34
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	1	12	3	15	2	2	4	14	5	19

TOTAL	66	635	524	1169	307	341	648	942	865	1807
(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										
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										
Tailoring and Stitching										
Rural Crafts										
TOTAL										
(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										
Low cost and nutrient efficient diet designing										
Production and use of organic inputs										
Gender mainstreaming through SHGs										
TOTAL	0	0	0	0	0	0	0	0	0	0

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	4	47	28	75	20	33	53	67	61	128
Water management	1	11	8	19	4	7	11	15	15	30
Seed production										
Nursery management										
Integrated Crop Management	6	38	21	59	11	14	25	49	35	84
Fodder production										
Production of organic inputs										
II Horticulture										
a) Vegetable Crops										

Production of low volume and high value crops	2	22	6	28	14	6	20	36	12	48
Off-season vegetables	10	187	50	237	70	34	104	257	84	341
Nursery raising	2	37	4	41	22	2	24	59	6	65
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										
Cultivation of Fruit	1	10	0	10	2	0	2	12	0	12
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	1	36	16	52	28	10	38	64	26	90

technology										
Processing and value addition										
e) Tuber crops										
Production and Management technology	1	9	1	10	5	2	7	14	3	17
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	5	56	28	84	32	21	53	88	49	137
Soil and Water Conservation										
Integrated Nutrient Management	1	12	7	19	5	8	13	17	15	32
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Soil and Water Testing	1	18	3	21	10	4	14	28	7	35
IV Livestock Production and Management										

Dairy Management	1	5	9	14	6	12	18	11	21	32
Poultry Management										
Piggery Management										
Rabbit Management										
Disease Management										
Feed management	1	0	0	0	4	9	13	4	9	13
Production of quality animal products										
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
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										
Storage loss minimization techniques										
Value addition	12	0	264	274	0	143	143	0	407	407
Income generation activities for empowerment of rural Women	2	0	30	30	0	11	11	0	41	41
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care										

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	11	116	43	159	66	38	104	182	81	263
Integrated Disease Management	6	63	28	91	38	14	52	101	42	143
Bio-control of pests and diseases	1	17	6	23	9	2	11	26	8	34
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	1	12	3	15	2	2	4	14	5	19
TOTAL	70	696	555	1261	348	372	720	1044	927	1971
(B) RURAL YOUTH										
Mushroom Production	2	14	7	21	15	13	21	29	20	49
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										
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										
Tailoring and Stitching										
Rural Crafts										
TOTAL	2	14	7	21	15	13	21	29	20	49
(C) Extension Personnel										
Productivity enhancement in field crops										
Integrated Pest Management	1	18								18
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology	1	12								12
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										
Production and use of organic inputs										
Gender mainstreaming through SHGs										
TOTAL	2	30	0	0	0	0	0	0	0	30
GRAND TOTAL	74	740	562	1282	363	385	741	1073	947	2050

8	18.3.16	Post harvest and value addition	Home Science	Value addition	1	PF	1	0	22	22	0	10	10	0	32	32	Mid Hima laya	5700
9	22.3.16	Post harvest and value addition	Home Science	Value addition	1	PF	1	0	25	25	0	6	6	0	31	31		5700
10	14-20.3.16	Integrated crop management	Multidisciplinary	Integrated crop management	7	PF	1	9	8	17	4	9	13	13	17	30	ATM A	67200
Total							10	48	172	220	22	63	116	70	235	305		110164

6. Extension Activities (including activities of FLD programmes)

Sl. No.	Nature of Extension Activity	Purpose/ topic and Date	No. of activities	Participants											
				Farmers (Others) (I)			SC/ST (Farmers) (II)			Extension Officials (III)			Grand Total (I+II+III)		
				Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1.	Field Day	10.09.15	1	20	6	26	1	3	4				21	9	30
2.	Field Day	18.09.15	1	11	9	20	7	3	10				20	10	30
3.	Field day	09.11.2015	1	9	9	18	0	3	3				9	12	21
	Total		3	40	24	64	8	9	17				50	31	81
4.	Kisan Mela	25-27.10.2015	1	175	150	325	195	115	310	25	35	50	395	300	695
5.	Kisan Mela	04.12.2015	1	216	84	300	105	80	185	10	5	15	331	169	500
6.	Kisan Mela	13.04.2016	1	195	168	363	88	22	110	20	7	27	303	197	500
	Total		03	586	402	988	388	217	605	55	47	92	1029	666	1695
7.	Kisan Ghosthi		9	602	448	1044	409	356	771	-	-	-	1011	804	1815
8.	Exhibition		6	490	185	675	275	145	420				765	330	1095
9.	Film Show		37	375	217	592	293	195	488				668	412	1080
10.	Method Demonstrations		15	45	37	82	37	36	73				82	73	155
11.	Farmers Seminar	4.9.15	1	47	31	78	25	17	42				72	48	120
12.	Workshop														
13.	Group meetings														
14.	Lectures delivered as resource persons		117	878	644	1522	278	230	508				1156	874	2030
15.	Newspaper coverage		29												Many
16.	Radio talks		7												-do-
17.	TV talks		0												
18.	Popular articles		4												
19.	Extension Literature		5												
20.	Advisory Services		51												-

21.	Scientific visit to farmers field		237	523	169	692	349	152	501				872	321	1193
22.	Farmers visit to KVK		49	465	320	785	216	114	330				681	434	1115
23.	Diagnostic visits		14	168	45	213	118	25	143				286	70	356
24.	Exposure visits		15	126	97	223	91	73	164				217	170	387
25.	Ex-trainees Sammelan		2	56	14	70	31	7	38				87	21	108
26.	Soil health Camp		5	44	27	71	32	21	53				76	48	124
27.	Animal Health Camp														
28.	Agri mobile clinic														
29.	Soil test campaigns		8	73	48	121	29	30	59				102	78	180
30.	Farm Science Club Conveners meet														
31.	Self Help Group Conveners meetings														
32.	Mahila Mandals Conveners meetings														
33.	Celebration of important days (specify)														
34.	Parthenium week	16-22.8.15	1	72	16	88	33	10	43				105	26	131
	World food day	16.10.15	1	34	11	45	7	3	10				41	14	55
	Swach Bharat Abhiyan	9.10.15	1	15	0	15	0	0	0				15	0	15
	Yellow Rust campaign	December-February, 2015	24												
	World soil day	5.12.15	1	62	10	72	12	6	18				74	16	90
	Grand Total		630	4701	2745	7440	2631	1646	4283	55	47	92	7389	4436	11825

* Example for guidance only

6. B. Kisan Mobile Advisory Services

Kisan Mobile Advisory									
Name of the KVK	No. of farmers Covered	No. of Messages (Text)	Type of messages						
			Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	Any other
KVK Hamirpur	1000	04	02	-	02	-	-	-	-

6.C. DETAILS OF TECHNOLOGY WEEK CELEBRATIONS during 2015-16: NII

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			

1. 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	HS-507	4.15	19600	20	
		VI-892	1.00	4000	10	
		HPW-349	2.7	10800	05	
		HPW-360	5.7	22800	80	
OILSEEDS	Gobhi Sarson	GSC-7	0.12	720	39	
		Brown Sarson	KBS-3	0.12	720	30
		Sesame	LTK-4	0.60	9000	10
		PULSES	Black Gram	UG-218	1.17	17550
Black Gram	Him-Mash-1		0.22	3300	04	
Cowpea	Himachal Lobia-1		0.32	2560		
VEGETABLES	Okra	P-8 & Palam Komal	.27	6480	270	
FLOWER CROPS						
OTHERS (Specify)	Foot Yam	Narendra 5	.80	2400	10	

*An example for guidance only

B) PLANTING MATERIALS

Major group/class	Crop	Variety	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
FRUITS					
SPICES					
VEGETABLES	Bottle Gourd	Sharda	790	7900	180
	Bitter Gourd	Pali & Chaman	165	1650	72
	Cucumber	Malini	197	1970	98
	Brinjal	Naveen	2279	2279	113
	Chillies		1444	1444	60
	Capsicum	California wonder	952	952	78
	Tomato	7730 & 974	2847	2847	175
	Cauliflower	Mega and 626	29011	29011	480
	Cabbage	Golden	1101	1101	100
	Broccoli	Green magic	485	485	48
	Onion	N-53	486.50	48625	265
FOREST SPECIES					
	Guinea grass	PGG-9	400000	200000	500
ORNAMENTAL CROPS					
PLANTATION CROPS					
Others (specify)					

*An example for guidance only

C) BIO PRODUCTS

Major group/class	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			No	(kg)		
BIOAGENTS						
1	Vermiculture	<i>Eisenia foetida</i>	66 units	92 kg	9900	66
2						
3						
4						
BIOFERTILIZERS						
1	Azolla			218.5	21850	218
2						
3						
4						
BIO PESTICIDES						
1						
2						

APR 2015-16

D) LIVESTOCK

Sl. No.	Type	Breed	Quantity		Value (Rs.)	Provided to No. of Farmers
			(Nos)	Liters		
Cattle	Buffalo*	Murrah*	04	5314.6	212584	22
SHEEP AND GOAT						
POULTRY						
FISHERIES						
Others (Specify)						

* An example for guidance only

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	1. Evaluation of essential oils against <i>Ralstonia solanacearum</i> causing bacterial wilt of solanaceous crops. <i>Pl Dis Res 30(1): 67-72.</i> 2. Integrated management of pea diseases through seed -cum -soil treatment with bioagents and carboxin 75WP in dry temperate zone of North Western Himalaya. <i>Indian Phytopath. 66(4): 410-414.</i> 3. Efficacy of Fungicides against Powdery Mildew of Garden Pea in Lahaul Valley - A Dry Temperate Zone of Himachal Pradesh. <i>Mycol. Plant. Pathol.</i> (Communicated)	Pankaj, A. K. Sood and Kumar, Pardeep. Kumar, Pardeep Kumar, Pardeep	- -
Technical reports	Annual Progress Reports, Monthly, Quartely, SDR, All reports of NICRA projects & Coordinated Trials, FLDs	All Scientists	-
Technical bulletins			
Popular articles			
	1. Insect Pests, mites and nematodes in mushrooms and their management (in Hindi) submitted in Girirraj	Anjana Thakur and Pardeep Kumar	
	2. Integrated insect pest management in mustard (in Hindi) submitted in Girirraj	Anjana Thakur and Gulshan Kumar	
	3. Azolla: an alternative of green fodder (in Hindi) submitted in Girirraj	Gulshan Kumar and Anjana Thakur	
	4. Silage (in Hindi) submitted in Girirraj	Gulshan Kumar and Anjana Thakur	
	5. Integrated insect pest management in tomato (in Hindi) submitted in Girirraj	Anjana Thakur, Gulshan Kumar and Madhu Patial	
Training Manual			
Extension literature	Standeeds on different technologies	All Scientists	20
Folders /leaflets			
	1. Scientific cultivation of gram (in Hindi)	Dhanbir Singh, Pardeep Kumar, Anjana Thakur, Parveen Kumar and Chaman Chauhan	200
	2. Major insect pests of chickpea and their management (in Hindi)	Anjana Thakur, Pardeep Kumar, Dhanbir Singh, Parveen Kumar and Chaman Chauhan	200
	3. Major diseases of chickpea and their management (in Hindi)	Pardeep Kumar, Anjana Thakur, Dhanbir Singh, Parveen Kumar and Chaman Chauhan	200
	4. Integrated insect pest management in mustard (in Hindi)	Anjana Thakur, Pardeep Kumar, Dhanbir Singh, Parveen Kumar and Chaman Chauhan	200
TOTAL			820

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(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)

The success stories/case studies with good action photographs (with captions) should be on the following topics

Azolla an innovative fodder/feed resource for livestock

Background: availability of green fodder is limited and consequently the health and production performance of animals suffer.

KVK Intervention: KVK introduced Azolla cultivation, which need minimal water and ensures availability of quality feed resource throughout the year.

Refinement through OFT : Replaced dung slurry with vermicompost in Azolla production to improve its palatability in Livestock.

Trainings : 2 (2 days), 15 (One Day)

Demonstration : 300 (including NICRA)

- Effective popularization on a larger scale of any one FLD technology and its role in transformation of district agriculture with respect to that particular crop or enterprise***
- Performance of the end results of any one technology assessed, its refinement if any and its impact in district agriculture with respect to that crop or enterprise***
- Effect of production and supply of seeds and planting material / animal breed / or bio-product and its impact on district agriculture with respect to that crop/ enterprise/ bio-product***



Spread: Azolla culture (Rs 50/Kg& 100/ Kg) has been sold to the tune of Rs 3385/- in last 3 yrs.

NGO Manav Vikas Sansthan under technical guidance of KVK Hamirpur and financial support from NABARD is propagating Azolla cultivation in Dist Hamirpur and Bilaspur.

District Animal Husbandry Department and ATMA District Bilaspur with technical knowhow from KVK Hamirpur has started Azolla cultivation as an innovative activity.

Publications:

Effect of replacing dung slurry with vermicompost in Azolla production Rakesh Thakur, Anand Singh presented in National seminar on Organic Agriculture-Challenges & Prospects May 28-29, 2014 CSKHPKV Palampur

Ajolla: utpadan evam upyogita Rakesh Thakur, Anand singh in Giriraj Saptahik, 2014 (5)14

The general format for preparing the above success stories/case studies are furnished below

TITLE

Introduction

KVK intervention: KVK introduced and refined the technology for azolla production

Output: KVK earned Rs. 33850/- earned by selling culture from last 3 yrs.

Outcome: Overcome the scarcity of green fodder during lean periods and also useful in health point of view and also observed increase in milk production

Impact:

NGO Manav Vikas Sansthan under technical guidance of KVK Hamirpur and financial support from NABARD is propagating Azolla cultivation in Dist Hamirpur and Bilaspur. ATMA District Bilaspur. Presently, Animal Husbandry Department of District Hamirpur with technical knowhow from KVK Hamirpur also provided the culture to the farmers of the district and farmers adapt the technology to overcome the scarcity of green fodder during lean periods and also useful in animal health point of view and also observed increase in milk production.

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

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
i.	All crops	Hanging of glass bottle with nut for production of sound	Scaring of wild animals in cultivable land
ii.	Colocasia	Cultivation with maize crop	Reducing the incidence of blight in colocasia
iii.	Maize	Use of crackers and locally made guns	Control of wild bears and monkey menace
iv.	Maize, wheat and pulses	Used leaves of neem, Melia, banna and Eucalyptus	For the control of stored grain pests
v.	Health disorder	Leaves of gandala, banna and mendru boiled in water	Muscle pain
vi.	Health disorder	Juice extracted from mentha and onion	To control vomiting
vii.	Health disorder	Consumption of roasted harad	Bronchitis and stomach ailments

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viii.	Health disorder	Decoction of tulsi, bhabri, mulathi and banafshah	Cold and cough
ix.	Cucurbits	Application of ash in morning hours	Management of red pumpkin beetle
x.	Vegetables	Cow urine	Management of various diseases and insect pests.

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

Identification of courses for farmers/farm women:

The training needs of the farmers/farm women are identified on the basis of preliminary survey conducted by KVK through PRA Tools. The trainings/On Farm Trials on different agricultural technologies in the field are conducted on the demand of the farmers to address their specific needs

- Rural Youth

The training for rural youth are being organized by the Kendra in the field of agro-based enterprises such as mushroom cultivation, vegetable production, organic farming, post-harvest and value addition for self employment.

- Inservice personnel

The trainings to the In-service personnel are being planned keeping in view the agro-ecological situations and crop cafeteria and new potential crops / enterprises.

9.E. Field activities

- i. Number of villages adopted: 05
- ii. No. of farm families selected: 100
- iii. No. of survey/PRA conducted: 01

9.F. Activities of Soil and Water Testing Laboratory

Status of establishment of Lab : Functional

- 1. Year of establishment : 2007
- 2. List of equipments purchased with amount :

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

- 3. Details of samples analyzed so far :

Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized
Soil Samples	500	480	16	-
Water Samples				
Plant Samples				
Petiole Samples				
Total	500	480	16	-

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)
Use of improved varieties in veg. crops	290	70	60000 (Rs./ha)	132000 (Rs./ha)
Protective cultivation of vegetable	82	45	10000 Rs./250 sqm polyhouse	35000 Rs./ 250 sqm polyhouse
Vermicomposting	200	70	Nil	5000(Rs./month)
Scientific cultivation of oilseed and pulses	250	35	10000.00 (Rs./ha)	15000-30000 (Rs./ha)
Post harvest management of fruits and vegetables	300	40	2500 (Rs./month)	9000 (Rs./month)
Pheromone traps for the control of fruit fly in vegetables	250	90	50000 (Rs./ha)	75000 (Rs./ha)

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

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

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

- Farmers are cultivating mushroom for self employment and income generation.
- Farmers are gaining knowledge about Azolla cultivation for feeding their livestock.
- KVK is demonstrating biological pest control tactics especially Pheromone traps for the control of fruit fly in the district and farmers are now well aware of its use and demanding more traps.
- KVK is associated with 167 SHGs through line departments for promotion of their income by imparting trainings in the field of post harvest technology, tailoring & stitching, rural crafts, food processing & value addition.
- Members of some Self Help Groups have started their microenterprise after receiving trainings from the Kendra.
- As a result of KVKs efforts in popularising vermicompost bulk of rural households in the district have their own vermicomposting units

11.0 LINKAGES

11.1 Functional linkage with different organizations

Name of organization	Nature of linkage
District Rural Development Agency – Hamirpur	Supplementary observation mechanism (SOM) of watershed activities. Training of watershed functionaries. Training of farmers under Intensive Dairy Development Project in district Hamirpur
Deptt. of Agriculture –Hamirpur	Participation in different extension programmes of Technology Dissemination such as trainings, diagnostic field visits.

	Refresher training for Officers and Extension functionaries of the Deptt. Collaboration in the implementation of KVK activities like FLD and OFTs in the fields. Co-ordination in celebration of different important days.
Agriculture Technology Management Agency (ATMA) Hamirpur	Assessment and refinement of technology. Training of SHGs/FIGs Organising Kisan Gosthis and participation in different activities organized by BTTs/ATMA. Planning implementation and monitoring of different research/extension activities as member of ATMA Management Committee/Governing Board.
Deptt. of Horticulture – Hamirpur	Co-ordination in departmental and HTM activities
Mid Himalayan Watershed Development Project – Sujanpur	Coordination in watershed development and trainings to the farmers for watershed development
District Sports And Youth Services Officer – Hamirpur	Vocational and un-employed training to youth and school dropout in the district
Deptt. of Animal Husbandry –Hamirpur	Training of farmers under Intensive Dairy Devt. Project in district Hamirpur Exposure visit, clinical camp and training.
CDPO- working in each block	Training to Women Self Help Group and school dropouts.
Market committee –Hamirpur	Devt. of market yard and training of farmers.
Nehru Yuva Kendra- Hamirpur	Training and Awareness camp
All Mahila Mandal in – Hamirpur	Training and Awareness camp
Panchayat in district Hamirpur	Training and Awareness camp
Kisan Sangh, Nadaun	Training and Awareness camp

NB The nature of linkage should be indicated in terms of joint diagnostic survey, joint implementation, participation in meeting, contribution received for infrastructural development, conducting training programmes and demonstration or any other

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.)
National Initiative on Climate Resilient Agriculture (NICRA)	2010	ICAR, New Delhi	1045342/- during 2015-16
Attracting and retaining youth in agriculture (ARYA)	2015	ICAR, New Delhi	900000/- during 2015-16

11.3 Details of linkage with ATMA

a) Is ATMA implemented in your district Yes

S. No.	Programme	Nature of linkage	Remarks
1.	Technology assessment and refinement	Especially for popularization of vegetables hybrids Integrated Pest Management	Increased number of Vegetable growers
2.	Trainings of the farmers	Training being conducted at KVK Campus	All agricultural and allied sectors
3.	Diagnostic visits	Joint Farmers field visits	Yellow rust campaign in wheat

Coordination activities between KVK and ATMA during 2015-16

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				
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

S. No.	Programme	Nature of linkage	Constraints if any

11.5 Nature of linkage with National Fisheries Development Board

S. No.	Programme	Nature of linkage	Remarks

11.6 Details of linkage with RKVY

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	Year of estt.	Area	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	

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									
Rice									
Pulses									
Pigeonpea									
Oilseeds									
Fibers									
Spices & Plantation crops									
Floriculture									
Fruits									
	Mango	July, 2015	0.5	Dusheri	Fruits	60 kg	-	1200	
	Peach	May, 2015	0.5	-	Fruits	170 Kg	-	3400	
	Aonla	December, 2015	0.2	Banarsi	Fruits	157 Kg	-	3140	
	Jack Fruit	July, 2015	02 plants	Local	Fruits	26.6 Kg		665	
Vegetables									
	Bottle Gourd	Sept. to Dec.	-	Sharda	Fresh	46 Kg	-	460	
	Bitter Gourd	Sept. to Dec.	-	Pali	Fresh	31 Kg	-	310	
	Cucumber	August-Sept,	-	Malav	Fresh	66Kg	-	1320	
	Okra	August-Sept,	-	P-8	Fresh	15 Kg	-	300	
	Beans	Dec. - March	-	Palam	Fresh	12 Kg	-	240	
	Squashes	March-April	-	Zucchini	Fresh				
	Peas	Feb.-April	-	Raj	Pod	29 Kg	-	610	

	Onion	May-June	-	N-53	Bulb	57.5 Kg	-	1550	
	Capsicum	August-Sept,	-	California wonder	Fresh	27 Kg	-	500	
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	
1.	Buffaloes	Murrah	Milk	6314.6	181800	212584	

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 2015			
May 2015			
June 2015			
July 2015			
August 2015			
September 2015			
October 2015	24	01	
November 2015	12	01	
December 2015	02	01	
January 2016			
February 2016			
March 2016	66	One day, two days and six days	

12.6. Database management

S. No	Database target	Database created by the KVK
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12.7 Rainwater Harvesting

Training programmes conducted using Rainwater Harvesting Demonstration Unit

Date	Title of the training course	Client (PF/R/EF)	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/EF)	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

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Bank account	Name of the bank	Location	Account Number
With Host Institute	SBI HPAU Palampur	Palampur	10640342317
With KVK	SBI Bara	Bara	11518791639

13.2 Utilization of KVK funds during the year 2015-16 (up to March 2016)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	1,04,00,000	10392835	8485481
2	Traveling allowances	1,00,000	1,00,000	53845
3	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	9,00,000	9,00,000	360000
B	POL, repair of vehicles, tractor and equipments			-
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)			98365
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)			81259
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)			132125
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)			98413
G	Training of extension functionaries			44963
H	Maintenance of buildings			83852
I	Establishment of Soil, Plant & Water Testing Laboratory			-
J	Library			-
TOTAL (A)		1,04,00,000	10392835	9438303
B. Non-Recurring Contingencies				
1	Works			-
2	Equipments including SWTL & Furniture			-
3	Vehicle (Four wheeler/Two wheeler, please specify)			
4	Library (Purchase of assets like books & journals)			-
TOTAL (B)				-
C. REVOLVING FUND				
GRAND TOTAL (A+B+C)		1,04,00,000	10392835	1103679
				10541982

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 2012 to March 2013	1035723	1187481	982532	1330672
April 2013 to March 2014	1330672	1236945	827380	1740237
April 2014 to March 2015	1740237	1358394	1079949	2018682
April 2015 to March 2016	2018682	975055	1103679	1756474

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14. Details of HRD activities attended by KVK staff during 2015-16

<i>Name of the staff</i>	<i>Designation</i>	<i>Title of the training programme</i>	<i>Institute where attended</i>	<i>Date</i>
Dr. Pardeep Kumar	Programme Coordinator	Orientation course on "IPM in important crops with special reference to Himachal Pradesh and Jammu & Kashmir	ATARI-Zone-1, PAU, Ludhiana	20-22.8.2015
Dr. Pardeep Kumar	Programme Coordinator	Providing technological support Extension and Demonstration services to the farmers	SKUAST, Jammu	4.11.2015
Dr. Pardeep Kumar	Programme Coordinator	Cluster front line demonstration on pulses and oilseeds	CSSHAU, Hisar	1-2.12.2015
Dr. Pardeep Kumar	Programme Coordinator	3 rd MDP for newly recruited PC of KVKs	NAARM, Hyderabad, KVK Chiterkoot and ATARI-Zone-1, PAU, Ludhiana	14.12.2015-22.01.2016
Dr. Pardeep Kumar	Programme Coordinator	National Youth Convention on ARYA	NASCcomplex-Delhi	27-28.01.2016
Dr. Pardeep Kumar & Dr. Parveen Kumar Sharma	Programme Coordinator ES(Agroforestry)	Zero budget farming	CSKHPKV, Palampur	3-4.3.2016
Dr. Parveen Kumar Sharma	ES Agro forestry	Green House Technologies for production of Horticultural Crops	Dr. YSP UHF Nauri Solan	08-10.03.2016
Dr Anjana Thakur & Dr.CL Chauhan	SMS Entomology SMS Vegetable Sci.	Recent advances in protected Cultivation	CSK HPKV, Palampur	27-28.2.2016
Dr. Parveen Kumar Sharma Dr. Dhanbir Singh	SMS (Aagroforstry) SMS Soil Science	Review cum Action plan Meeting of NICRA for the KVKs of Zone-I	CSSRI, Karnal	2.5.2015
All Scientists	-	Agriculture officers <i>Kharif</i> seasons workshop	CSKHPKV, Palampur (H.P.)	12.5.2015
Dr. Dhanbir Singh	SMS Soil Science	e-governancein Agriculture.	SAMET, Mashobra, Shimla (H.P.).	21.7.2015 to24.7.2015
Dr. Dhanbir Singh	SMS Soil Science	Advances in micro-irrigation and fertigations technologies for improving water and nutrient use efficiency.	Department of Soil Science, CSKHPKV, Palampur (H.P.).	1.10.2015 to10.10.2015
Dr. Dhanbir Singh & Sh. Dinesh Chand Sharma	SMS Soil Science Farm Manager	Soil testing for the KVKs of H.P .	Department of Soil Science, CSKHPKV, Palampur (H.P.).	1.3.2016 to2.3.2016

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

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Annexures

District Profile - I

Include the details of

1. General census	
Total Geographical Area (ha)	110162
No. of Sub-division (No.)	4
No. of Blocks	6
No. of Panchayat	229
No. of village	1650
Human Population (No.)	412009
Average Annual Rainfall (cm)	100-110
Total Cultivable Area	68938
Net Cultivated Area (ha)	35965
Total Uncultivable Land (ha)	16899
Total Net Irrigated Area (ha)	3342
Cropping Intensity (%)	200
Literacy (%)	83.16

Actual Population	454,768	412,700
Male	217,070	196,593
Female	237,698	216,107
Population Growth	10.19%	11.80%
Area Sq. Km	1,118	1,118
Density/km ²	407	369
Proportion to Himachal Pradesh Population	6.62%	6.79%
Sex Ratio (Per 1000)	1095	1099
Child Sex Ratio (0-6 Age)	887	850
Average Literacy	88.15	82.46
Male Literacy	94.36	90.15
Female Literacy	82.62	75.70
Total Child Population (0-6 Age)	48,548	50,699
Male Population (0-6 Age)	25,722	27,398
Female Population (0-6 Age)	22,826	23,301
Literates	358,091	298,498
Male Literates	180,555	152,537
Female Literates	177,536	145,961

Child Proportion (0-6 Age)	10.68%	12.28%
Boys Proportion (0-6 Age)	11.85%	13.94%
Girls Proportion (0-6 Age)	9.60%	10.78%

2. Agricultural and allied census

Particulars	Area (ha)
Total cropped area	71632
Net sown area	36418
Total uncultivable land	21160
Culturable wastelands	5732
Gross irrigated land	3464
Average Rain fall	144.7 cm
Cropping Intensity	196.69%

3. Agro-climatic zones

S. No	Agro-climatic Zone	Characteristics
1	Zone I - 801-1000 m	High Altitude sandy clay loam
2	Zone II - 651-800 m	Medium Altitude sandy clay loam
3	Zone III - 651-800 m	Medium Altitude gravelly sandy clay loam
4	Zone IV - 400-650m	Low Altitude Sandy loam

4. Agro-ecosystems

5. Major and micro-farming systems

S. No	Farming system/enterprise
1	Maize – Wheat
2	Maize-toria-wheat
3	Tomato –wheat
4	Tomato-cauliflower
5	Paddy – Wheat
6	Black gram-Wheat
7	Okra-radish-cauliflower
8	Vegetables
9	Cucurbits- cole crops

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

7. Major agriculture and allied enterprises

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

Include

1. Names of villages, focus area, target area etc.
2. Survey methods used (survey by questionnaire, PRA, RRA, etc.)
3. Various techniques used and brief documentation of process involved in applying the techniques used like release transect, resource map, etc.
4. Analysis and conclusions
5. List of location specific problems and brief description of frequency and extent/intensity/severity of each problem
6. Matrix ranking of problems
7. List of location specific thrust areas
8. List of location specific technology needs for OFT and FLD
9. Matrix ranking of technologies
10. List of location specific training needs

Technology Inventory and Activity Chart - III

Include

1. Names of research institutes, research stations, regional centres of NARS (SAU and ICAR) and other public and private bodies having relevance to location specific technology needs
2. Inventory of latest technology available *

Sl. No	Technology	Crop/enterprise	Year of release or recommendation of technology	Source of technology	Reference/citation
1.					
2.	Modified Paddy Drum Seeder*	Improved Farm Implements	2007	Directorate of Rice Research	Proceedings/Notification no. 77 of DRR, Hyderabad dated 04.02.2007
3.	Stem application of Imidachloropid @ 0.04%*	Cotton	2008	ANGRAU, Hyderabad	Proceedings/Notification no. 88 of ANGRAU, Hyderabad dated 04.02.2008

PS * an example for guidance only

3. Activity Chart

Crop/Animal/ Enterprise	Problem	Cause	Solution	Activity	Reference of Technology
Okra	Poor yield of existing varieties and non descript hybrids growing under rainfed conditions	Lack of high yielding varieties under rainfed conditions	Suitable high yielding varieties	1.OFT on evaluation of different varieties of okra under rainfed conditions. 2.Trainings in scientific cultivation of okra	POP of CSK HPKV, Palampur
Onion	Poor yield of existing/local varieties and non descript hybrids of onion grown in Hamirpur district.	Lack of high yielding varieties under rainfed conditions	Suitable high yielding varieties	1.OFT on evaluation of different varieties of onion under rainfed conditions 2. Trainings in scientific cultivation of onion	POP of CSK HPKV, Palampur
Wheat	Low productivity of old varieties	1)Lack of high yielding varieties under rainfed conditions 2)Low productivity of existing varieties due to imbalance or low nutrient 3) Pest and disease occurrence	Suitable high yielding varieties	1. OFT & FLD to demonstrate newly released wheat varieties. 2. OFT on effect of recommended dose of nutrients. 3.Training programme on integrated pest management of wheat	POP of CSK HPKV, Palampur
Cauliflower	Poor yield due in insect pests	Heavy infestation of aphid in late sown group of cauliflower	Suitable management tactics	OFT and trainings on insect pest management	POP of CSK HPKV, Palampur
Capsicum	Poor yield of capsicum under protected cultivation due to diseases	Heavy disease incidence in capsicum under protected cultivation	Suitable management tactics	OFT and trainings on management of powdery in capsicum under protected cultivation	POP of CSK HPKV, Palampur
Tomato	Poor yield of tomato due to diseases	Heavy disease incidence in capsicum under protected cultivation	Suitable management tactics	OFT and trainings on management of Phytophthora blight in tomato	POP of CSK HPKV, Palampur

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

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Include

- a. Detailed account on varietal/breed characters for each of the variety/breed selected for FLD and OFT
- b. Details of technologies that may include formulation, quantity, time, methods of application of nutrients, pesticides, fungicides etc., for technologies selected under FLD and OFTs
- c. Details of location/area specificity of recommended technology viz., for each of the variety/breed/technology selected for FLD and OFT