KRISHI VIGYAN KENDRA

Saraiya, Muzaffarpur, Bihar

Quinquennial Review Team Report

Period of 2011-12 to 2018-19

Presented by :-

Dr. Anupma Kumari

Senior Scientist and Head

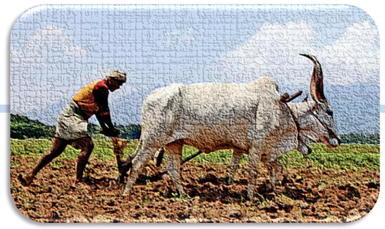
Dr. Rajendra Prasad Central Agricultural University, PUSA, Bihar

Staff Position of KVK, Saraiya Contd...

Sanctioned post	Name	Qualification	Basic Pay	Gross Salary per Month	Total Amount per Year
Sr. Scientist & Head	Dr. Anupma Kumari	*PhD Agronomy*	104100	132876	1753956
SMS Home Science	Dr. Savita Kumari	*PhD Human Nutrition*	101200	125472	1656230
SMS Soil Science	Dr. Kamlesh Kumar Singh	*PhD Soil Science*	82200	111878	1476790
SMS Plant Protection	Sri H. C. Chaudhary	*MSc. Plant Pathology*	73000	99808	1317466
SMS Fisheries	Ms. Shobha Rawat	*MFSc. Fishries Resource Management*	56100	77635	1024782
SMS Agriculture Engg.	Er. Tarun Kumar	*M. Tech Soil and Water Engineering, RS and GIS*	56100	77635	1024782
SMS 6	Vacant				

Staff Position of KVK, Saraiya

Sanctioned post	Name	Qualification	Basic Pay	Gross Salary per Month	Total Amount per Year
Computer Programmer	Vacant				
Farm Manager	Mr. Anupam Adarsh	*PhD Vegetable Science*	36500	49904	658732
Lab Assistant	Mr. Indrajeet Kumar Mandal	*MSc Soil Science*	36500	49904	658732
Accountant/Assistant	Smt Kumari Pratibha	*MA Economics*	36500	49904	658732
Stenographer	Mr. Rama Ranjan	*BSc Chemistry*	26300	36522	482090
Driver 1 (Jeep)	Sri Ram Ekwal Singh		41000	51216	676051
Driver 2 (Tractor)	Vacant				
Supporting Staff 1	Sri Ram Sakal Rai		36400	45696	603187
Supporting Staff 2	Vacant				



KVK, Saraiya, Muzaffarpur

Farming Situation

- Cereal based farming system (Rice/Wheat/ Maize)
- Pulses based farming system (Black gram/Pigeon pea/ Green gram/ Chick pea)
- Oilseed based farming system (Sesamum / Mustard/Sunflower/Linseed)
- Agri –Horti. Based farming system
- Cereal-Livestock Rearing
- Bee-keeping
- Mushroom cultivation
- Zero-tillage
- Vermi-composting
- Fisheries

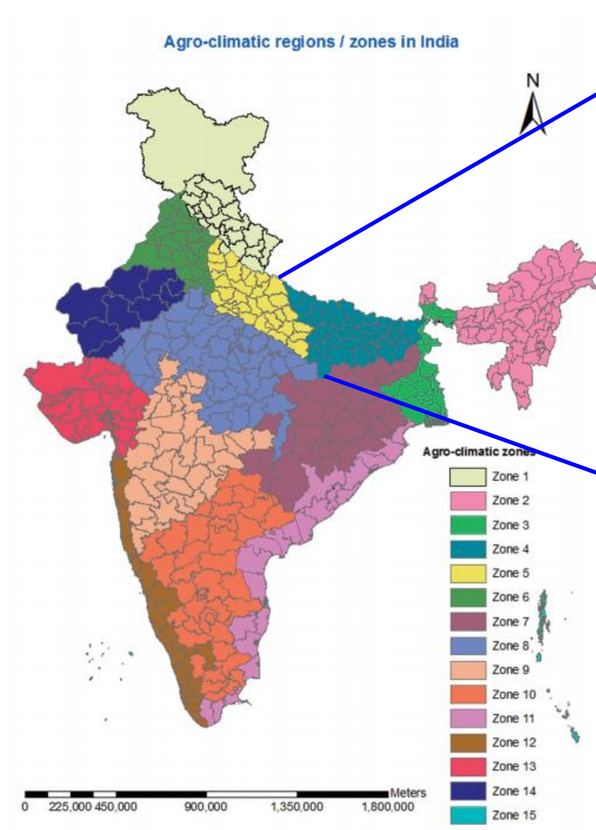
Major Crops

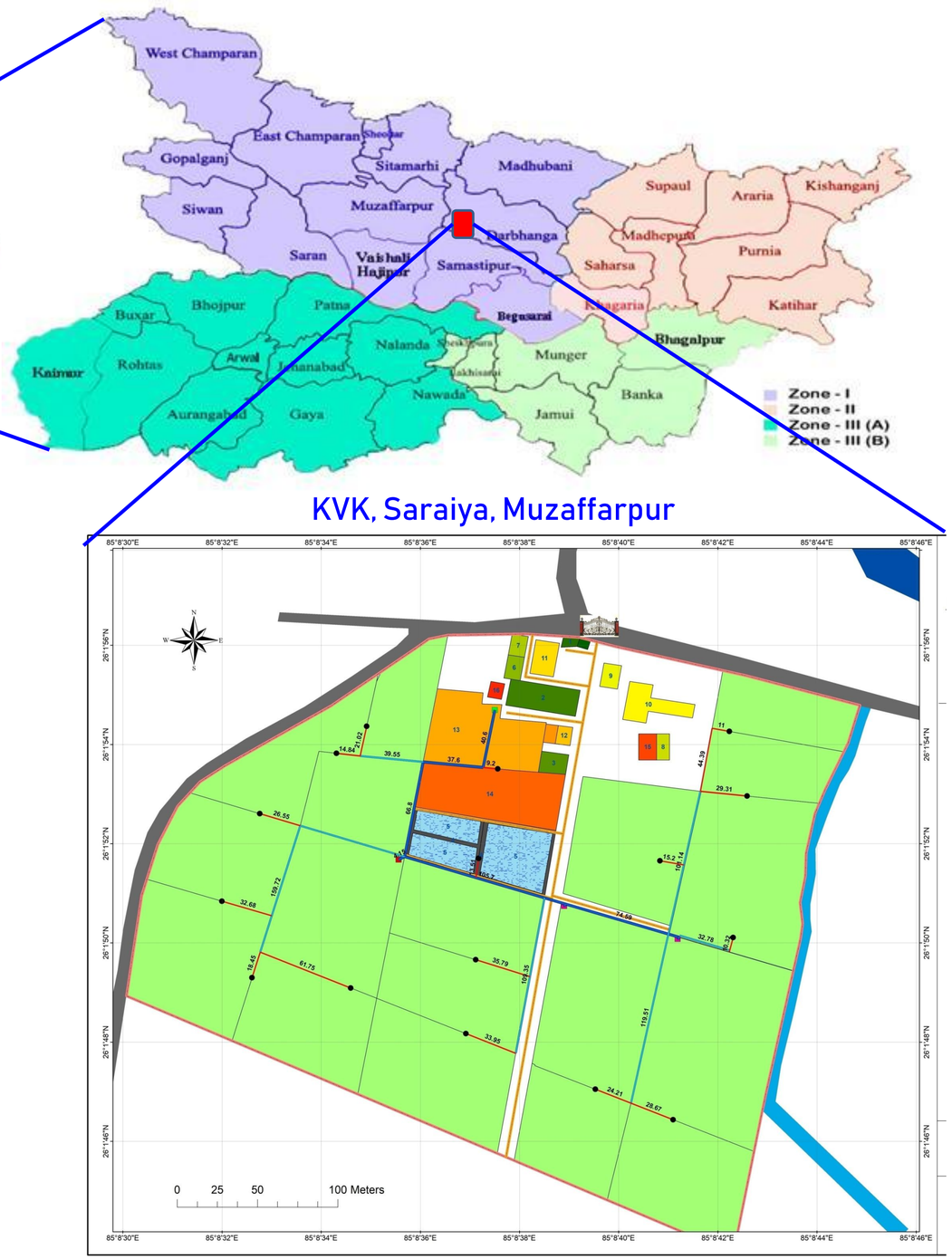
- Rice
- Wheat
- Maize
- Gram
- Lentil
- Pea
- Moong
- Arhar
- Rapseed and Mustard
- Linseed
- Sunflower oil
- Sesamum





Agro-ecological Features





KVK, Saraiya, Muzaffarpur

Study Area	Muzaffarpur District
Geographical area (Sq Km)	3172 Sq. km.
Agro-climatic Zone	Agro- climatic zone -I (Northern West)
Number of Tehsil/ Block	16
Major Drainages	Gandak, Burhi Gandak
Elevation	320 m. to 881 m.
Average Rainfall	1046 mm
Net irrigated area	1121.68
Depth range (m)	55.5 to 121.85
Discharge (litres per second)	14 to 26 (lps)
Temperature Maximum Minimum	36.6 (^{0}C) 7.7 (^{0}C)

Infrastructural facilities available at KVK

Krishi Vigyan Kendra, Saraiya
District-Muzaffarpur, Bihar

Legend

- 1 Azoola Unit
- 2 Administrative building
- 3 Agro meteorological observatory
- 4 Bund
- 6 Garage room
- 7 Genter Room
- 8 Godown
- 9 Greenhouse
- 10 Kisan Ghar
- 11 Lawn/ Garden
- 12 Masroom Uint
- 13 Micro Irrigation Unit
- 17 Poly Hous
- 5 Pond
- 14 Proposed Micro Irrigation Unit
- 15 Thressing Floor
- 16 Vermicompost Unit
- Plot
- KVK_Boundary
- Existing Borewell (Need to Maintenance)
- Existing Borewell (diesel engine)
- Existing tube well
- Gate
- Outlet point
- HDPE 110 MM
- HDPE 75 MM
- HDPE 90 MM
- Farm Road

Krishi Vigyan Kendra, Saraiya

Krishi Vigyan Kendra, Reva road At+ PO. Saraiya Dist. Muzaffarpur

Dr. Rajendra Prasad Central Agricultural University Pusa, Samastipur - 848 125, Bihar, India

Orientation N

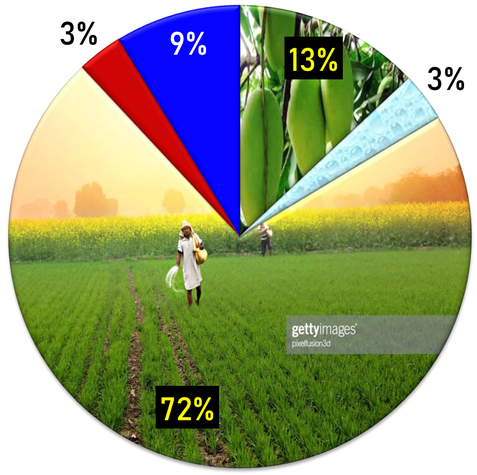
Coordinate System: GCS WGS 1984
Datum: WGS 1984
Units: Degree

Scale: Date: 16-01-2019

Drawn By: Er. TARUN KUMAR

Mobile No.: +91-7725021495

Land use of KVK (10 ha.)



- Buildings
- Demonstration Units
- Crop cultivation
- Orchard/Agro-forestry
- Road and channels

Soil Fertility Map of KVK, Saraiya

Soil Fertility Map of Krishi Vigyan Kendra, Saraiya District-Muzaffarpur, Bihar

Element		Nutrients' Range		
		Low	Medium	High
Nitrogen (N)	(kg/ha.)	<250	250-500	>500
Phosphorous (P)	(kg/ha.)	<25	25-50	>50
Potassium (K)	(kg/ha.)	<125	125-300	>300
Organic carbon (OC)	(%)	< 0.5	(0.5 - 0.75	> 0.75
Iron (Fe)	(ppm)	< 7	7 - 12	> 12
Manganese (Mn)	(ppm)	< 3	3 - 5	> 5
Zinc (Zn)	(ppm)	< 0.78	0.78 - 1.20	> 1.20
Copper (Cu)	(ppm)	< 0.60	0.60 - 1.20	> 1.20

Parameters	Range		
	Low	Normal	High
Electrical conductivity	<4	<4	> 4 (Saline)
pH	> 8.5 (Alkaline Soil)	6.5 - 7.5 (Normal)	7.5 - 8.5 (Saline Soil)

Legend

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- Plot
- KVK_Boundary
- Farm Road

Soil Nutrient's Class

- Low
- Medium
- High
- Very High

* Green colour of background shows medium range of rest parameters

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Drawn By:
Er. TARUN KUMAR
SMS, (Agri. Engineering)

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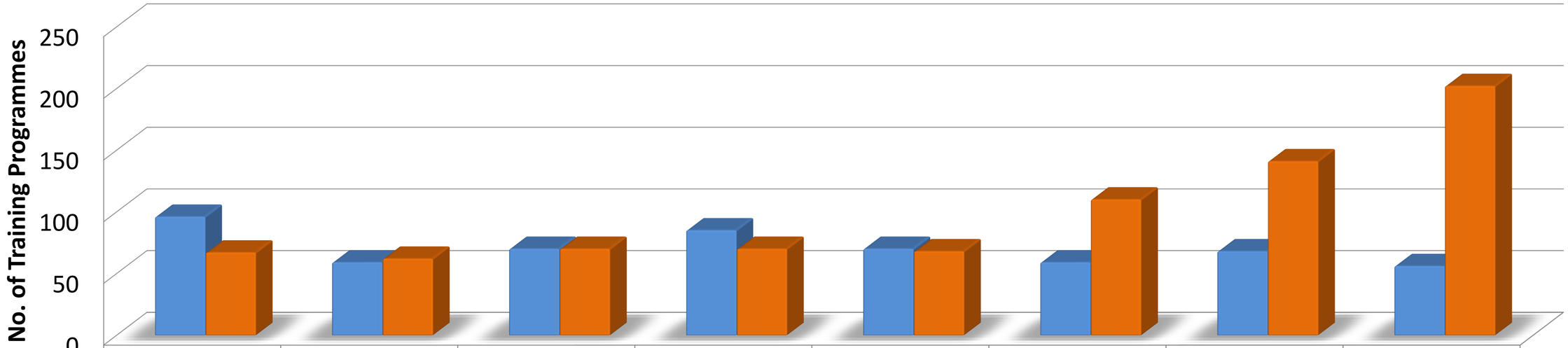
Details of Training Programmes Conducted

S. N	Training Programmers	TOTAL		
		T	C	P
1.	Farmers / farm women	563	790	27629
2.	Extension functionaries	135	105	4549
3.	Rural youths	203	206	4367

T = Target, C = Course, P = Participate

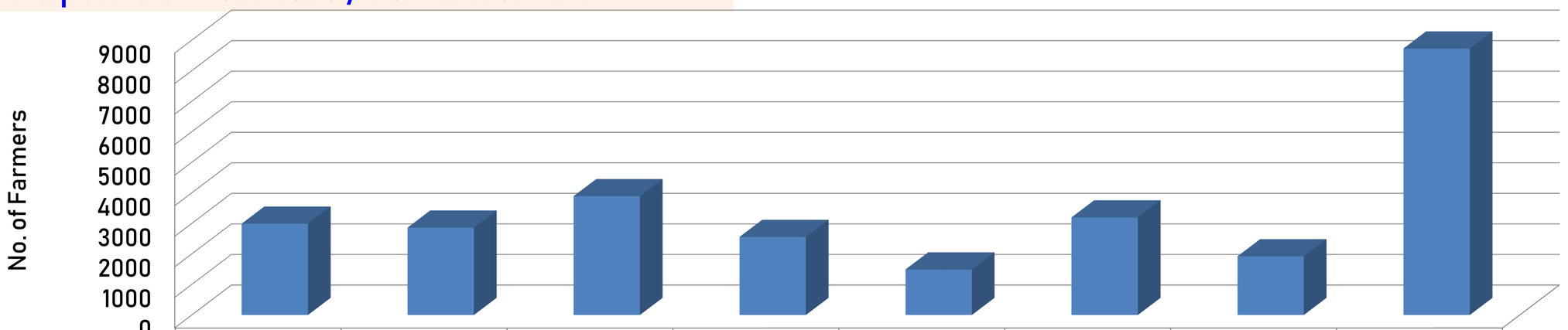
Farmers / Farm Women Trainings

Training programmes conducted for Farmers / Farm Women (last 8 years)



	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
T	96	59	70	85	70	59	68	56
C	67	62	70	70	68	110	141	202

Year-wise participants of Farmers / Farm Women

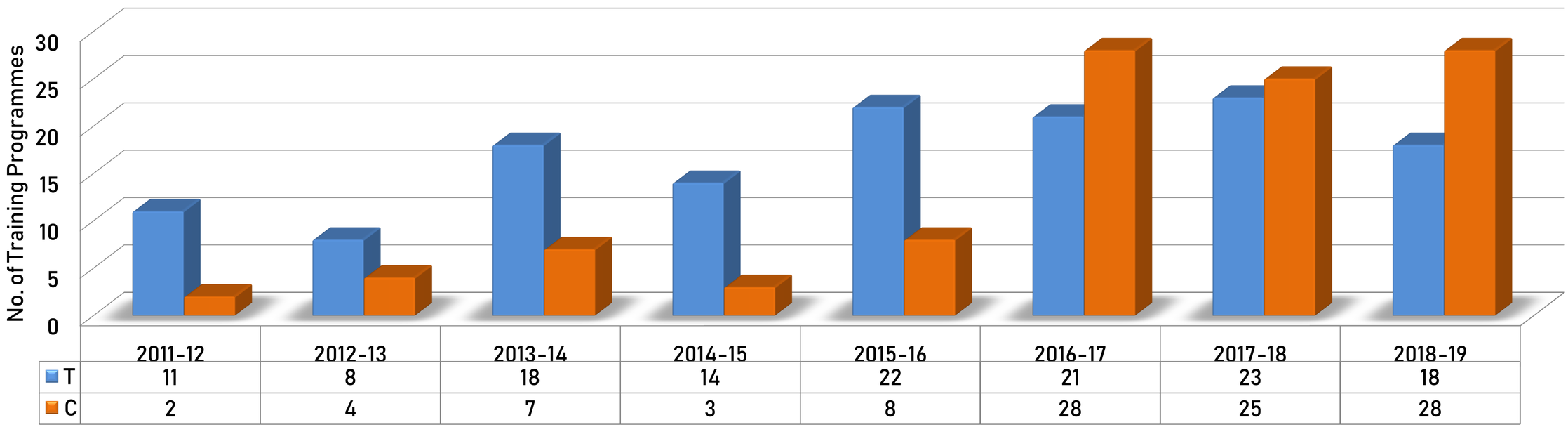


	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Participants	2989	2861	3890	2556	1490	3196	1921	8726

Average participants : 3454 per year

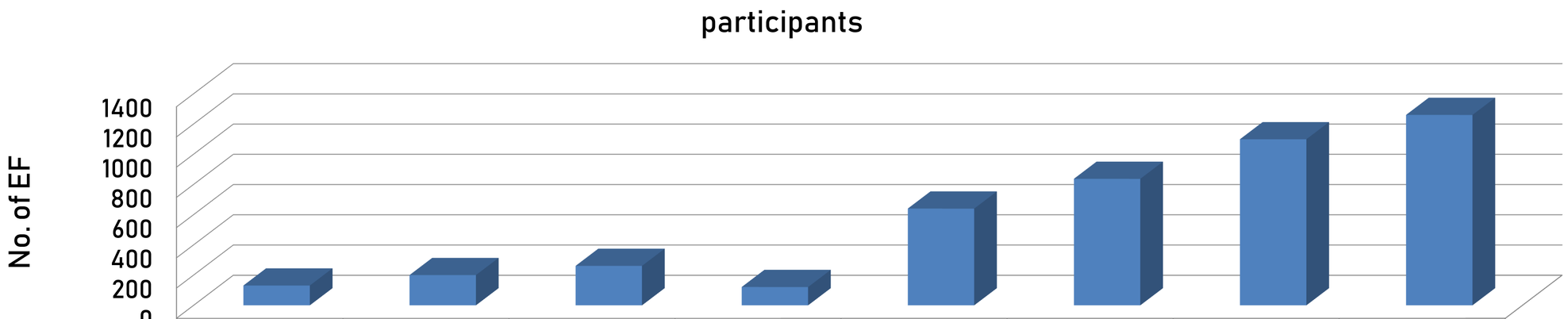
Extension functionaries Training Programme

Training programme conducted for extension functionaries



	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
T	11	8	18	14	22	21	23	18
C	2	4	7	3	8	28	25	28

Year-wise participants of extension functionaries

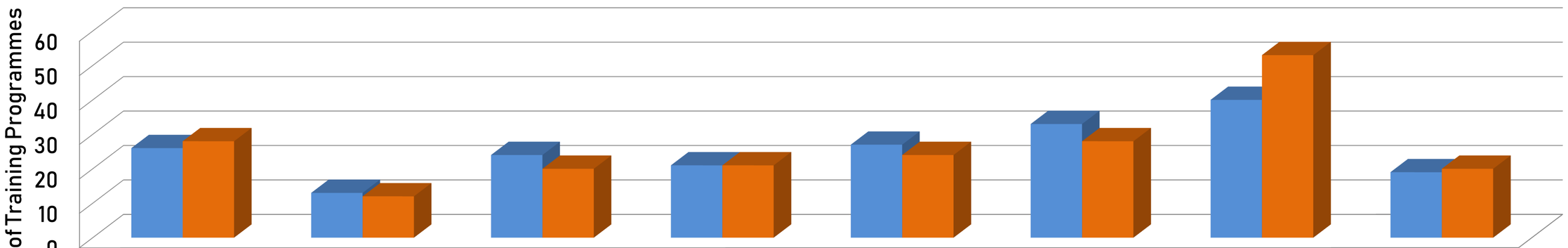


	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
participants	131	200	261	121	640	837	1099	1260

Average participants : 569 per year

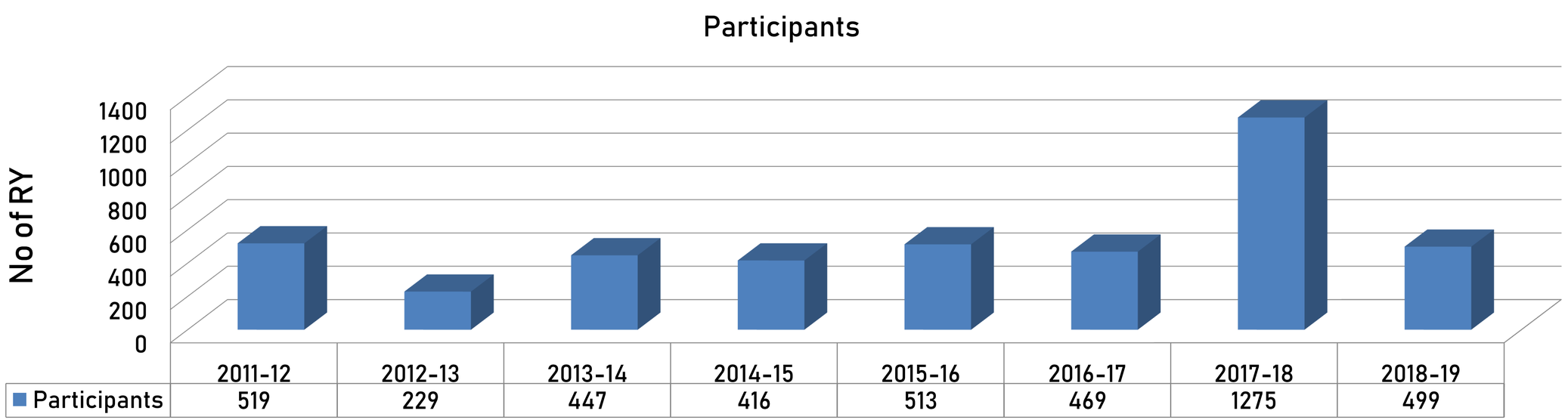
Rural Youth Training Programme

Training programmers conducted for rural youths (last 8 years)



	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
T	26	13	24	21	27	33	40	19
C	28	12	20	21	24	28	53	20

Year-wise participants of rural youths



	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Participants	519	229	447	416	513	469	1275	499

Average participants : 546 per year

Summary of FLD achievement

Year	No. Of Crop in rabi season	No. Of Crop in Kharif season	Enterprise	No. of Farmers
2011-12	2	3	-	69
2012-13	4	3	-	62
2013-14	9	4	-	241
2014-15	9	1	-	269
2015-16	8	4	1	506
2016-17	5	6	-	430
2017-18	8	7	1	467
2018-19	5	1	3	290

Front-line demonstration in Rabi season

Year wise	Crops	No. of farmer	Area (ha)	Avg. yield (q/ha)	Variety	Increase	
						C (Rs.)	R (Rs.)
I (2011-12)	Tori	30	11	10	Rauts -17	725	8000
	Fodder crops	7	1	704	HYV	980	13740
II (2012-13)	Toria	10	2	10.32	Pusa tarak	500	7420
	Green gram	11	3.5	13.63	PusaVisal	400	33200
	Wheat	9	3	66.1	HD-2824, K-307	2000	6960
III (2013-14)	Toria	26	3.04	8.5	RAUTS-17	400	3500
	Green Gram	52	14	19	SML-668, Rhizobium& PSB	1300	20300
	Lentil	10	3	8.5	HUL57	450	3900
	Wheat	48	12.7	96.6	HD-2824, K-307, Azotobactor& PSB	4500	16920
	Maize	10	4	54.5	Shaktiman-3	880	4500
	Rai	26	3	12.5	R.suflam	500	13300
	Toria	78	25	20.5	Sulphur 80%, JE-28	1505	13300
IV (2014-15)	Green gram	14	5	9.75	SML-668	500	7875
	Wheat	83	24	164	PBW-502, HD-2824,HD-2733,Azotobactor+ PSB,DBW-14	8500	32526
	Mustard	76	40	16.2	INM and IPM	1800	11250
	Lentil	44	24	14.23	Seed Pesticides, M.nutrient	1025	14160
IV (2014-15)	Field pea	112	30	11.22	Seed Pesticides, Micro .nutrients	915	9150
	Chick pea	46	12	32.45	GNG-1581+INM, IPM	1900	39270
	mustard	76	40	17.7	R.suflam	1800	11250
	Lentil	44	24	14.23	L-4594	1025	14160
	Field pea	112	30	11.22	IPFDI-10	905	9150
	Sorghum green fodder	10	2	530	High yielding variety	1000	19650
	Cauliflower	50	5	9306	Trichoderma viridi	50	15432

Front-line demonstration in Rabi season

Year wise	Crops	No. of farmer	Area (ha)	Avg. yield (q/ha)	Variety	Increase	
						C (Rs.)	R (Rs.)
VI 2016-17	Linseed	97	20	8.99	Azad alsi-1 INM & IPM	1800	11300
	Lentil	97	40	14.5	HUL-57 +INM&IPM	5250	31250
	Litchi	50	20	200	Pheromone Trap		
	Cauliflower	50	10	350	Trichoderma viridi	2000	46800
	Marigold	10	3	80	HYV	1000	12000
VII 2017-18	Potato	17	1.5	427.01	kufri Ashoka, K. Sinduri	4000	36500
	Lentil	25	10	15.57	HUL-57 +INM&IPM	1900	20018
	Rapseed & mustard	126	50	16.38	R.Suflam	1700	17235
	Marigold	10	3	80	African gold	1000	12000
	Litchi	23	10	200	Pheromone trap	24000	78000
	Marigold	20	1	200	African gold	-1500	33900
	Mushroom	20	4	85	Oyster mushroom	0	492
VIII (2018-19)	Maize	10	10		Hermetic storage bags for maize	0	0
	Mustard	44	20	18.2	R. Sufalam INM	2000	10802.27
	Lentil	20	10	15.59	KLS-218 & HUL-57INM & IPM	3940	19810
	Chick pea	28	10	17.49	GNG-1581	1500	21028.93
	Licthi	30	10	52.88	Neem Oil	43000	325000

Contd.....

Front-line demonstration in *kharif* season

Year wise	Crops	No. of farmer	Area (ha)	Avg. yield (q/ha)	Variety	Increase	
						C (Rs.)	R (Rs.)
I 2011-12	Red gram	17	7	31.5	ND 1, Malvia 13	-8180	17000
	Paddy	15	5	33.13	Swarna sub -1	550	6060
II 2012-13	Redgram	16	5	12.26	P-9	1000	36040
	Black Gram	6	2	5.75	Gram-Pant 31	500	22400
	Paddy	10	5	39	Bhagawati	600	6050
III 2013-14	Paddy	69	25.5	160.2	R. Bhagawati, Swarna sub-1, Vaidehi, Rajshree	7700	29760
IV 2014-15	Red gram	18	4.2	15	P-9	2500	24500
V 2015-16	Red gram	8	2.1.	11	ICM	8000	32000
	paddy	15	4	10	ICM	600	2800
	Barseem	6	2	667	Mascavi	1250	25760
	Green gram	35	20	8.5	SML-668 INM& IPM	1600	8100
VI 2016-17	Arhar	5	1	10.2	Malvia-13	0	0
	Berseem green fodder	6	1.5	670	High yielding variety (Mascavi)	850	25450
	Cow pea	14	4	45	High yielding variety (Kashi kanchan)	5000	10000
	Green gram	50	21	19.65	NP-1, Local/HUM-16/Sona/pusa vishal	5600	29600
	Sesamum	51	20	8.23	Local & kalika	3050	15246

Front-line demonstration in *kharif* season

Year wise	Crops	No. of farmer	Area (ha)	Avg. yield (q/ha)	Variety	Increase	
						C (Rs.)	R (Rs.)
VII (2017-18)	Soya bean	35	10	21.88	PS-1042	26500	109250
	Cow Pea	10	3	85	HYV	1000	15400
	Berseem green fodder	6	1.5	670	High yielding variety (Mascavi)	850	25450
	Sorghum green fodder	10	2	530	High yielding variety	1000	19650
	Green gram	57	20	10.5	IPM-02-03, SOIL TEST ,INM,IPM	1650	13000
	Sesamum	21	10	5.9	Krishna	4000	13088
	Red gram	27	10	18.2	LRG-41	4050	28250
	Oyster mushroom	20	4 unit	-	Oyster mushroom	-400	1000
VIII 2018-19	Paddy	109	20	29.8	DSR through zero till seed drill cum fertilizer machine	-1000	5650

Front-line demonstration year round

Year wise	Crops	No. of farmer	Area (ha)	Avg. yield (q/ha)	Variety	Increase	
						C (Rs.)	R (Rs.)
VIII (2018-19)	Oyster mushroom	20	4 unit	-	Oyster mushroom	-400	1000
	Mushroom	20	4	85	Oyster mushroom	0	492
	Maize	10	10		Hermetic storage bags for maize	0	0

Summary of OFT achievement

Year	Target	Achievement
2011-12	9	6
2012-13	8	4
2013-14	8	4
2014-15	7	4
2015-16	7	8
2016-17	10	9
2017-18	10	8
2018-19	8	7

Details of technology refined / generated during the period under review

Technology	Relevance	Status of transfer
Paddy variety :Rajendra Bhagwati	Paddy cultivation needs high investment and comparatively less return specially in case of using local variety. Rajendra Bhagwati at the same investment of local variety increases the yield upto 31.92 q/ha.	More than 2000 ha of land covered with this variety. Approximately 5000 farmers adapt this variety for quality rice as well as suited in climatic cange scenario
NPK - 90:40:40 +azobacter+PSB in wheat crop.	Farmers are using excessive chemical fertilizer leading to deteriotion of soil health. In order to improve the soil health and production, biofertilizer is useful in addition to chemical fertilizer. It decreases the chemical fertilizer ratio and increases the yield upto 11.33%.	After completion of 2 years OFT, the technology was disseminated through FLD programme more than 500 farmers utilized the technique convering near about 300 ha.
Use of sulpher in Rai crop at the ratio of 60:40:40:40(N:P:K:S) as basal dose.	Farmers are not aware about the importance of sulpher in oil crop and only use NPK. In comparison of cost of Sulpher the yield is too high, so very beneficial for farmers. Through this technology yield was increases the production @ 43.66%.	After completion of 2 years OFT, the technology was disseminated through FLD programme more than 1500 farmers utilized the technique convering near about 1000 ha
Weeding with conoweeder	Conoweeder is very simple and cheap equipment for weeding. It works very efficiently by women farmers also so local khurpi can replaced by conoweeder. takes less time i.e. 9.8 hour per acre only. It saves from waist pain, palm injury and excessive tiredness.	Through training and demonstration this technology is transferred among 550 women farmers as it works in line sowed field only.
Weed control (Pretilachlor @ 0.75l/ha + one hand weeding)	Due to climate change scenario weed infestation is high in transplanted paddy, reducing the yield as well as problem arises at the time of harvesting.	In blocks of Saraiya, Kanti, Madwan, Paroo 5000-6000 small/marginal farmers adopted this technology
FIR technique (Carbendazim 50%EC @2 g/ + Chloropyriphos 50EC @5ml/kg +Rhizobium culture @ 5 g/kg of seed)	Due to infestation of wilt disease in lentil crop, yield of the lentil was drastically reduced but through this technonogy incidence of wilt diseases decreases in lentil crop as well as increases yield upto 36.6%.	Through training cum demonstration programme along with ATMA and DOA, Muzaffarpur this technology was upto 350ha area covering 900-1000 farmers.

Technology	Relevance	Status of transfer
Green gram cultivars SML 668 increase yield upto 41.94%	Due to cultivation of local variety, yield of the green gram was very poor as the variety was severely affected by YMV disease. By this technology yield of the green gram increases upto 41.94 % because there is less incidence of YMV.	22% of the farmers of the district use SML-668. It Is also demonstrated under demonstration programmes by KVK and through subsides by Deptt. Of agriculture , Government of Bihar
Application of Pendimethalin as Pre emergence and Bispyribac sodium 25g ai/ha 25DAT. in paddy,	Less rainfall in the region has lead to heavy weed infestation in DSR paddy. By application of this technology the yield of the paddy obtained up to 45.54q/ha.	The technology was promoted every year under CSISA-KVK Network in 50-100 acre of cultivated land and demonstrated under FLD programme.
Green gram cultivars Hum-12	Due to cultivation of local variety, yield of the green gram was very poor as the variety was severely affected by YMV disease. This technology helps in increase in yield to 7.37q/ha ,while YMV severity was found 8.4 %	Through training cum demonstration programme along with ATMA and DOA, Muzaffarpur this technology was upto 250ha area covering 1250 farmers
Management of Litchi Fruit Borer through foliar spraying of Neem oil 300 ppm @ 3 ml after fruit setting and lambda cyholothrin @ 2 ml at after 15 days of Neem oil spray	Due to infestation of fruit borer in litchi led to reduced production as well as market value.by resulted in 7.2%.	Through training cum demonstration programme along with ATMA and DHO, Muzaffarpur this technology was upto 2500-2600 ha area covering 1200 farmers
INM through biofertilizer in Rabi Maize (100:60:50+Azotobacter+PSB)	Farmers are using excessive chemical fertilizer and to improve the soil health and production, biofertilizer is useful in addition to chemical fertilizer as It decreases the chemical fertilizer ratio and increases the yield upto 11.33% since it is easily available at low cost so farmers accepted it.	Through training cum demonstration programme along with ATMA and DAO, Muzaffarpur this technology was upto 2000 ha area covering 4500 farmers.
Management of stem rot disease in Rai caused by Rhizoctonia solani through soil treatment with Trichoderma viridi @ 5 kg/ha along with vermicompost 1.5 t//ha. ha.	Infestation of stem rot disease led to the reduction in yield of Rai. By application of this technology disease severity reduced by 4.47% and increased yield up to to 49.6%,	Under FLD the demonstration IS Conducted in 10 ha area covering 50 farmers each year.

Technology	Relevance	Status of transfer
Soil test based fertilizer along with 25 kg ZnSO4 in paddy.	Farmers are using excessive chemical fertilizer, which has deterioted the soil health. soil test based fertilizer application has resulted in increases the yield upto 34.83% against the farmer's practice.	Through training cum demonstration programme along with ATMA and DAO, Muzaffarpur this technology was upto 2500 ha area covering 5000 farmers.
Bio fertilizer effect on yield of green gram(20 kg N -40 kg P2O5- seed treatment of Rhizobium and PSB)	Farmers are using only chemical fertilizers in green gram crop.the usage of biofertilizer has resulted in increases the yield upto to 9.5 q/ha against the farmer's practice.	After completion of 2 years OFT, the technology was disseminated through FLD programme, ATMA and DAO, Muzaffarpur more than 1000 farmers utilized the technique convering near about 750 ha.
Yield Maximization of wheat based on soil test value. (Recommended dose N:P:K: 120:60: 40)	Irrational use of fertilizers in wheat crop has led to deterotion of soil health and declining production. Yield Maximization of wheat based on soil test value has resulted in increase the yield by 13.21% against the farmer's practice	Through training cum demonstration programme along with ATMA and DAO, Muzaffarpur this technology was upto 2000 ha area covering 4500 farmers.
nitrogen levels for production of rabi maize (Plant spacing for sowing 40*20 and 150:75:50 kg/ha NPK)	Farmers in the district are are sowing maize through broadcasting or 60x20 spacing resulting in lower yield. the maintained plant spacing has recorded in higher yield with lowest net returns were (Rs.41820.00/ha and B: C (2.76) against the farmers practice.	After completion of 2 years OFT, Through training cum demonstration programme along with ATMA and DAO, Muzaffarpur this technology was disseminated upto 750 ha area covering 1500 farmers..
FIR technique (Carbendazim 50%EC @2 g/ + Chloropyriphos 50EC @5ml/kg +Rhizobium culture @ 5 g/kg of seed)	Due to infestation of wilt disease in lentil crop, yield of the lentil was drastically reduced but through this technonogy incidence of wilt diseases decreases in lentil crop as well as increases yield upto 36.6%.	Through training cum demonstration programme along with ATMA and DOA, Muzaffarpur this technology was upto 350ha area covering 900-1000 farmers.
Green gram cultivars SML 668 increase yield upto 41.94%	Due to cultivation of local variety, yield of the green gram was very poor as the variety was severely affected by YMV disease. By this technology yield of the green gram increases upto 41.94 % because there is less incidence of YMV.	22% of the farmers of the district use SML-668. It Is also demonstrated under demonstration programmes by KVK and through subsides by Deptt. Of agriculture , Government of Bihar

Details of technology refined (Horticulture)

Technology	Relevance	Status of transfer
Management of damping off complexes in nursery bed of vegetable (Cauliflower) Through Trichoderma viridi @ 10 g - Neem cake 100g/sq.m	Due to damping off complexes disease, 42-50% seedling dies in nursery bed. Through this technology the disease incidence was found only 1.73% & increased the production upto 184%.	Under FLD, the demonstration is Conducted in 1 ha area covering 50 farmers each year.
seed treatment with Azotobacter and PSB in potato (20% Reduced Recommended dose of fertilizer + Azotobactor and PSB)	Lower yield of potato in the district due to the lack of availibilty of nutrients to the tubers. The application of seed treatment with Azotobacter and PSB in potato has increased the yield to 2.25% against the farmer practice.	After completion of 2 years OFT, the technology was disseminated through training programme along with ATMA and DAO, Muzaffarpur more than 1200 farmers utilized the technique convering near about 850 ha.
INM in potato (75 % Recommended dose of fertilizer + 25 % vermicompost) led to increase in production by 16.6%	Low yield due to irrational use of fertilizers and low organic carbon in soil	This technique has been adopted by 10-15farmers in 20 ha.
Integrated approaches for management of Die back disease of Mango. (Cultural practices like pruning and land preparation+ Drenching of Streptocyclin @ 1 g/10L of water + Blitox 50 @ 4 g/L of water and repeat the application at 30 days' interval (Oct-Nov). + soil application of ZnSo4 +Feso4+Cuso4 (305g+200g +526g per plant)	Production loss due to dieback in mango and it was a severe problem among farmers. By application of this technology disease severity was found only 22.28%.	This technology was started last year and recommendations have been advised to 70 farmers till date.
Management Panama wilt in banana through non-chemical (disease free sucker+ vermicompost @ 250 g/pit + soil application of Trichoderma viride (107) @ 10 g + Psedumonas fluoroscens @ 50g /sucker at 0,2nd and 4th month after planting.	Banana plantation is severly affected by Panama wilt causing heavy economic losses. This technogy highly effective with more than 52% wilt reduction.	This technology was started last year only.

Details of technology refined (Livestock)

Technology	Relevance	Status of transfer
Feeding of concentrate mixture (150gm – 200gm/day) and two times deworming at one month interval provided better growth performance for goat kids	Farmers donot heed importance to Feeding of concentrate mixture to goat kids. While the govt. veterinary hospital is supplying deworming drugs free of cost. Whenever concentrate mixture (150gm – 200gm/day) and two times deworming at one month interval showed better performance in terms of better growth performance for goat kids	About 55-60% farmers are using dewormer and 35-40% farmers are providing concentrate mixture to got kids..
Indication of Anthelmintics to cattle showed reduction of Egg per gram (gastrointestinal parasite) of faece in cattle and yielded better performance performance in terms of milk & estrus symptoms.	Farmers are using traditional esistant drugs for deworming which is not effective hence use of broad spectrum Anthelmintics are very useful.	60-65% of dairy farmers are using dewormers for their animal.

Details of technology refined (Poultry)

Technology	Relevance	Status of transfer
Supplementation in balance concentrate with Ground Maize ration on performance of broiler.	Rising readymade feed cost price will increase the cost of production. For economizing the feeding cost of the broiler, farmers included 50-70% ground maize by using balance concentrate with Ground Maize ration,	70-80% farmers adopted and got good growth performance in broiler.
Supplementation of Multienzyme @ 0.6 gm per kg feed with probiotics as feed supplements in poultry feed.	Most of the farmers using only probiotic or some are adding single or double enzymes in broiler ration but when cocktails of enzymes was used it showed better performance.	Nearly 90% poultry farmers are using probiotic with multienzyme.

Details of technology refined (Home science)

Technology	Relevance	Status of transfer
wheat straw as best substrate for Oyester mushroom cultivation and produces 8 kg mushroom per kg of spawn used.	Wheat sraw as by product of wheat farming is locally available at low cost.	Through training, demonstration and FLD this technology is initiated among 200 farmers and 100% of them are using wheat straw for oyster mushroom cultivation
Button mushroom retains its whiteness at some extent if dried after blanching and soaked in 1% Potassium metabisulfite solution. It got 8.5 point at sensory evaluation.	Button mushroom got blackish after sundried and farmers have no option except sell it fresh. Treated mushroom preferred by farmers and Potassium metabisulfite is safe, cheap and approved by FPO so farmers use it.	Four year back this technology was provided under OFT and FLD and only 10-12 farmers are using it as button mushroom are preferred to sell fresh.
soil treatment withTrichoderma viridi @ 5 kg/ha along with vermicompost 50 kg/ha		
Storage of local vegetables in Zero Energy cool chamber extends its self life upto nine days with 5.1% Physiological weight loss for tomato, three days with only 18% spoilage and 20.5% weight loss for oyster mushroom and extends the self life for 5, 2, 6 and 2 days respectively for Okra, spinach, radish, and cauliflower respectively .	Oyster mushroom is highly perishable, local variety of tomato and other vegetables spoil in 3-4 days and Zero Energy cool chamber can be constructed with local material. As it works on the basis of evaporative cooling and does not need electricity so farmers easily construct it at their field.	2000 farmers knew the importance of Zero Energy Cool Chamber for vegetables storage through training, Exhibition, Field visit and OFT programme

Details of technology refined (Agriculture Engineering)

Technology	Relevance	Status of transfer
Weed control by Grubber and wheel weeder in Green gram crop.Wheel weederwas found most effective in reducing population of weeds and producing maximum yield of green gram.	The predominant weed werePhysalisminon and Salanumnigrum weed more grow in green gram field in Muzaffarpur district. The farmer used local khurpi for weed control but that tool not effectively removing the weed root and required more manpower, that why increase the cost of cultivation.	This technology under trail and adopting percentage is very low. This technology will be extend by demonstration and training.

स्वस्थ धरा, खेत हरा

Soil Testing and Soil Health Cards Issued

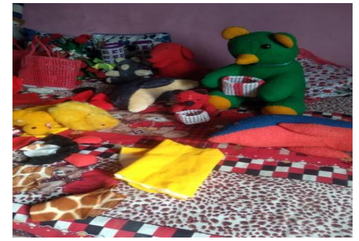
Inputs	I (2011-12)	II (2012-13)	III (2013-14)	IV (2014-15)	V (2015-16)	VI (2016-17)	VII (2017-18)	VIII (2018-19)	Total
Soil Samples tested	nil	2400	100	184	685	1022	414	341	5146
Soil Health Card issued	nil	2400	100	184	685	1022	414	341	5146
No of Farmers benefitted	nil	2400	100	184	685	1022	414	341	5146

Entrepreneurship development after training

Area/Field	Target group	Impact
Food Processing	SHGs	20 SHGs formed for making differnet kinds of pickle under Kisan chachi achhar by Smt Rajkumari devi
Tissue culture Banana	Banana farmers	1 lakh plants were produced annually by Mr. Avinash Kumar under MBRI, Bhatoulia. It was sold throughout the district and neighboring districts too.
Seed production	Farmers	1. Sri Satish Dwivedi is a progressive farmer of Sakari Chandpura in Bandra Block of Muzaffarpur district. He produce seed 25 t of seed annually and the income generated is 4-5 lakh/ annum by supplying seed in all over the state. 2.Mehta Beej Nigam, Dholi, muzaffarpur produces 20 t of seed annually and the income generated is 5 lakh/ annum by supplying seed in all over the state.
Bee Keeping	Farmers	Abikshek Kumar adopted beekeeping in small unit starting with 10 boxes and getting 200 to 300 liter honey per year. He is earning Rs 45000-55000.00 annually.
Vermicomposting	Farmers	1. Kheti enterprises produce vemicompost of 3000MT/annum. The income raised from Rs. 150000.00 to Rs.1000000/annum by selling the produce under several Govt. schemes. It is also sold at nearby districts to organic producer. 2.50 tonnes/ Annual produced by Shri Maheshwar Rai. The produce was sold all round the district via under different government schemes and

Entrepreneurship development after training

Area/Field	Target group	Impact
Organic vegetable production	Farmers	1. Sri Dinesh Kumar is actively involved in vegetable (30 acres), fruits (Banana -10 acres, Litchi- 4 acres), Sugarcane (20 acres), Paddy/ wheat seed (9 acres) production. 2.Rajesh Kumar Ranjan is producing organic vegetables in 1 ha. the income generated is 2 lakh/ annum.
Lac bangle making	Farmers	Sulekha kumari is trained on Soft toys making at Sadikpur Saraiya village and started by investing Rs 2500.00 at initial cost. Now she is getting Rs 8000.00 per month
Soft toys Making	Farmers	Mr. Shambhu Ram produces chicks in Ragunathpur village, saraiya block. He developed the poultry house of 360 sq. metre area and income raised from Rs. 75000to Rs.100000/annum by selling the produce.
Poultry farm	Farmers	1. Maharaja Paltry farm established by Mr. Vijay Shankar Kumar Raman produce chicks in Bakhara village. The income raised from Rs. 700000.00 to Rs.1000000/annum by selling the produce 2. Mr. Shambhu Ram produces chicks in Ragunathpur village, Saraiya block. He developed the poultry house of 360 sq. metre area and income raised from Rs. 75000to Rs.100000/annum by selling the produce.



Entrepreneurship development after training

Area/Field	Target group	Impact
Fish Culture	Farmers	1. 1. Mr. Shivchandra from Jakra Sheik, Madwan, has developed a 0.32 ha fish Pond and produces 5q /annum. With the operating cost of 35000.00 he is generating a net income of 70000.00/annum 2. 2. Mr. Vishwanath Kumar, has developed a 2 acre fish Pond and produces 50 q/annum. With the operating cost of 96000.00 he is generating a net income of 210000.00/annum. 3. 3. Mr. Rakesh Kumar developed a Pond (1 acre) and produce Fish of 5q/annum. The income raised from Rs. 45000.00 to Rs. 85,000/annum by selling the produce. 4. 4. Mr. Binod Kumar has developed 1 ha fish Pond and produces 2 0q /annum. With the operating cost of 60000.00 he is generating a net income of 200000.00/annum.

Entrepreneurship development after training

Area/Field	Target group	Impact
Mushroom cultivation	Rural youth	1. Mr.Sudhanshu Kumar has started oyster mushroom cultivation. He is producing 9 kg oyster mushroom from one kg spawn. He also started milky mushroom production. He has developed and innovative method of straw sterlization. 2.Manju Devi started oyster mushroom cultivation and Produces 5 kg oyster mushroom from one kg spawn. She has also started milky mushroom production. 3.Vikash kumar started mushroom spawn production and cultivation of mushroom .This activity has given him the economic boost up from Rs. 48000.00 to Rs. 200000.00 per annum. 4.Rural youth are trained on lac bangle making process at Manikpur village are started by investing Rs 4000.00 at initial cost. They are getting Rs 10000.00 per month

Linkage establishment with other Govt. Department / NGOs

Establishment	Area of collaboration / interaction
Department of Agriculture Govt. of Bihar	• Identification of training needs. • Joint implementation of training programme, Diagnostic Team visits. • Identification of target groups.
Agricultural Technology Management Agency (ATMA) Muzaffarpur	• Sponsored Training Programme & Joint Implementation of Developmental Programme. • Preparation of SREP, Programme implementation.
Department of Horticulture govt. of Bihar	• Joint participation in meetings for NHM. • Joint implementation of training programme.
Word vision, Muzaffarpur (NGO)	Technical backstopping
IDF,Muzaffarpur(NGO)	Technical backstopping
NRC,litchi	Technical backstopping
CSRI,Motipur	Technical backstopping
JEEViKA	Technical backstopping
Sahgal Foundation	Technical backstopping
NHRDF,Patna	Technical backstopping
NABARD	Technical backstopping
VASFA, Vaishali	Technical backstopping
District Fishery Officer,Muzaffarpur	Technical backstopping
Director seed & farm, DRPCAU, Pusa	Seed purchase and sale
Department of soil science,College of agriculture, DRPCAU, Pusa	Technical backstopping
Department of plant pathology, College of agriculture, DRPCAU, Pusa	Technical backstopping
Department of food and nutrition, college of community science, DRPCAU, Pusa	Technical backstopping, Resource Person For Training
Department of post harvest technology , college of agriculture engineering	Technical backstopping
NHRDF, Patna	backstopping

Budget (Rs. In lakh)

a. ICAR

Head	I (2011-12)	II (2012-13)	III (2013-14)	IV (2014-15)	V (2015-16)	VI (2016-17)	VII (2017-18)	VIII (2018-19)	Total
Recurring	8.23	8.09	10.5	4.75	13.0	30.44	13.58	11.5	100.09
Non-Recurring	21.78	2.13	2.68	10.55	1.2	1.2	8.0	3.55	51.09
TA	0.99	0.9	0.75	0.5	1.0	1.55	1.3	1.0	7.99
Others	0.0	0.0	0.0	0.0	14.1	6.46	8.52	40.05	69.13

b. Other than ICAR

Head	I (2011-12)	II (2012-13)	III (2013-14)	IV (2014-15)	V (2015-16)	VI (2016-17)	VII (2017-18)	VIII (2018-19)	Total
Jeevika				1.65	2.68	1.88			6.21
World Vision	0.16					2.78	.010	0.75	3.7
NAIM, Jaipur	0.35								0.35
DOEE,Pusa	0.55								0.55
CAE,Pusa	1.19								1.19
DSR				1.0					1.0
ATMA				1.0			2.54	0.5	4.04
Soil health management scheme								16.8	16.8

Revolving Fund Status (Rs. in lakh):

Activity	I (2011-12)	II (2012-13)	III (2013-14)	IV (2014-15)	V (2015-16)	VI (2016-17)	VII (2017-18)	VIII (2018-19)	Total
I	3.9	3.01	3.36	10.9	8.06	8.21	7.1	9.23	53.8

Resource generation (Rs. in lakh)

Activity	I (2011-12)	II (2012-13)	III (2013-14)	IV (2014-15)	V (2015-16)	VI (2016-17)	VII (2017-18)	VIII (2018-19)	Total
Pre Rabi kisan Sammelan					0.8	0.8		0.8	2.4
KKA								21.0	21
PMKSY								1.7	1.7
DAMU								4.8	4.8
ASCI								3.304	3.304
CFLD (2018-19)					9.4	4.8	3.37	2.25	19.82
CSISA							4.35	3.0	7.35
SCSP								2.0	2
Soil testing					1.25	0.86			2.11
Farmer fair					1.25				1.25
jeevika				1.65	2.68	1.88			6.21
World Vision	0.16					2.78	.010	0.75	3.7
NAIM, Jaipur	0.35								0.35
DOEE,Pusa	0.55								0.55
CAE,Pusa	1.19								1.19
DSR				1.0					1
ATMA				1.0			2.54	0.5	4.04
Soil health								16.8	16.8

New Initiative

a. KKA –Phase I

Programmes	No.	Beneficiaries
Training	123	4842
Planting material	12500	3876
No. of animal vaccinated	9567	3362
Distribution of seeds	203	3876
NADEP/ Vermi compost unit	94	94
Soil Health card distributed	4981	4981
Farm implement distributed	00	00

b. KKA- Phase-II:

Programmes	No.	Beneficiaries
Training	89	3038
Planting material	00	00
No. of animal vaccinated	9308	5485
Distribution of seeds	48	1204
NADEP/ Vermi compost unit	420	420
Soil health card	5647	5647
Farm implement	490	490

Cereal Systems Initiative for South Asia (CSISA)

Kharif

Experiment	Replications	Area covered (Acre)
Improving rice- Wheat cropping system (RWCS) productivity using different crop establishment methods.	16	5
Combative performance of rice establishment methods in different ecologies of Bihar (Muzaffarpur).	6	2
Effects of delayed transplanting on the growth and the yield of rice.	8	2
Impact of age of rice nursery on the growth and yield of transplanted rice rationale	5	2
Developing entrepreneurship on rice nursery marketing.	10	5
Effect of critical irrigation on the yield of rice.	10	5
Performance of conventional till DSR with and without pre-sowing irrigation.	6	2
Weed Management in direct seeded rice dominated Cyperusrotundusbased mixed weed flora.	10	2

Cereal Systems Initiative for South Asia (CSISA)

Rabi

Experiment	Replications	Area covered (Acre)
Performance of short duration (SDVs) and long duration varieties (LDVs) under different sowing schedules across ecologies.	10	5
Assessing the role of additional irrigation during terminal heat stress period during grain filling stage to beat the heat stress and its effect on wheat productivity.	10	5
Response of wheat to Phosphorus applied in both rice & wheat and only in wheat in rice-wheat rotation	10	5
Impact of herbicide application technology on the performance of herbicide in wheat HD2967.	10	5
Boron deficiency induced sterility in wheat and its effect on the yield and yield attributes of wheat.	10	5
Quantifying the grain in wheat productivity throughzero- tillage mediated advance sowing of wheat.	10	5
Residue management in rice –wheat system.	10	5

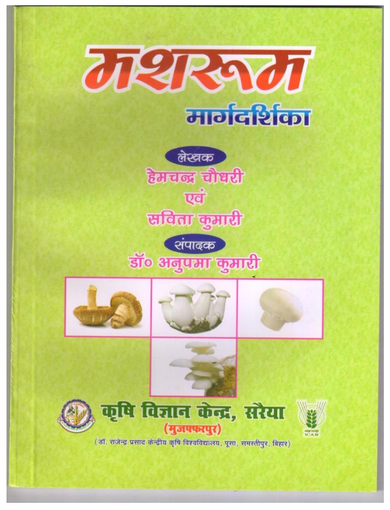
Cluster front Line Demonstration (CFLD)

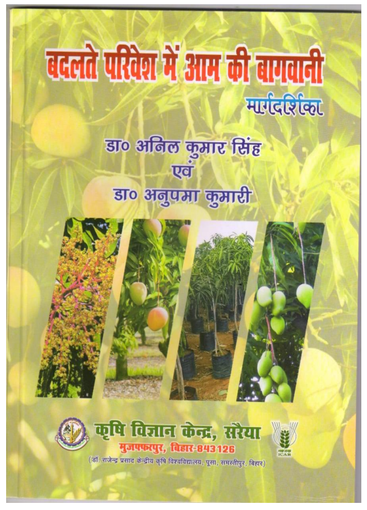
Variety demonstrated	Technology demonstrated	Number of farmers	Area (ha)
Green gram	SML-668INM&IPM	35	20
mustard	R.suflam	76	40
Lentil	L-4594	44	24
Field pea	IPFDI-10	112	30
Lentil	Azad Alsi-1INM&IPM	97	20
lentil	HUL-57+INM andIPM	97	40
Green gram	NP-1	15	1
Green gram	Local/HUM-16/Sona/pusa vishal	35	20
Sesamum	Local & kalika	51	20
Green gram	IPM-02-03, SOIL TEST ,INM,IPM	57	20
Soybean	Krishna	35	10
Sesamum	Krishna	21	10
Lentil	HUL-57 +INM&IPM	25	10
Rapeseed & Mustard	R.Suflam	126	50
Red gram	LRG-41	27	10
Lentil	KLS-218 & HUL-57INM & IPM	20	10
Chick pea	GNG-1581	28	10

Conti.....

ASCI Skill Development Training Programme

Year	Name of the Job role	Name of the certified Trainer of KVK for the Job role	Date of start of training	Date of completion of training	No. of participants
2018-19	Job role for mushroom grower	Mr. Hemchandra Choudhary	7.01 2019	19.02.2019	20
2018-19	Job role for mango grower	Dr. A.K.Singh	17.01.2019	21.02.2019	20





Conti.....

Mobile Soil Testing Lab

Inputs	2018-19
Soil Samples tested	341
Soil Health Card issued	341
No of Farmers benefitted	341

Conti.....

Mobile Soil Testing Lab

Inputs	2018-19
Soil Samples tested	341
Soil Health Card issued	341
No of Farmers benefitted	341

Conti.....

Supply of seed of new varieties

New varieties	Name of beneficiaries
Pusa vristi(Carrot) Pusa chetaki(raddish) P.S (Brinjal) All Green (Spinach) P.E.B (Fenugreek)	Ajay kumar
	Satish kumar
	Mahesh patel
	Shaliesh ojha
	Ashok singh
	Dinesh kumar
	Ramashankar singh
Pusa sugandha-16 (Paddy)	Satish Kr. Dwivedi
	Prabhat Kumar Dwivedi
	Ashok Kumar Dwivedi
Naveen (Bottle gourd)	Satish Kr. Dwivedi, Prabhat Kumar Dwivedi, Ashok Kumar Dwivedi, Ramniranjan Prasad Dwivedi, Rajmohan Dwivedi, Vijay kr. Dwivedi, Prayas Kr. Dwivedi, Vinod Kr. Dwivedi, Pramod Kr. Dwivedi, Bikhari Rai, Baidyanath Rai, Bhajju Mahto, Sanjeev Kumar, Rajiv Kumar, Nanadkishor Dwivedi, Rajesh Kumar, Vijay prakash, Naval Kishor Thakur, Saroj Kr.Thakur, Rajendra sahni, Mahesh sahni , Anil Sahni
HD2967(Wheat)	Satish Kr. Drivedi
	Prabhat Kumar Drivedi
	Ashok Kumar Drivedi

Sl. No.	Name of the Award	Name of the Scientist and Farmer	Year	Conferring Authority
5	Women Achievers Award	Smt. Rajkumari Devi	2014	
6	Avinav Kisan Award	Smt. Rajkumari Devi	2014	RAU, Pusa Samastipur
7	Avinav Kisan Award	Sri Dinesh Kumar	2014	RAU, Pusa Samastipur
8	Avinav Kisan Award	Sri Avinash Kumar	2016	RAU, Pusa Samastipur
9	Mahindra Samridhi Award	Sri Avinash Kumar	2016	Mahindra and Mahindra
10	Udyaan Ratna	Sri Dinesh Kumar	2017	ICAR
11	Avinav Kisan Award	Sri Maheshwar Rai	2019	RPCAU, Pusa Samastipur

Other salient recognition by KVK, Scientist

S.N.	Name & Designation of Scientist	Award/Recognition/Distinction	Awarding organization	Year of award	Date of announcement
1	Dr. Kamlesh Kumar Singh and Dr. Anupama Kumari	Best Poster Presentation Award	Society for upliftment of rural economy (SURE)	2018	01.11. 2018
2.	Dr. Savita Kumari	Best extension scientist Award,2017	SURE	2018	01.11. 2018
3.	Dr. Savita Kumari and Dr. Anupama Kumari	Best Poster Presentation Award	SURE	2018	01.11. 2018
4.	Tarun Kumar, Anupma Kumari, Brajesh Shahi and D.C. Jhariya	Best Poster Award	IASWC and IISWC	2019	06.02. 2019 to 08 .02. 2019
5.	Shobha Rawat	Young Scientist Award	Kalash research and welfare society	2019	24.2. 2019 to 25.2. 2019

Celebration of Important Day

Swachchta Pakhwara

World Yoga Day

Mahila Kisan Diwas

World Soil Day

National Fish Farmer Day

Jay Kisan Jay Vigyan Diwas

World Meteorological Day

Kisan Diwas

Parthenium Day

Celebration of Important Day

LIVE telecast of
Hon'ble PMs Speech

No Tobacco Day

National Nutritional week
celebration

Achievement of the KVK

Best KVK award 2017

Food Processing

Mushroom Production

Sponsored training

Mushroom Cultivation

Awareness on Zero tillage

Field Day on Zero till

Seed Production

NADEP/Vermicompost pit

Extension Activities Undertaken during 2011-2019

Activity	Total
Field Days	51
Agril. Exhibition	11
Farmers' Fairs	19
Radio Talk	2
TV show	83
Film show	8
Training materials produced (a) Pamphlets (b) Video-cassette/ CD (c) Slides	31
Farm Science Club organized	1
Mahila Mandals Organized	15
Extension Training meetings organized	2
i.Kisan Ghosthi	66
ii.Farmers Seminar	10

Activity	Total
Lectures delivered as resource persons	254
Newspaper coverage	478
Popular articles	6
Advisory Services	5136
Scientific visit to farmers field	3054
Farmers visit to KVK	6331
Diagnostic visits	1273
Exposure visits	16
Animal Health Camp	3
Soil test campaigns	6
Celebration of important days (specify)	8

Activity	Total
Farmers'- Scientists' Interaction	8
Method demonstration	20
Exposure visit	10
Swacchata pakhwara	36
Crop seminar	1
Awareness programme	87
Video conferencing	4
Sankalp se siddhi	1
Mobile advisory services	1170
Pesticides dealer meet	1

Publications made during 2011-2019)

Type of Publication	Number
Research article	19
Popular article	6
Electronic media	15
Extension Literature :	15
Reports published in ICAR Reporters	2
Book chapter	36
Electronic publication	1

Thank You.....