PROFORMA FOR PREPARATION OF ANNUAL REPORT (Jan to December 2022)

APR SUMMARY

(Note: While preparing summary, please don't add or delete any row or columns)

1. Training Programmes

Clientele	No. of Courses	Male	Female	Total participants
Farmers & farm women	72	1074	432	1506
Rural youths	07	51	25	76
Extension functionaries	12	109	64	173
Sponsored Training	-	-	-	-
Vocational Training	07	40	25	65
Total	**98**	**1274**	**546**	**1820**

2. Frontline demonstrations

Enterprise	No. of Farmers	Area (ha)	Units/Animals
Oilseeds	77	20	-
Pulses	88	20	-
Cereals	31	12	-
Vegetables	14	1.3	-
Other crops	12	1.0	-
Hybrid crops	-	-	-
Total	222	54.3	-
Livestock & Fisheries	-	-	-
Other enterprises	20	0.9	60
Total			
Grand Total	**242**	**55.20**	

3. Technology Assessment & Refinement

Category	No. of Technology Assessed & Refined	No. of Trials	No. of Farmers
Technology Assessed			
Crops	8	24	24
Livestock	-	-	-
Various enterprises	-	-	-
Total	8	24	24
Technology Refined			
Crops	-	-	-
Livestock	-	-	-
Various enterprises	-	-	-
Total	-	-	-
Grand Total	**8**	**24**	**24**

4. Extension Programmes

Category	No. of Programmes	Total Participants
Extension activities	868	8430
Other extension activities	133	2284
Total	**1001**	**10714**

5. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						
		Crop	Livestock	Weather	Marke-ting	Aware-ness	Other enterprise	Total
	Text only	210	-	103	-	26	-	339
	Voice only	-	-	-	-	-	-	-
	Voice & Text both	-	-	-	-	-	-	-
	Total Messages	**210**	**-**	**103**	**-**	**26**	**-**	**339**
	Total farmers Benefitted	**6196**	-	**2126**	-	**1547**	-	**9842**

6. Seed & Planting Material Production

	Quintal/Number	Value Rs.
Seed (q)	347.90	594572
Planting material (No.)		
Bio-Products (kg)		
Livestock Production (No.)	01	-
Fishery production (No.)		

7. Soil, water & plant Analysis

Samples	No. of Beneficiaries	Value Rs.
Soil	279	7190
Water		
Plant		
Total	279	7190

8. HRD and Publications

Sr. No.	Category	Number
1	Workshops	02
2	Conferences	21
3	Meetings	12
4	Trainings for KVK officials	03
5	Visits of KVK officials	-
6	Book published	1
7	Training Manual	-
8	Book chapters	01
9	Research papers	02
10	Lead papers	-
11	Seminar papers	-
12	Extension folder	05
13	Proceedings	01
14	Award & recognition	-
15	On going research projects	-

DETAIL REPORT OF APR-2022

1. GENERAL INFORMATION ABOUT THE KVK

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

Address	Telephone		E-mail
	Office	FAX	
Krishi Vigyan Kendra, Khekra, NH 709B (Behind New Tehsil) Baghpat – 250 101 (U.P.) Website: baghpat.kvk4.in	9412311502	-	kvkbaghpat1@gmail.com

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

Address	Telephone		E-mail
	Office	FAX	
Sardar Vallabhbhai Patel University of Agriculture & Technology, Meerut (U.P.) Website: svbpmeerut.ac.in	0121-288522,	0121-288505, 288540	vc2016svpuat@gmail.com deesvpuat2014@gmail.com

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Sandeep Chaudhary, Professor/OIC	-	9412311502	sundeep.baraut@gmail.com

1.4. Year of sanction: 27-04-2014

1.5. Staff Position (as on 31st August 2022)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale (Rs.)	Present basic (Rs.)	Date of joining	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
1	Programme Coordinator	-	-	-	-	-	-	-	-
2	Subject Matter Specialist	Dr. Sandeep Chaudhary	Professor/OIC	Crop Production	37400-67000	182700	01/01/1996	Permanent	OBC
3	Subject Matter Specialist	Dr. Sarita Joshi	Professor	Home Science	37400-67000	205600	26/08/1995	Permanent	Others
4	Subject Matter Specialist	Sh. Amit Chaudhary	SMS/Asstt. Professor	Horticulture	15600-39100	98200	09/12/2003	Permanent	OBC
5	Subject Matter Specialist	Dr. Shivam Singh	SMS/T6	Plant Protection	15600-39100	56100	01/07/2022	Permanent	Others
6	Subject Matter Specialist	Dr. Sonika Grewal	SMS/T6	Livestock Production	15600-39100	56100	01/07/2022	Permanent	OBC
7	Subject Matter Specialist	Er. Gaurav Sharma	SMS/T6	Ag. Engineering	15600-39100	56100	08/07/2022	Permanent	OBC
8	Programme Assistant	-	-	-	-	-	-	-	-
9	Computer Programmer	-	-	-	-	-	-	-	-
10	Farm Manager	Dr. Ravindra Kumar	Programme Assistant/Farm Manager	Soil Science	9300-34800	56900	02/08/2007	Permanent	OBC

11	Accountant / O.S.	Sh. Sanjeev Chandel	Accountant	Accountancy	9300-34800	70000	10/12/2003	Permanent	OBC
12	Stenographer	Sh. Praveen Kumar Premi	Steno	-	5200-20200	41600	26/12/2008	Permanent	SC
13	Driver	Sh. Papin Kumar	Driver cum Mechanic	-	5200-20200	32300	26/12/2008	Permanent	OBC
14	Driver	-	-	-	-	-	-	-	-
15	Supporting staff	Sh. S. C. Sharma	-	-	5200-20200	38600	01/12/1992	Permanent	Others
16	Supporting staff	-	-	-	-	-	-	-	-

1.6. Total land with KVK (in ha):

S. No.	Item	Area (ha)
1	Under Buildings, roads & irrigation Channel	3.042
2.	Under Demonstration Units	0.60
3.	Under Crops	7.60
4.	Orchard/Agro-forestry	1.40
Total		**12.642**

1.7. Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Date	Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	-	510	43.65	-	-	-
2.	Farmers Hostel	ICAR	-	300	22.92	-	-	-
3.	Staff Quarters (6)	ICAR	-	400	26.72	-	-	-
4.	Demonstration Units (2)	ICAR	-	160	11.06	-	-	-
5.	Fencing	ICAR	-	2000 RM	38.43	-	-	-
6.	Rain Water harvesting system	ICAR	-	1000RM	8.26	-	-	-
7.	Threshing floor	ICAR	-	300	2.34	-	-	-
8.	Farm godown	ICAR	-	60	3.63	-	-	-
9.	Center of Excellence Implement shed	UPCAR	14/07/2022	105	24.00	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Mahindra Marshal Jeep	Not available	-	-	-
Motor Cycle	2006	46575.00	93122	Not Good

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Tractor Sonalika	2005	3,44,500.00	Not Good
12 Disc Harrow	2005	20275.00	Not Good
Cultivator	2005	12265.00	Not Good
Leveler	2006	5080.00	Not Good
Two tier tractor trolley	2006	65106.00	Not Good
LCD Projector	2007	5700.00	Not Good

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

Sl.No.	Date	Name and Designation of Participants	Salient Recommendations	Action taken
1.	26.11.21	1. Dr. Gajendra Pal, Professor & Head KVK Baghpat 2. Dr. Gopal Singh, Joint Director Extension, SVPUA&T, Modipuram, Meerut 3. Dr. S.K. Tirpathi, Assistant Professor Extension, SVPUA&T, Modipuram, Meerut 4. Dr. Sandeep Pal, BSA (Soil Conservation), Baghpat 5. Dr. Sandeep Kumar Singh, Joint Director, Ch. Charan Singh National Institute of Animal Health, Baghpat 6. Prasant Kumar, Deputy Director Agriculture, Baghpat 7. Dr. Sandeep Chaudhary, Professor (Agronomy), KVK Baghpat 8. Dr. Sarita Joshi, Professor (Home Science), KVK Baghpat 9. Sh. Amit Chaudhary, Assistant Professor (Hort.), KVK Baghpat 10. Sh. Dinesh Kumar Arun, District Horticulture Officer, Baghpat 11. Moh. Rameesh, Fisheries Department, Baghpat 12. Sh. Ranveer Singh, Soil Conservation Laboratory, Baghpat 13. Sh. Sashi Kumar Yadav, RSETI, Baghpat 14. Sh. Rajesh Pant, District Land Band, Manager, Baghpat 15. Sh. Ishwar Tyagi, Progressive Farmers 16. Dr. Ramesh Chandra, Chief Veterinary Officer, Baghpat 17. Smt. Rajveeri, Progressive Women Farmers 18. Smt. Rakesh, Progressive Women Farmers 19. Dr. Bhupandar Kumar, Farm Manger, KVK Baghpat 20. Ku. Ankita Negi, SMS, KVK Baghpat 21. Sh. P.K. Premi, Steno, KVK Baghpat 22. Sh. Aadiprakesh Tyagi, Progressive Farmers	1. Dr. Gopal Singh, Joint Director Extension suggested to organize demonstration and training programme 2. Dr. Gopal Singh, Joint Director Extension suggested to use Nano Urea or DAP organizing Training/demonstration of cucurbits crops. 3. Dr. Gopal Singh, Joint Director Extension suggested to purchase mini seed kit from University Headquarter i.e (SVPUA&T Modipuram Meerut) 4. District Horticulture Officer (DHO) suggested to organize training on nursery management of horticulture crop 5. Dr. Sandeep Kumar Singh, Joint Director, Ch. Charan Singh National Institute of Animal Health suggested to conduct trainings one livestock also.	1. Five days training from 07-11 Nov., 2022 programme for rural youth have been conducted by SMS Plant Protection No. of beneficiaries were 11. 2. One OFT on cucurbits crop ([khjk) have been conducted during 2022 in which effect of NPK + micronutrient on production on Production have been assessed. 3. Mini seed kit from IARI Pusa have been purchased for conducting FLD o nutrigarden. 4. Training on nursery management of horticulture crop have been conducted . 5. 06 training programme have been conducted by livestock unit & total 124 farmers & farm women have been benefitted.

		23. Sh. Sadab, Agromet, KVK Baghpat 24. Sh. Dev Kumar, SRF, KVK Baghpat 25. Sh. U.S. Rathi, Computer Programmer, KVK Baghpat 26. Dr. Ravindra Kumar, Programme Assistant (Soil), KVK Baghpat 27. Sh. Sanjeev Chandel, O.S., KVK Baghpat 28. Sh. Surendra Yadav, Dairy/Agriculture, Baghpat 29. Sh. Vinod Tyagi, Progressive Farmers 30. Sh. Anuj, Horticulture, Baghpat 31. Sh. Nishant, RAWE, KVK, Baghpat 32. Sh. Aashuman Verma, RAWE, KVK, Baghpat 33. Sh. Ajay Verma, RAWE, KVK, Baghpat 34. Sh. Sandeep Kumar, RAWE, KVK, Baghpat 35. Sh. Sorabh Dexit, RAWE, KVK, Baghpat 36. Sh. Narayan Singh, RAWE, KVK, Baghpat		
2.				

2. DETAILS OF DISTRICT (31st December, 2022**)**

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

S. No	Farming system/enterprise
1	Agriculture+Animal Husbandry
2	Agriculture+Animal Husbandry+Horticulture

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

S. No	Agro-climatic Zone	Characteristics
1	North Western Plain Zone	Sub humid to Subtropical climate, maximum and minimum temperature 44 .2$^{\Theta}$C and 3 $^{\Theta}$C respectively with average rainfall is about 512.69 mm in last 11 year

2.3 Soil type/s

S. No	Soil type	Characteristics
1	Sandy loam to loam with normal pH	The soil have enough clay to store adequate amount of water and plant nutrients for optimum plant growth, containing enough sand, silt and clay. Clay content is not much as to cause poor aeration or to make working difficult. A soil containing 7 to 27% clay and approximately equal amount of silt and sand has been designated as loam textured soil.

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

S. No	Crop	Area (ha)	Production (MT)	Productivity (q/ha)
1	Sugarcane	74.227	866.40	866.40
2	Jawar (grain)	0.011	0.012	10.91
3	Bajra	0.595	1.062	17.85
4	Maize	0.009	0.023	25.56
5	Urd	0.52	0.584	11.23
6	Arhar	0.464	0.336	7.24
7	Rice	4.847	13.998	28.88
8	Wheat	55.427	253.468	45.73
9	Barley	0.038	0.149	39.21
10	Mustard	2.716	3.715	13.66
11	Gram	0.311	0.013	11.82
12	Massor	0.052	0.053	10.14
13	Pea	0.013	0.020	15.56

2.5. Weather data

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
January	88	17.3	7.9	88.15
February	16	23.55	9.19	71.69
March	0	33.1	15.9	66.22
April	0	41.63	20.87	37.08
May	54	39.52	24.1	60.00
June	75.5	40.27	25.53	56.77
July	177	45.5	26.78	80.77
August	76.5	35.1	26.71	80
September	127	34.45	24.6	79.48
October	36.5	32.33	18.5	72.9
November	0	29.1	12.67	65.8
December	0.5	23.12	8.12	70.80

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

Category	Population	Production	Productivity
Cattle			
Crossbred	83834	150486 lit/day	10.5 lit/day
Indigenous	39492	139997 lit/day	6.5 lit/day
Buffalo	139763	838578 lit/day	6.0 lit/day
Sheep			
Crossbred	3782	-	-
Indigenous	2924	-	-
Goats	16948	-	-
Pigs			
Crossbred	442	-	-
Indigenous	3138	-	-
Poultry			
Hen			

Desi	39596	-	-
Improved			
Horse	2387		
Donkey	358		
Mule	936		
Dog	3251		
Camel	96		
Fish (Reservoir)	53.843 Ha.	1615.99Q	30Q/Ha.

2.7 Details of Operational area / Villages (2022)

S.N.	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1.	Khekra	Khekra	44	Dairy, sugarcane, paddy, wheat. mustard, moong, arhar, poultry & vegetables	1. Low production in late sown wheat 2. Weed infestation in wheat 3. Reducing production 4. White grub attack in sugarcane. 5. Red rot in sugarcane 6. Late sowing of sugarcane due to wheat- sugarcane system 7. No use of potash in all crops 8. Deficiency of minor elements and organic matter in soil 9. Depletion of ground water 10. Low production of old orchards 11. Insect attack in vegetables 12. . Low production of milk health. in cow & buffalo. 13. Long dry period in milch animals 14. Undeveloped marketing system of Agriculture of produces 15. Less net return in sugarcane based cropping system. 16. Infertility in buffalo and cow and poor health of animal	a. Increase productivity of wheat in late sown conditions. b. Increase milk production in Buffalos. c. Balance use of fertilizer in sugarcane. d. Balance use of fertilizer in wheat. e. Weed management in wheat. f. Management of pests in sugarcane g. Creating awareness about human nutrition /nutritional needs to mitigate the problems of nutritional deficiency in rural woman & children. h. Management of mango orchards. i. Pest and weed management in paddy j. Maintenance of soil k. Disease management in okra. l. Promotion of oilseed and pulse crops. m. Intercropping with sugarcane. n. Balance diet with mineral mixture and vaccination to animals. o. Renovation of old orchards
2.	Baghpat	Baghpat	47	Dairy Sugarcane, paddy, wheat, fodder & vegetables		
		Pilana	49	Dairy Sugarcane, paddy, wheat, mustard, moong, arhar& poultry		
3.	Baraut	Baraut	50	Dairy, Sugarcane, wheat, fodder & vegetables crop		
		Chhaprauli	26	Dairy, sugarcane, wheat. Fodder & vegetable crops		
		Binauli	65			

2.8 Priority/thrust areas

S. No.	Crop/Enterprise	Thrust area
1	Wheat	Increase productivity of late sown conditions
		Weed management.
2	Sugarcane	Management of pests & disease
3	Nutritional Management	Creating awareness about human nutrition (nutritional needs to mitigate the problems of nutritional deficiency in rural woman.
4	Paddy	Pest & disease management
5	Soil	Maintenance of soil health.
6	Vegetable	Pest Management and crop husbandry
7	Oilseed and Pulses	Promotion of oilseed and pulses crops.

2.9 Intervention/ Programmes for the doubling the farmers income –Nil

3. TECHNICAL ACHIEVEMENTS

3.A. Details of target and achievements of mandatory activities by KVK during 2022

OFT (Technology Assessment and Refinement)				FLD (Oilseeds, Pulses, Cotton, Other Crops/Enterprises)			
1				2			
Number of OFTs		Total no. of Trials		Area in ha		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
12	08	36	36	100	55.20	200	242

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	64	72	1280	1506	500	236	12000	7602
Rural youth	08	07	80	76				
Extn. Functionaries	12	12	180	173				
Total	84	91	1540	1755	500	236	12000	7602

Seed Production (q)			Planting material (Nos.)		
5			6		
Target	Achievement	Distributed to no. of farmers	Target	Achievement	Distributed to no. of farmers
375.00	347.9.00	Supply to NSC, Meerut			

I.A TECHNOLOGY ASSESSMENT

Summary of technologies assessed under various crops by KVKs

Thematic areas	Crop	Name of the technology assessed	No. of trials	No. of farmers
Integrated Nutrient Management	Cucumber	Use of balanced fertilizers in cucumber production	03	03
Varietal Evaluation	Wheat	Screening of timely sown wheat variety	03	03
	Pea	Evaluation of improved variety of vegetable pea	03	03
Integrated Pest Management	Paddy	Control of brown plant hopper in paddy	03	03
Integrated Crop Management	Paddy	Evaluation of chemical and natural farming in basmati paddy production	03	03
Farm Machineries	Sugarcane	Deep plowing of the field by disc plow before sowing sugarcane in autumn	03	03
Drudgery Reduction	Onion	Increasing the work efficiency and reducing the risk/difficulty of the farmer women doing onion weeding by using twin wheel hoe machine.	03	03
Others (Pl. specify) Human health	Wheat, Chickpea & Barley	To test the effective use of mixed cereal flour (wheat flour 75% gram flour 20% and barley flour 5%) for improving the nutritional status of farm women.	03	03
Total			**24**	**24**

Summary of technologies assessed under livestock by KVKs -Nil

Summary of technologies assessed under various enterprises by KVKs -Nil

I.B. TECHNOLOGY REFINEMENT-NIL

I.C. TECHNOLOGY ASSESSMENT AND REFINEMENT IN DETAIL

(From each state please include the full details of three OFTs on technology assessment and or refinement under the broad thematic areas such as Integrated Crop Management, weed management, pest and disease management, nutrient management, resource conservation, livestock enterprises, Integrated Nutrient Management)

(The model for preparing the same is furnished below)

VARIETY EVALUATION

1. Problem definition: Low production of local species

Technology Assessed or Refined (as the case may be): Screening of timely sown wheat variety

KVK, Baghpat in Uttar Pradesh conducted an on-farm trial to **assess or refine (as the case may be)** effect of timely sown variety on production. Production of wheat variety DBW-222 was found quite effective in terms of high yield and taste of bread/chapatis as compared to farmer's practice (wheat variety HD-2967). Production of PBW-222 was 48.75 q/ha while HD-2967 has yielded 40.50 q/ha.

Table: Screening of wheat varieties for the production:

Technology Option	No.of trials	Yield (q/ha)	Net Returns (Rs. in lakh./ha)
Use of wheat variety HD-2967 (Farmer's practice)	03	40.50	1.18
Use of wheat variety DBW-222		48.50	1.35

2. Problem definition: Low production of local species

Technology Assessed or Refined (as the case may be): Evaluation of improved variety of vegetable pea

KVK, Baghpat in Uttar Pradesh conducted an on-farm trial to **assess or refine (as the case may be)** effect of improved variety on vegetable pea production. Production of pea variety PSM-05 was found quite effective in terms of high yield as compared to farmer's practice (local pea variety Arkil) (65.0 q/ha) with net return of Rs. 3.62 lakh.

Table: Screening of pea varieties for the production:

Technology Option	No.of trials	Yield (q/ha)	Net Returns (Rs. in lakh./ha)
Use of local pea variety Arkil (Farmer's practice)	03	65.0	2.73
Use of improved pea variety PSM-05		80.5	3.62

INTEGRATED CROP MANAGEMENT

Problem definition: Decrease in product quality

Technology Assessed or Refined (as the case may be): Evaluation of chemical and natural farming in basmati paddy production

KVK, Baghpat in Uttar Pradesh conducted an on-farm trial to **assess or refine (as the case may be)** difference between chemical and natural farming systems on production of paddy. As a result, production of paddy (39.37 q/ha) was recorded high with chemical farming system as compared to natural farming system (26.87 q/ha) with net return of Rs. 157,480.00.

Table: Difference between natural and chemical cropping systems on production of paddy:

Technology Option	No.of trials	Yield (t/ha)	Net Returns (Rs. in lakh./ha)
Use of N:P:K (80:60:40) (as farmer's practice, chemical farming, variety: PB-1718)	03	39.37	1.57
Natural farming with cow based products (variety: PB-1718)		26.87	1.07

INTEGRATED NUTRIENT MANAGEMENT

Problem definition: Lower productivity of cucumber due to imbalance application of fertilizers

Technology Assessed or Refined (as the case may be): Use of balanced fertilizers in cucumber production

KVK, Baghpat in Uttar Pradesh conducted an on-farm trial to find out appropriate nutrient management practice to enhance the cucumber productivity. The **assessed or refined (as the case may be)** use of NPK along with zinc sulphate, copper sulphate and boron was found better with 28.57 % increase in yield.

Table: Effect of NPK, zinc sulphate, copper sulphate and boron in enhancing yield in cucumber

Technology Option	No.of trials	Germination (%)	Plant height at flowering stage	Yield (q/ha)	Increase in Yield (%)	B:C Ratio
Use of DAP and Urea (Farmers Practice)	03	-	-	175	--	25:1
Use of NPK + micro nutrients		-	-	225	28.57	31.12:1

PEST MANAGEMENT

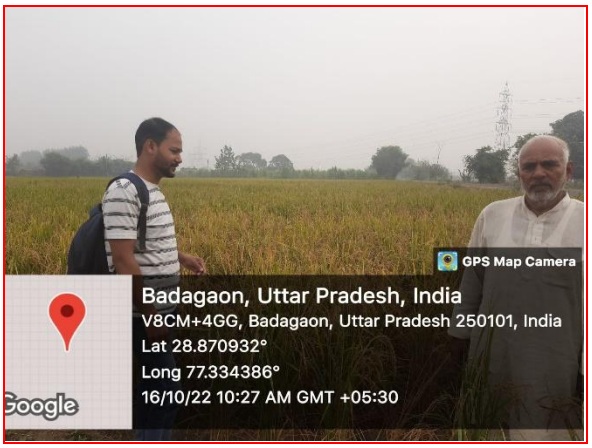
Problem definition: Heavy infestation of brown plat hopper effecting in a yield loss of 15-40%

Technology Assessed or Refined (as the case may be): Control of brown plant hopper in paddy

KVK, Baghpat in Uttar Pradesh conducted an on-farm trial on insecticide evaluation to control brown aphid in paddy to check the efficacy of new insecticide Dinotefuran 20 SG @ 250 g/ha. Based on the data collected, Dinsecticide fared significantly better than the chemical insecticide being used as a practice by farmers in terms of pest incidence, yield potential and economic returns.

Table: Effect of insecticides to control of brown plat hopper in paddy

Technology Option	No.of trials	Per cent deduction	Yield (q/ha)	% Increase in yield over farmer's practice	B:C Ratio
Spray of Fipronil 5 SC @ 2 ml/lit (Farmers Practice)	03	32.29	31.25	--	3.25:1
Spray of Dinotefuran @ 0.5 ml/lit		51.14	37.50	20	4.06:1



DRUDGERY REDUCTION

Problem definition: Low work efficiency and high drudgery of farm women during weeding in onion

Technology Assessed (as the case may be) : Use of Twin wheel hoe for drudgery reduction and efficiency enhancement of farm women involved in weeding onion.

Many agriculture operations are performed by women involve a lot of physical strain. Weeding is one of them.Traditionaly khurpi is being used in Baghpat. In order to enhance the efficiency and reducing drudgery, Krishi Vigyan Kendra, Baghpat conducted a trial by introducing twin wheel hoe as T2 (technology option 2) for weeding of onion against traditional khurpi as farmer practice T1 (technology option 1) on three locations. Results revealed that the activity became less drudgery prone as the perceived exertion has been reduced from severe to mild when work is performed by T2 and The output is increased by 90.08%.

Result:

Technology	Parameter	Data	Result
T_1:Use of khurpi for weeding onion	Output m^{*2}/hr Average working heart rate (b/min) EER (KJ /min) Rate of perceived exertion (Pain in legs and upper arms) (on 5 point scale)	60.5 105.50 7.97 Very severe pain .9 Due to adoption of aquating posture for many hours.)	The output is increased by 90.08 % when the work is performed by T2(twin wheel hoe) and the activity became less drudgery prone as the perceived exertion has been reduced from very severe (as in case of T1) to mild (as in case of T2.Thus drudgery is minimized.Women farmer showed their interest and willingness for adopting T2.
T_2: Use of twin wheel hoe for weeding onion	Output m*2/hr Average working heart rate (b/min) EER (b/m) Rate of perceived exertion (on 5 point scale) Pain in legs and upper arms) (on 5 point scale)	115 112 9.08 mild	

NUTRITIONAL SECURITY / FORTIFICATION

Problem definition : Low nutritional status/mal nutrition among farm women

Technology assessed : Supplementation of fortified wheat flour/ multigrain flour [wheat flour 75% +grain flour 20% + Barley flour 5%] for 180 days.

It has been found that majority of farm women have been suffering from iron deficiency and they have been complaining general health problem (fatigue back ache, head ache). KVK Baghpat conducted trial by assessment of effective supplementation of fortified wheat flour for improvement of nutritional status of farm women by providing / multigrain flour [wheat flour 75% +gram flour 20% + Barley flour 5%] for 180 days (T1) against consumption of 100% wheat flour (T2) as their staple diet. Gram and barley have been provided as input to the subjects for the period of **180 days**. Result revealed that the subjects (average value) were able to obtained in case of T2 (Calori, protein, fat, fibre, minerals like calcium, Phosphorus and iron as dipected in table) as comparision to T1. Similarly value of BMI and HB level were also found increased from (17.8 to 18.6) and (9.3 to 10.45) respectively in T2 as compare to T1.

Results:

Physical parameter

Technology	No. of trials	Quantity required/day	Duration (day)`	Height	Weight	BMI	% change in BMI	HB level	% change in HB level
T_1-use of wheat flour	03	350	180	158-6	44-3	17-8*	4%	9-32	18% less from minimum value**
T_2- use of fortified flour				158-6	46-66	18-6*		10-45	5-2% less from minimum value**

***Note**: The standard range of BMI Level lies between 18-24.

****Note**: The standard range of H.B. Level lies between 11-17.

Nutritional parameter

Technology	Requirement/day	Composition of flour	Obtained nutrients							
			Calory	Proteint (gm)	fat (gm)	Carbohydrates (gm)	fibre (gm)	Calcium (ml.gm)	Phosphorus (ml.gm)	Iron (ml.gm)
T_1-use of wheat flour	350 gm	Wheat 100%	**1091**	**38-50**	**5-35**	**224-49**	**39-76**	**71-40**	**385**	**14-66**

T_2- use of fortified flour	262-50 70-00 17-5	Wheat 75% Gram 20% Barley 5%	818-73 160-00 533-00	28-75 13-13 1-91	4-01 3-59 -23	168-36 32-70 10-76	29-82 17-65 2-73	53-55 105-00 5-01	288-75 218-40 31-15	15-69 4-25 -273
			1511-73	**43-86**	**7-83**	**211-80**	**50-20**	**208-56**	**538-00**	**20-21**

Source C. Gopalan *et al.*, ICMR 2018 : nutritive value of Indian food

II. FRONTLINE DEMONSTRATION

a. Follow-up for results of FLDs implemented during previous years

List of technologies demonstrated during previous year and popularized during 2021 and recommended for large scale adoption in the district

S.No	Crop/ Enterprise	Thematic Area*	Technology demonstrated	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
					No. of Vill.	No. of farmers	Area in ha
1	Wheat (*Rabi* 2021-22)	Variety evaluation	DBW-173	Training and demo.	05	12	4.0
2	Paddy (*Kharif* 2022)	Variety evaluation	PUSA 1718	Training and demo.	04	09	4.0
3	Tomato (*Rabi* 2021-22)	Variety evaluation	Pusa hybrid -2	Training and demo.	02	05	0.4
4	Radish (*Kharif* 2022)	Variety evaluation	Japani White	Training and demo.	06	9	0.9
5	Nutrigarden (Rabi. Zaid. Kharif)	Nutritional food security	Cultivation of vegetables round the year	Training, demo. and Ghosti	10	50	0.75

**** Thematic areas as given in Table 3.1 (A1 and A2)***

b. Details of FLDs implemented during **2022** (Information is to be furnished in the following **three tables** for **each category** i.e. **cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops**.)

Sl. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall
					Proposed	Actual	SC/ST	Others	Total	
OILSEED										
1	Mustard	Variety evaluation	Improved variety RH 725	Rabi 2022-23	20	20	11	41	52	-
2	Sesame	Variety evaluation	GJT-5	Kharif 2022	10	10	08	14	22	
PULSES										
1	Black Gram	Variety evaluation	Partap Urd-01	Zaid 2022	10	10	12	26	38	-

2	Black Gram	Variety evaluation	PU-31 & Mukundra urd 2	Kharif 2022	10	10	06	44	50	-
3	Field Pea	Variety evaluation	IPFD-12-2	Rabi 2022-23	20	20	10	36	46	
CEREALS										
1	Wheat	Variety evaluation	DBW-173	Rabi 2021-22	04	04	02	10	12	
2	Paddy	Variety evaluation	Pusa 1718	Kharif 2022	04	04	02	07	09	
3	Paddy	Pest Control	Control of Brown Plant Hopper	Kharif 2022	04	04	00	10	10	
Horticultural crops										
1	Tomato	Variety evaluation	Pusa hybrid -2	Rabi 2021-22	0.4	0.4	01	04	05	
2	Radish	Variety evaluation	Japani White	Kharif 2022	0.9	0.9	03	06	09	
3	Vegetables	Nutritional food security	Availability of vegetables around the year	Rabi & Zaid 2021-22	0.9	0.9	04	56	60	
Fodder Crops										
1	Sugar Grej (Jwar)	Fodder production	Production of green fodder	Kharif 2022	1.0	1.0	00	12	12	
2	Makkhan Grass	Fodder production	Production of green fodder	Rabi-2022-23	1.0	1.0	00	12	12	

Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P	K					
Mustard	Rabi 2021-22	Irrigated	Sandy loam	0.45	24	161	Paddy	15thOct. to 30th Nov. 21	15th Feb. 10th March 22		
Sesame	Kharif 2022	Irrigated	Sandy loam	0.23	26	118	Urd	15th July to 10th August 22	October 22		
Black Gram	Zaid 2022	Irrigated	Sandy loam	0.24	25	220	Mustard	March 2022	June 22		
Black Gram	Kharif 2022	Irrigated	Sandy loam	0.25	27	225	Jowar	10th to 30th July 22	October 22		
Wheat	Rabi 2021-22	Irrigated	Sandy loam	0.26	25	222	Paddy	25th Nov to 04th Dec 21	March 22		
Paddy	Kharif 2022	Irrigated	Sandy loam	0.28	26	226	Dhancha	15th to 20th July 22	October 22		
Tomato	Rabi 2021-22	Irrigated	Sandy loam	0.32	26	200	-	-	-		

Radish	Kharif 2022	Irrigated	Sandy loam	0.33	28	226	-	-	-		
Vegetable	Rabi & Zaid 2021-22 Kharif	Irrigated	Sandy loam	0.25	29	125	Vegetable	15^{th} to 25^{th} Sep 22 25^{th} Feb to 1^{st} March 22 June ---- 22	Multiple cutting of crop as per requirement		
Sugar Grej (Jwar)	Kharif 2022	Irrigated	Sandy loam	0.27	23	124	Wheat	March to Aug 22	Multiple cutting of crop as per requirement		
Makkhan Grass	Rabi-2022-23	Irrigated	Sandy loam	0.21	20	118	Oat/Bareem	Oct to Dec 22	Multiple cutting of crop as per requirement		

Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	More yield was found with thinning, after 25 days of mustard plants.
2	Line sowing of wheat crop was found 5-7% increased in yield and reduction in seed rate.

Farmers' reactions on specific technologies

S.No	Feed Back
1	The RH 749 variety oil quality is best for cooking
2	By growing kitchen garden at their backyard, availability of vegetable remain throughout the year.
3	The problem of wild animals namely blue bull, cow in field crop.

Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organized	Date	Number of participants	Remarks
1	Field days	09	April & Dec., 2022	190	-
2	Farmers Training	12	Jan. to Dec., 2022	240	-
3	Media coverage	07	Jan. to Dec., 2022	Mass	-
4	Training for Ext. functionaries	04	April to Dec., 2022	60	-

Performance of Frontline demonstrations

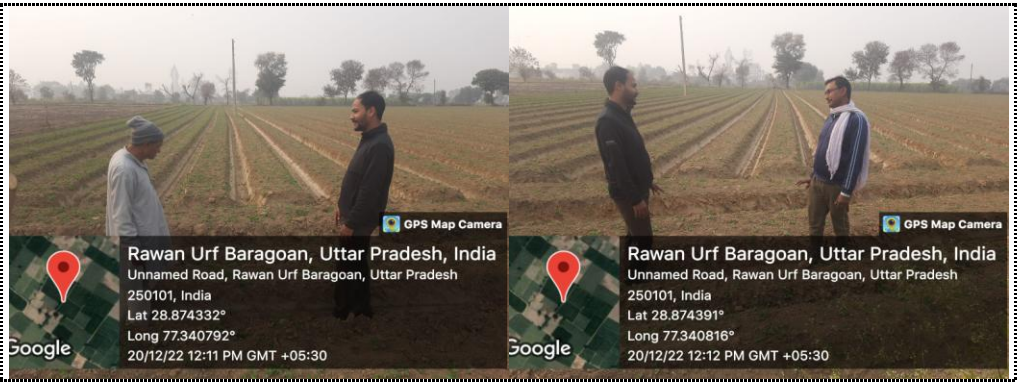
Frontline demonstrations on oilseed crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Groundnut																		
Sesamum																		
	Variety evaluation	Evaluation of improved variety of Sesamum *ie*. GJT-5	GJT-5	22	10	9.25	7.9	8.57	7.65	12.03	12550	48937.5	36387.5	1:2.8	12550	39150	26600	1:2
Mustard																		
	Variety evaluation	Evaluation of improved variety of Mustard *ie*. RH-725	RH-725	52	20			Result Awaited										

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST

Frontline demonstration on pulse crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Blackgram																		
	Variety evaluation	Evaluation of two improved varieties of Black gram *ie.* PU-31 & Mukundra urd 2	PU-31 & Mukundra urd 2	50	10	11.55	9.85	10.7	7.95	34.59	19000	45752	26752	1:1.40	18550	37800	19250	1:1.0
	Variety evaluation	Evaluation of improved variety of Black gram *ie.* Pratap Urd 1	Pratap Urd 1	38	10	11.33	9.78	10.73	8.25	36.8	19000	47250	28250	1:1.48	19000	37800	18800	1:0.9
Fieldpea																		

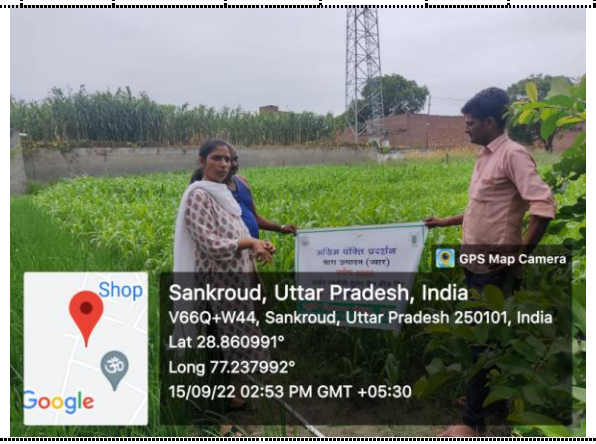
	Variety evaluation	Evaluation of improved variety Field pea *ie.* IPFD-12-2	IPFD-12-2	46	20			Result Awaited	

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST

FLD on Other crops

Category & Crop	Thematic Area	Name of the technology	No. of Farmers	Area (ha)	Yield (q/ha)				% Change in Yield	Other Parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demo			Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
					High	Low	Average												
Cereals																			
Paddy																			
	Variety evaluation	Evaluation of improved variety Pusa 1718	09	4	43.75	41.75	42.42	37.50	13.12	-	-	38500	161196	122696	1:4.1	37500	142500	105000	1:3.8
	Insect Pest Control	Evaluation of insecticide Pymetrozin against BPH	10	4	43.75	41.75	42.42	37.50	13.12	-	-	36000	165438	129438	1:4.59	34500	146250	111750	1:4.23
Wheat																			
	Variety evaluation	Evaluation of improved variety DBW 173	12	4	51.50	47.50	49.45	43.75	13.02			62628	129642	67014	1:2.07	60128	118156	58028	1:1.86
Vegetables																			
Tomato																			

	Variety evaluation	Evaluation of improved variety Pusa Hybrid-2	5	0.4	125	82.5	105.5	90.5	16.5	-	-	71500	263750	192250	1:5.26	71250	226250	155000	1:2.1
Radish																			
	Variety evaluation	Evaluation of improved variety Japani White	9	0.9	200	170	184.1	155.5	5.4	-	-	71500	368200	296700	1:4.1	70200	311000	240800	1:3.4
Fodder Crops																			
Sorghum (F)																			
	Variety evaluation	Evaluation of improved variety Sugargrez	12	1	842.18	758.14	810.16	587.75	37.8	-	-	13740	87500	73760	1:6.37	14740	68750	54010	1:4.66



* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST

FLD on Livestock -Nil

FLD on Other enterprises -Nil

FLD on Women Empowerment-Nil

FLD on Farm Implements and Machinery –Nil

FLD on Other Enterprise: Kitchen Gardening

Category and Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units	Yield (Kg)		% change in yield	Other parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demonstration	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Rabi, Zaid & Kharif Vegetable	Nutritional food security	Cultivation of vegetables around the year	20	60	540	102	429	Availability: 320 days	Availability : 179 days	2550	13500	10950	1:5.2	875	1550	1675	1:2.9

FLD on Demonstration details on crop hybrids *(Details of Hybrid FLDs implemented during* **2022***)-Nil;*

III. Training Programme

Farmers' Training including sponsored training programmes (on campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management										
Resource Conservation Technologies	2	38	0	38	2	0	2	40	0	40
Cropping Systems	2	37	0	37	3	0	3	40	0	40
Total	**4**	**75**	**0**	**75**	**5**	**0**	**5**	**80**	**0**	**80**
II Horticulture										
a) Vegetable Crops										
Production of low value and high valume crops	2	40	0	40	0	0	0	40	0	40
Off-season vegetables										
Nursery raising	1	22	0	22	1	0	1	23	0	23
Total (a)	**3**	**62**	**0**	**62**	**1**	**0**	**1**	**63**	**0**	**63**
g) Medicinal and Aromatic Plants										
Production and management technology	1	18	2	20	0	0	0	18	2	20
Total (g)	**1**	**18**	**2**	**20**	**0**	**0**	**0**	**18**	**2**	**20**
GT (a-g)	**4**	**80**	**2**	**82**	**1**	**0**	**1**	**81**	**2**	**83**
IV Livestock Production and Management										
Disease Management	1	10	5	15	2	3	5	12	8	20
Feed & fodder technology	1	20	0	20	0	0	0	20	0	20
Total	**2**	**30**	**5**	**35**	**2**	**3**	**5**	**32**	**8**	**40**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	1	0	19	19	0	3	3	0	22	22
Processing and cooking	1	0	17	17	0	3	3	0	20	20
Women and child care	1	0	20	20	0	0	0	0	20	20
Others (Food fortification)	1	0	20	20	0	0	0	0	20	20
Total	**4**	**0**	**76**	**76**	**0**	**6**	**6**	**0**	**82**	**82**
VI Agril. Engineering										
Installation and maintenance of micro irrigation systems	1	16	3	19	1	0	1	17	3	20
Others (PM Krishi Sinchai Yojna)	1	22	0	22	0	0	0	22	0	22
Total	**2**	**38**	**3**	**41**	**1**	**0**	**1**	**39**	**3**	**42**
VII Plant Protection										
Integrated Pest Management										
Integrated Disease Management	1	20	0	20	0	0	0	20	0	20
Bio-control of pests and diseases										
Production of bio control agents and bio pesticides										
Others (Seed treatment in sugarcane)	1	15	0	15	1	4	5	16	4	20
Total	**2**	**35**	**0**	**35**	**1**	**4**	**5**	**36**	**4**	**40**
GRAND TOTAL	**18**	**258**	**86**	**344**	**10**	**13**	**23**	**268**	**99**	**367**

Farmers' Training including sponsored training programmes (off campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management				0			0	0	0	0
Resource Conservation Technologies	1	19	0	19	1	0	1	20	0	20
Cropping Systems	6	111	0	111	13	0	13	124	0	124
Crop Diversification				0			0	0	0	0
Integrated Farming				0			0	0	0	0
Micro Irrigation/irrigation	3	62	0	62	3	0	3	65	0	65
Seed production				0			0	0	0	0
Nursery management				0			0	0	0	0
Integrated Crop Management	1	20	0	20	0	0	0	20	0	20
Soil & water conservatioin	1	23	0	23	1	0	1	24	0	24
Integrated nutrient management	1	19	0	19	2	0	2	21	0	21
Production of organic inputs				0			0	0	0	0

Others (Organic/Natural farming)	3	57	0	57	3	0	3	60	0	60
Total	**16**	**311**	**0**	**311**	**23**	**0**	**23**	**334**	**0**	**334**
II Horticulture										
a) Vegetable Crops										
Production of low value and high valume crops				0			0	0	0	0
Off-season vegetables				0			0	0	0	0
Nursery raising	3	79	0	79	2	0	2	81	0	81
Exotic vegetables				0			0	0	0	0
Export potential vegetables				0			0	0	0	0
Grading and standardization				0			0	0	0	0
Protective cultivation	1	20	0	20	0	0	0	20	0	20
Others (pl specify)				0			0	0	0	0
Total (a)	**4**	**99**	**0**	**99**	**2**	**0**	**2**	**101**	**0**	**101**
b) Fruits										
Training and Pruning				0			0	0	0	0
Layout and Management of Orchards	1	21	0	21	1	0	1	22	0	22
Cultivation of Fruit				0			0	0	0	0
Management of young plants/orchards				0			0	0	0	0
Rejuvenation of old orchards	3	64	0	64	0	0	0	64	0	64
Export potential fruits				0			0	0	0	0
Micro irrigation systems of orchards				0			0	0	0	0
Plant propagation techniques				0			0	0	0	0
Others (pl specify)				0			0	0	0	0
Total (b)	**4**	**85**	**0**	**85**	**1**	**0**	**1**	**86**	**0**	**86**
c) Ornamental Plants										
Nursery Management				0			0	0	0	0
Management of potted plants				0			0	0	0	0
Export potential of ornamental plants				0			0	0	0	0
Propagation techniques of Ornamental Plants	1	12	0	12	8	0	8	20	0	20
Others (pl specify)	1	20	0	20	0	0	0	20	0	20
Total (c)	**2**	**32**	**0**	**32**	**8**	**0**	**8**	**40**	**0**	**40**
g) Medicinal and Aromatic Plants										
Total (g)										
GT (a-g)	**10**	**216**	**0**	**216**	**11**	**0**	**11**	**227**	**0**	**227**
IV Livestock Production and Management										
Dairy Management	2	16	22	38	2	0	2	18	22	40
Poultry Management				0			0	0	0	0
Piggery Management				0			0	0	0	0
Rabbit Management				0			0	0	0	0
Animal Nutrition Management				0			0	0	0	0
Disease Management	4	54	25	79	1	0	1	55	25	80
Feed & fodder technology				0			0	0	0	0
Production of quality animal products				0			0	0	0	0
Others (pl specify)				0			0	0	0	0
Total	**6**	**70**	**47**	**117**	**3**	**0**	**3**	**73**	**47**	**120**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	1	0	23	23	0	0	0	0	23	23
Design and development of low/minimum cost diet	1	0	22	22	0	0	0	0	22	22
Designing and development for high nutrient efficiency diet	2	0	42	42	0	1	1	0	43	43
Minimization of nutrient loss in processing				0			0	0	0	0
Processing and cooking	1	0	21	21	0	0	0	0	21	21
Gender mainstreaming through SHGs	1	0	14	14	0	6	6	0	20	20
Storage loss minimization techniques	1	0	20	20	0	0	0	0	20	20
Value addition				0			0	0	0	0
Women empowerment				0			0	0	0	0
Location specific drudgery reduction technologies	1	0	19	19	0	1	1	0	20	20
Rural Crafts	1	0	20	20	0	0	0	0	20	20
Women and child care	3	0	58	58	0	2	2	0	60	60
Others (pl specify)	1	0	16	16	0	5	5	0	21	21
Total	**13**	**0**	**255**	**255**	**0**	**15**	**15**	**0**	**270**	**270**
VI Agril. Engineering										
Farm Machinary and its maintenance	1	20	0	20	0	0	0	20	0	20
Installation and maintenance of micro irrigation systems				0			0	0	0	0
Use of Plastics in farming practices				0			0	0	0	0

Production of small tools and implements				0			0	0	0	0
Repair and maintenance of farm machinery and implements	2	45	0	45	0	0	0	45	0	45
Small scale processing and value addition				0			0	0	0	0
Post Harvest Technology				0			0	0	0	0
Others (pl specify)				0			0	0	0	0
Total	**3**	**65**	**0**	**65**	**0**	**0**	**0**	**65**	**0**	**65**
VII Plant Protection										
Integrated Pest Management				0			0	0	0	0
Integrated Disease Management	2	23	13	36	1	3	4	24	16	40
Bio-control of pests and diseases	3	62	0	62	1	0	1	63	0	63
Production of bio control agents and bio pesticides				0			0	0	0	0
Others (pl specify)	1	20	0	20	0	0	0	20	0	20
Total	**6**	**105**	**13**	**118**	**2**	**3**	**5**	**107**	**16**	**123**
GRAND TOTAL	**54**	**767**	**315**	**1082**	**39**	**18**	**57**	**806**	**333**	**1139**

Farmers' Training including sponsored training programmes – CONSOLIDATED (On + Off campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management	0	0	0	0	0	0	0	0	0	0
Resource Conservation Technologies	3	57	0	57	3	0	3	60	0	60
Cropping Systems	8	148	0	148	16	0	16	164	0	164
Crop Diversification	0	0	0	0	0	0	0	0	0	0
Integrated Farming	0	0	0	0	0	0	0	0	0	0
Micro Irrigation/irrigation	3	62	0	62	3	0	3	65	0	65
Seed production	0	0	0	0	0	0	0	0	0	0
Nursery management	0	0	0	0	0	0	0	0	0	0
Integrated Crop Management	1	20	0	20	0	0	0	20	0	20
Soil & water conservatioin	1	23	0	23	1	0	1	24	0	24
Integrated nutrient management	1	19	0	19	2	0	2	21	0	21
Production of organic inputs	0	0	0	0	0	0	0	0	0	0
Others (Organic/Natural farming)	3	57	0	57	3	0	3	60	0	60
Total	**20**	**386**	**0**	**386**	**28**	**0**	**28**	**414**	**0**	**414**
II Horticulture										
a) Vegetable Crops										
Production of low value and high valume crops	2	40	0	40	0	0	0	40	0	40
Off-season vegetables	0	0	0	0	0	0	0	0	0	0
Nursery raising	4	101	0	101	3	0	3	104	0	104
Exotic vegetables	0	0	0	0	0	0	0	0	0	0
Export potential vegetables	0	0	0	0	0	0	0	0	0	0
Grading and standardization	0	0	0	0	0	0	0	0	0	0
Protective cultivation	1	20	0	20	0	0	0	20	0	20
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total (a)	**7**	**161**	**0**	**161**	**3**	**0**	**3**	**164**	**0**	**164**
b) Fruits										
Training and Pruning	0	0	0	0	0	0	0	0	0	0
Layout and Management of Orchards	1	21	0	21	1	0	1	22	0	22
Cultivation of Fruit	0	0	0	0	0	0	0	0	0	0
Management of young plants/orchards	0	0	0	0	0	0	0	0	0	0
Rejuvenation of old orchards	3	64	0	64	0	0	0	64	0	64
Export potential fruits	0	0	0	0	0	0	0	0	0	0
Micro irrigation systems of orchards	0	0	0	0	0	0	0	0	0	0
Plant propagation techniques	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total (b)	**4**	**85**	**0**	**85**	**1**	**0**	**1**	**86**	**0**	**86**
c) Ornamental Plants										
Nursery Management	0	0	0	0	0	0	0	0	0	0
Management of potted plants	0	0	0	0	0	0	0	0	0	0
Export potential of ornamental plants	0	0	0	0	0	0	0	0	0	0
Propagation techniques of Ornamental Plants	1	12	0	12	8	0	8	20	0	20
Others (pl specify)	1	20	0	20	0	0	0	20	0	20
Total (c)	**2**	**32**	**0**	**32**	**8**	**0**	**8**	**40**	**0**	**40**
g) Medicinal and Aromatic Plants										

Nursery management	0	0	0	0	0	0	0	0	0	0
Production and management technology	1	18	2	20	0	0	0	18	2	20
Post harvest technology and value addition	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total (g)	1	18	2	20	0	0	0	18	2	20
GT (a-g)	**14**	**296**	**2**	**298**	**12**	**0**	**12**	**308**	**2**	**310**
IV Livestock Production and Management										
Dairy Management	2	16	22	38	2	0	2	18	22	40
Poultry Management	0	0	0	0	0	0	0	0	0	0
Piggery Management	0	0	0	0	0	0	0	0	0	0
Rabbit Management	0	0	0	0	0	0	0	0	0	0
Animal Nutrition Management	0	0	0	0	0	0	0	0	0	0
Disease Management	5	64	30	94	3	3	6	67	33	100
Feed & fodder technology	1	20	0	20	0	0	0	20	0	20
Production of quality animal products	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	0	0	0	0	0	0	0	0	0	0
Total	**8**	**100**	**52**	**152**	**5**	**3**	**8**	**105**	**55**	**160**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	2	0	42	42	0	3	3	0	45	45
Design and development of low/minimum cost diet	1	0	22	22	0	0	0	0	22	22
Designing and development for high nutrient efficiency diet	2	0	42	42	0	1	1	0	43	43
Minimization of nutrient loss in processing	0	0	0	0	0	0	0	0	0	0
Processing and cooking	2	0	38	38	0	3	3	0	41	41
Gender mainstreaming through SHGs	1	0	14	14	0	6	6	0	20	20
Storage loss minimization techniques	1	0	20	20	0	0	0	0	20	20
Value addition	0	0	0	0	0	0	0	0	0	0
Women empowerment	0	0	0	0	0	0	0	0	0	0
Location specific drudgery reduction technologies	1	0	19	19	0	1	1	0	20	20
Rural Crafts	1	0	20	20	0	0	0	0	20	20
Women and child care	4	0	78	78	0	2	2	0	80	80
Others (pl specify)	2	0	36	36	0	5	5	0	41	41
Total	**17**	**0**	**331**	**331**	**0**	**21**	**21**	**0**	**352**	**352**
VI Agril. Engineering										
Farm Machinary and its maintenance	1	20	0	20	0	0	0	20	0	20
Installation and maintenance of micro irrigation systems	1	16	3	19	1	0	1	17	3	20
Use of Plastics in farming practices	0	0	0	0	0	0	0	0	0	0
Production of small tools and implements	0	0	0	0	0	0	0	0	0	0
Repair and maintenance of farm machinery and implements	2	45	0	45	0	0	0	45	0	45
Small scale processing and value addition	0	0	0	0	0	0	0	0	0	0
Post Harvest Technology	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	1	22	0	22	0	0	0	22	0	22
Total	**5**	**103**	**3**	**106**	**1**	**0**	**1**	**104**	**3**	**107**
VII Plant Protection										
Integrated Pest Management	0	0	0	0	0	0	0	0	0	0
Integrated Disease Management	3	43	13	56	1	3	4	44	16	60
Bio-control of pests and diseases	3	62	0	62	1	0	1	63	0	63
Production of bio control agents and bio pesticides	0	0	0	0	0	0	0	0	0	0
Others (pl specify)	2	35	0	35	1	4	5	36	4	40
Total	**8**	**140**	**13**	**153**	**3**	**7**	**10**	**143**	**20**	**163**
GRAND TOTAL	**72**	**1025**	**401**	**1426**	**49**	**31**	**80**	**1074**	**432**	**1506**

Training for Rural Youths including sponsored training programmes (On campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	1	13	0	13	0	0	0	13	0	13
Vermi-culture	1	10	0	10	0	0	0	10	0	10
Mushroom Production	1	6	5	11	0	0	0	6	5	11
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements	1	12	0	12	0	0	0	12	0	12
Value addition	1	0	10	10	0	0	0	0	10	10
Rural Crafts	1	0	9	9	0	1	1	0	10	10
Any other (Natural farming)	1	9	0	9	1	0	1	10	0	10
TOTAL	**7**	**50**	**24**	**74**	**1**	**1**	**2**	**51**	**25**	**76**

Training for Rural Youths including sponsored training programmes (Off campus)-NilTraining for Rural Youths including sponsored training programmes – CONSOLIDATED (On + Off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	1	13	0	13	0	0	0	13	0	13
Vermi-culture	1	10	0	10	0	0	0	10	0	10
Mushroom Production	1	6	5	11	0	0	0	6	5	11
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements	1	12	0	12	0	0	0	12	0	12
Value addition	1	0	10	10	0	0	0	0	10	10
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts	1	0	9	9	0	1	1	0	10	10
Any other (Natural farming)	1	9	0	9	1	0	1	10	0	10
TOTAL	**7**	**50**	**24**	**74**	**1**	**1**	**2**	**51**	**25**	**76**

Training programmes for Extension Personnel including sponsored training programmes (on campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	**1**	**10**	**0**	**10**	**5**	**0**	**5**	**15**	**0**	**15**
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards	**1**	**12**	**0**	**12**	**3**	**0**	**3**	**15**	**0**	**15**
Women and Child care	**1**	**0**	**13**	**13**	**0**	**2**	**2**	**0**	**15**	**15**
Low cost and nutrient efficient diet designing	**1**	**0**	**11**	**11**	**0**	**4**	**4**	**0**	**15**	**15**
Management in farm animals	**2**	**27**	**0**	**27**	**3**	**0**	**3**	**30**	**0**	**30**
TOTAL	**6**	**49**	**24**	**73**	**11**	**6**	**17**	**60**	**30**	**90**

Training programmes for Extension Personnel including sponsored training programmes (off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management	**2**	**23**	**3**	**26**	**4**	**0**	**4**	**27**	**3**	**30**
Care and maintenance of farm machinery and implements	**2**	**21**	**0**	**29**	**1**	**0**	**1**	**30**	**0**	**30**
Women and Child care	**1**	**0**	**14**	**14**	**0**	**1**	**1**	**0**	**15**	**15**
Any other (Food fortification)	**1**	**0**	**13**	**13**	**0**	**3**	**3**	**0**	**16**	**16**
TOTAL	**6**	**44**	**30**	**74**	**5**	**4**	**9**	**49**	**34**	**83**

Training programmes for Extension Personnel including sponsored training programmes – CONSOLIDATED (On + Off campus)

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	1	10	0	10	5	0	5	15	0	15
Integrated Pest Management	2	23	3	26	4	0	4	27	3	30
Integrated Nutrient management	0	0	0	0	0	0	0	0	0	0
Rejuvenation of old orchards	1	12	0	12	3	0	3	15	0	15
Protected cultivation technology	0	0	0	0	0	0	0	0	0	0
Production and use of organic inputs	0	0	0	0	0	0	0	0	0	0
Care and maintenance of farm machinery and implements	2	21	0	21	1	0	1	22	0	22
Gender mainstreaming through SHGs	0	0	0	0	0	0	0	0	0	0
Formation and Management of SHGs	0	0	0	0	0	0	0	0	0	0
Women and Child care	2	0	27	27	0	3	3	0	30	30
Low cost and nutrient efficient diet designing	1	0	11	11	0	4	4	0	15	15
Group Dynamics and farmers organization	0	0	0	0	0	0	0	0	0	0
Information networking among farmers	0	0	0	0	0	0	0	0	0	0
Capacity building for ICT application	0	0	0	0	0	0	0	0	0	0
Management in farm animals	2	27	0	27	3	0	3	30	0	30
Livestock feed and fodder production	0	0	0	0	0	0	0	0	0	0
Household food security	0	0	0	0	0	0	0	0	0	0
Any other (Food fortification)	1	0	13	13	0	3	3	0	16	16
TOTAL	**12**	**93**	**54**	**147**	**16**	**10**	**26**	**109**	**64**	**173**

Table. Sponsored training programmes-Nil

Name of sponsoring agencies involved-Nil

IV. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	162	1863	36	1899
Diagnostic visits	32	64	0	64
Field Day	2	40	0	40
Group discussions	5	683	12	695
Kisan Ghosthi	15	1310	35	1345
Film Show	13	-	-	0
Self -help groups	15	170		170
Kisan Mela	8	2845	61	2906
Exhibition	-	-	-	0
Scientists' visit to farmers field	37	59		59
Plant/animal health camps	1	63	21	84
Farm Science Club	-	-	-	0
Ex-trainees Sammelan	-	-	-	0
Farmers' seminar/workshop	1	342	-	342
Method Demonstrations	11	62	9	71
Celebration of important days	5	259	-	259
Special day celebration	10	660	-	660
Exposure visits	-	-	-	0
Others (pl. specify)	684	1991	129	2120
Total	**1001**	**10411**	**303**	**10714**

Details of other extension programmes

Particulars	Number
Electronic Media (CD./DVD)	-
Extension Literature	08
News paper coverage	129
Popular articles	01
Radio Talks	-
TV Talks	05
Animal health amps (Number of animals treated)	01
Others (pl. specify)	-
Total	**144**

Name of KVK	Message Type	Type of Messages						
		Crop	Livestock	Weather	Marke-ting	Aware-ness	Other enterprise	Total
	Text only	210	-	103	-	26	-	339
	Voice only	-	-	-	-	-	-	-
	Voice & Text both	-	-	-	-	-	-	-
	Total Messages	**210**	**-**	**103**	**-**	**26**	**-**	**339**
	Total farmers Benefitted	**6196**	**-**	**2126**	**-**	**1547**	**-**	**9842**

V. DETAILS OF TECHNOLOGY WEEK CELEBRATIONS-Nil

VI. PRODUCTION OF SEED/PLANTING MATERIAL AND BIO-PRODUCTS

Production of seeds by the KVKs

Crop	Name of the crop	Name of the variety	Name of the hybrid	Quantity of seed (q)	Value (Rs)	Number of farmers
Cereals	Wheat	HD 3226	FS 1	219.00	534588.00	Supply to NSC
	Paddy	PB 1718	FS 1	111.00	-	Supply to NSC
Oilseeds	Mustard	Pant Sweta	FS 1	17.9	59984.00	Supply to NSC
Total				**347.9**	**594572.00**	

Production of planting materials by the KVKs-Nil

Production of Bio-Products-Nil

Table: Production of livestock materials-Nil

VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS

Samples	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
Soil	**279**	**279**	**21**	**7190**
Total	**279**	**279**	**21**	**7190**

VIII. SCIENTIFIC ADVISORY COMMITTEE

Name of KVK	Number of SACs conducted	Date of SAC
Baghpat	01	23.11.2022

IX. NEWSLETTER/MAGAZINE

Name of News letter/Magazine	No. of Copies printed for distribution

X. PUBLICATIONS

Category	Number
Books	
Technical bulletins	
Research Paper	02
Lead Papers	
Book Chapters	01
Popular Articles	01
Newsletters	
Technical reports	15
Others (Folder)	5

XI. DETAILS ON RAIN WATER HARVESTING STRUCTURE AND MICRO-IRRIGATION SYSTEM

Activities conducted				
No. of Training programmes	No. of Demonstration s	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)
2	5	0	35	4

XII. INTERVENTIONS ON DISASTER MANAGEMENT/UNSEASONAL RAINFALL/HAILSTORM/COLD WAVES ETC

Introduction of alternate crops/varieties-Nil
Major area coverage under alternate crops/varieties-Nil
Farmers-scientists interaction on livestock management-Nil

Animal health camps organised

Number of camps	No.of animals	No.of farmers
01	**257**	**63**
Total	**257**	**63**

Seed distribution in drought hit states

Crops	Quantity (qtl)	Coverage of area (ha)	Number of farmers
Mustard	**40 Kg**	**10**	**23**
Total	**40 Kg**	**10**	**23**

Large scale adoption of resource conservation technologies-Nil
Awareness campaign-Nil

XIII. DETAILS ON HRD ACTIVITIES

A. HRD activities organized in identified areas for KVK staff by the Directorate of Extension

Name of the SAU	Title of the training programmes	No of programmes	No. of Participants	No. of KVKs involved
SVPUAT, Meerut	Orientation Training Program	02	76	20
Total		02	76	20

B. HRD activities organized in identified areas for KVK staff by Zonal Project Directorate -Nil

XIV. CASE STUDIES

Name of the KVK-Baghpat

TITLE- improved variety seed & technology for organic Jaggery etc.

Introduction –
Baghpat Plan, Implement and Support : KVK Baghpat supported Sh. Vijay Singh from Sunhera giving him sound knowledge of new technology used in organic farming. KVK Baghpat Scientist tries to make them aware regarding scientific cultivation of organic sugarcane. That starts from land preparation to harvesting. This KVK has encouraged the farmer for soil testing and on the basis of that farmer was advised for balanced dose of bio fertilizer with high yielding varieties.
Impact:-
The farmer used faced problems like wild animals, seed, marketing etc. With interventions like improved variety seed & technology with scale of organic Jaggery etc., he is getting gross annual income of Rs 175000.00 before KVK interventions after using Improved variety he is now getting gross income per year of Rs 398465.00
KVK intervention - Mr. Vijay Singh from Sunhera adopted suggestion of KVK's scientist for his 3.5 acre land. The economical gain in terms of per unit expenditure gross income, net return and BCR are recorded.
Output
Before intervention farmer net income was 124810.00 and after intervention it increased and become 318465.00.
Outcome- Mr. Vijay Singh is very happy with this improved production and management technology and set forth example for other farmers of the district.
Impact
Mr. Vijay Singh is becoming one of the progressive and learned farmers for others with regards to popularization of Organic Sugarcane crop with intercropping. This technology helps him for livelihood, empowerment and make him enthusiastic regards oilseed production. He is one of the progressive farmer after a becoming a part of KVK activities and get their effectiveness for his own development.

farmers with KVK's scientist

Sugarcane Crop Improved variety

XIV. AGRICULTURAL TECHNOLOGY INFORMATION CENTRE

A. Details on ATICs

S. No	Name of the ATIC	Name of the Host Institute	Name of the ATIC Manager
1	Natural farming	SVPUA&T, Meerut	Dr. Sandeep Chaudhary

B. Details on Farmer's visit

S. No	Purpose of visit	Number of farmer's visited
01	Technology Information	847
02	Technology Products	175
03	Others if any pl. specify	

C. Facilities in the ATIC which are in operation

S. No	Particulars	Availability (Please √ mark)	Number of ATICs
01	Reception counter	√	**01**
02	Exhibition / technology museum	√	
03	Touch screen Kiosk		
04	Cafeteria		
05	Sales counter		
06	Farmer's feedback register	√	
07	Others if any (please specify)		

D. Technology information provided

D.1. Details on technology information

S. No	Information category	Number of ATICs	Total number of farmers benefitted	Category of information						
				Varieties / hybrids	Pest management	Disease management	Agro-techniques	Soil and water conservation	Post Harvest technology and Value addition	Animal Husbandry and fisheries
01	Kisan Call Centre / other Phone calls from farmers		9110	Yes	Yes	Yes	Yes	Yes	Yes	Yes
02	Video shows		06							
03	Letters received		05							
04	Letters replied		05							
05	Training to farmers / technocrats / students		21	02	02	02	01	07	03	04

D.2 . Publications (Print & Electronic media)-Nil

E. Technology Products provided -Nil

F. Technology services provided-Nil

XV. TECHNOLOGICAL BACKSTOPPING BY DIRECTORATES OF EXTENSION

States covered:

Number of Directorates of Extension:

A. Details on Directors of Extension

S. No	Name of the SAU	Name of the Director of Extension	Number of KVKs for which technological backstopping is provided					
			SAU/CAU	DU	ICAR	NGO	SDA	Others (pl. specify)
1								

B. Workshops / meetings organized-Nil

C. Visits made by DE / Officials in the Directorate to KVKs

S. No.	Particulars	Number of visits
01	SAC meetings	01
02	Field days	02
03	Workshops / seminars	
04	Technology week	
05	Training programmes	01
06	Others pl. specify	

D. Overseeing of KVKs activities_Nil

E. Publication on Technology inventory -Nil

F. Technological Products provided to KVKs-Nil

XVI Achievement of Special programmes

1) **Achievement of skill development training funded by DAC&FW-Nil**

2) **Achievements under Crop Residue Management (CRM) Project by KVKs-Nil**

3) **Achievement of TSP (Tribal Sub Plan)-Nil**

4) **Achievement of KSHAMTA (Knowledge Systems And Home Based Agricultural Management in Tribal Areas) -Nil**

5) **Achievements of SCSP KVKs-Nil**

6) **Achievement under IFS KVKs-Nil**

7) **Achievements under Mera Gaon Mera Gaurav (MGMG) project-Nil**

8) **Achievements of Farmers FIRST programme-Nil**

9) **Activities performed under NARI programme**

Table-9.1: Details of activities performed under NARI programme

Nutritional Garden		Bio-fortified crops		Value addition		Training programmes		Extension activities	
No of Established	No. of farmers/ beneficiaries	No of activity	No. of farmers/ beneficiaries	No of activity	No. of farmers/ beneficiaries	No of activity	No. of farmers/ beneficiaries	No of activity	No. of farmers/ beneficiaries
30	10	04	378	02	50	09	291	04	450

Table-9.2: Details of Bio-Fortified Crops used for nutritional security under NARI programme

Category	Bio Fortified Crop	Variety	Area (ha)	No of Beneficiaries
Cereal	Maize	-	-	-
	Rice	-	-	-
	Wheat	-	-	-
		-	-	-
Millet	Finger millet	-	-	-
	Pearlmillet	-	-	-
	Sorghum	-	-	-
		-	-	-
Oilseed	Groundnut	-	-	-
	Mustard	-	-	-
		-	-	-
Pulses	Lentil	-	-	-
	Lathyras	-	-	-
		-	-	-
Vegetable	Cauliflower	-	-	-
		-	-	-
		-	-	-
Tuber	Sweet Potato	-	-	-
		-	-	-
Total		-	-	-

10) Achievements of Soil, water, plant and manure samples analyzed by KVKs and soil health cards issued

Sample	No. of Samples in lakh	No. of Farmers in lakh	No. of Villages in lakh	Amount realized (Rs. in lakhs)	No. of Soil Health Cards issued (lakhs)
Soil	0.00279	0.00279	0.000021	0.0719	
Water					
Plant					
Manure					0.00279
Total	0.00279	0.00279	0.000021	0.0719	0.00279

11) Achievements under NICRA Project

NRM		Crop production		Livestock & Fisheries			Capacity Building		Extension Activities	
Demo	Area (ha)	Demo	Area (ha)	Demo	Area (ha)	No. of animals	No of Courses	Farmers	No. of programmes	Farmers
6	135	6	162	1	-	257	12	241	4	167

12) Achievements under ARYA Project-Nil

13) Achievements under Rainwater Harvesting Structures

Sr. No.	Activities	Number
1	Training programmes	16
2	Demonstration	13
3	Plant materials produced	-
4	Visit by farmers	-
5	Visit by officials	02

14) Achievements under Pulses Seed Hub programme-Nil

15) NEMA (New Extension Methodologies and Approaches) -Nil

16) Achievements under CSISA (Cereal System Initiative for South Asia) project-Nil

17) Achievements under NIFTD (National Initiatives for fodder technology demonstrations) –Nil

18) Achievements under Swachhata Abhiyan Mission

S.No.	Items	No. of Programmes	No. of persons paticipated
1	Toilet maintenance		
2	Road, drain cleaning		
3	Garbage disposal		
4	Door to door awareness		
5	Awareness campaign	51	832
6	Nookkad Drama		
7	School Drama		
8	School rally		
9	Writing paining slogans		
10	Composting		
11	Other		

19) Achievements under Aspirational District Scheme-Nil

XVI. Achivements under Natural Farming

Name of KVK	Number of awareness / training programmes organized	No. of Participants	Number of demonstrations organized at farms of KVKs	Number of farmers visited demonstration plots
Baghpat	4	85	2	85

XVII Awards-Nil

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