PROFORMA FOR PREPARATION OF ANNUAL REPORT (April 2018-March 2019)

APR SUMMARY

1. Training Programmes:

Clientele	No. of Courses	Male	Female	Total participants
Farmers & farm women	76	1851	797	2648
Rural youths	14	221	191	412
Extension functionaries	12	320	337	657
Sponsored Training	10	40	295	335
Vocational Training	6	174	33	207
Total	**118**	**2606**	**1653**	**4259**

2. Frontline demonstrations:

Enterprise	No. of Farmers	Area (ha)	Units/Animals
Oilseeds	102	80.0	
Pulses	349	244.0	
Cereals	40	16.0	
Vegetables	40	16.0	
Other crops	110	44.0	
Total			
Livestock & Fisheries	45	5.0	125
Other enterprises	40	5.0	30
Total			
Grand Total	**726**	**410.00**	**155**

3. Technology Assessment & Refinement:

Category	No. of Technology Assessed & Refined	No. of Trials	No. of Farmers
Technology Assessed			
Crops	13	58	78
Livestock	4	30	30
Various enterprises	3	10	68
Total	**20**	**98**	**176**
Technology Refined			
Crops			
Livestock			
Various enterprises			
Total			
Grand Total	**20**	**98**	**176**

4. Extension Programmes:

Category	No. of Programmes	Total Participants
Extension activities	45	3039
Other extension activities	111	2217
Total	156	5256

5. Mobile Advisory Services:

Name of KVK	Message Type	Type of Messages						
		Crop	Livestock	Weather	Marke-ting	Awar e-ness	Other enterprise	Total
	Text only	16	-	-	-	-	-	16
	Voice only							
	Voice & Text both							
	Total Messages	**16**	**-**	**-**	**-**	**-**	**-**	**16**
	Total farmers Benefitted	**67,253**	**-**	**-**	**-**	**-**	**-**	**67,253**

6. Seed & Planting Material Production:

	Quintal/Number	Value Rs.
Seed (q)	2,555	-
Planting material (No.)	3,81,472	1,17,940.00
Bio-Products (kg)	2,24,571	14,61,150.00
Vermiculture (Kg)	3,384	1,69,200.00
Livestock Production (No.)	5,685	6,30,320.00
Fishery production (No.)		

7. Soil, water & plant Analysis:

Samples	No. of Beneficiaries	Value Rs.
Soil-1663	1388	1,66,900.00
Water-23	19	2,300.00
Plant-4	2	2,400.00
Total	**1409**	**1,71,600.00**

8. HRD and Publications:

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

DETAIL REPORT OF Annual Progress Report 2018-19

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	
Shri Hanumantharaya Educational & Charitable Society, Krishi Vigyan Kendra, Yagantipalle (P) Banaganapalle (M) Kurnool (Dt.) A.P.	9440607424	----	pendekantikvk@rediffmail.com pendekantikvk@gmail.com

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

Address	Telephone		E mail
	Office	FAX	
Shri Hanumantharaya Educational & Charitable Society, Krishi Vigyan Kendra, Yagantipalle (P) Banaganapalle (M) Kurnool (Dt.) A.P.	9440607424	----	pb1961@rediffmail.com

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Smt. G.Dhanalakshmi	Illurukothapeta (V & P), Banaganapalle (M), Kurnool (Dt.), Andhra Pradesh.	9440607424	dhana66@rediffmail.com

1.4. Year of sanction: **1989**

1.5. Staff Position (as on 31th March, 2019):

Sl. No.	Sanctioned post	Name of the incumbent	Design-ation	Discip-line	Pay Scale (Rs.)	Present basic (Rs.)	Date of joining	Perman-ent /Temporary	Category (SC/ST/ OBC/ Others)
1	Sr. Scientist & Head	G.Dhanalakshmi	Sr. Scientist & Head	Home Science	15,600-39,100	40,870	03-04-2003	Permanent	OC
2	Subject Matter Specialist	K.Venkata Ramanaiah	SMS (Soil Science)	Soil Science	15,600-39,100	35,540	10-07-1996	Permanent	BC
3	Subject Matter Specialist	M.Sudhakar	SMS (Agronomy)	Agronomy	15,600-39,100	35,540	23-09-1996	Permanent	OC
4	Subject Matter Specialist	D.Balaraju	SMS (Plant Protection)	Plant Protection	15,600-39,100	31,170	04-04-2003	Permanent	OC
5	Subject Matter Specialist	A.Krishna Murthy	SMS (Animal Husbandry)	Animal Husbandry	15,600-39,100	25,840	29-06-2010	Permanent	OC
6	Subject Matter Specialist	P. Nagarjuna Reddy	SMS (Agril. Extension)	Agricultural Extension	15,600-39,100	21,000	27-03-2018	Permanent	OC
7	Subject Matter Specialist	M. Adinarayana	SMS (Horticulture)	Horticulture	15,600-39,100	21,000	06-04-2018	Permanent	BC
8	Programme Assistant	K.Lakshmi Priya	Programme Asst. (Home Science)	Home Science	9,300-34,800	25,280	18-06-1996	Permanent	BC
9	Accountant / Superintendent	N. Nagaraju	Assistant		9,300-34,800	14,330	24.08.2015	permanant	OC
10	Jr.Asst. cum Typist (SK)	B.V.M.V.Prasad Rao	Jr. Asst. cum Typist	Jr. Asst. cum Typist	5,200-20,200	16,480	21-03-1990	Permanent	BC
11	Driver	Iqbal Basha	Driver cum Mechanic	Driver cum Mechanic	5,200-20200	12,980	20-09-1995	Permanent	OC
12	Driver	D.Obulesu	Driver cum Mechanic	Driver cum Mechanic	5,200-20200	12,590	01-08-1996	Permanent	SC
13	Attender	P.Raghava Reddy	Attender	Attender	4,440-20200	11,270	02-11-1990	Permanent	OC
14	Watchman	T.P.Gurappa	Watchman	Watchman	4,440-20200	11,010	30-12-1994	Permanent	BC

15	Cook	T.Rajeswari	Cook	Cook	4,440-20200	11,010	20-09-1995	Permanent	BC
16	Farm Attendant	A.Rama Subbaiah	Farm Attendent	Farm Attendent	4,440-20200	11,010	01-10-1996	Permanent	BC

1.6. Total land with KVK (in ha) : 20 ha

S. No.	Item	Area (ha)
1	Under Buildings	2
2.	Under Demonstration Units	1
3.	Under Crops	10
4.	Orchard/Agro-forestry	4
5.	Others (specify)	3

1.7. Infrastructural Development:

B) **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 (Completed/ in progress/ to be initiated)
1.	Administrative Building	ICAR	1994	550	7.59	1990-91		
2.	Farmers Hostel	ICAR	1994	450	8.0	1990-91		
3.	Staff Quarters(6)	ICAR	1998	650	32.27	1992-93		
4.	Demonstration Units (3)	ICAR	1992-93	300	6.5	1992-93		
5	Fencing	ICAR	2005-06		6.5	2004-05		
6	Rain Water harvesting system	-	-	-	-			
7	Threshing floor	-	-	-	-			
8	Farm Godown	ICAR	2005-06	112.5	5.28	2005-06		
9	Shed (Farm equipment)							
10	Soil Testing Laboratory	ICAR	2004-05	112.5	8.59	2004-05		
11	Goat Shed	ICAR	2016-17	35.0	3.0	2016-17		

B) Vehicles:

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
TATA Sumo	2009	6,00,000-00	175948 km	OK
Mahindra & Mahindra Tractor	2005	3,54,522-00	30678 (hrs)	OK
Motorcycle (Hero Honda)	2014	-	13386 KM	OK

C) Equipments & AV aids:

Name of the equipment	Year of purchase	Cost (Rs.)	Present status
Tape Recorder	1990	2,600-00	OK
Over Head Projector	1991	6,200-00	OK
Slide Projector	1991	7,168-00	OK
Ahuja Micro phone Set	1994	9,500-00	OK
Television	1994	19,999-00	OK
Video Casette Recorder	1996	19,000-00	OK
Ahuja Portable wireless Amplifier	2003	9,927-00	OK
Cordless micro phone	2003	5,804-00	OK
Collar Mike	2005	5,800-00	OK

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

Scientific Advisory Committee meeting for the year 2019-20 was held under the chairmanship of Sri P. Balaji Secretary KVK on 21.02.2019.

- Field visit was made to the demonstrations units existing in KVK i.e. millets demonstration unit, Vermicompost units, IFS, Dairy unit, Hydroponic unit, Poultry etc. In the field visit all the line department officials and farmers actively participated and interacted with the scientists.
- After the field visit all the line department officials shared their experiences and activities and schemes prevailing in their department and how they can be used by the farmers.

Sno	Name & designation	Remarks made
1	Sri. D. Tagore Naik	Stressed on the promotion of millets. Assured for giving training to MPEOs at KVK. Appreciated team KVK for the services rendered to farming community.
2	Dr. M. Subbarao ADR, RARS, Nandyal	Expressed that coordination of KVK and RARS is very good and the seed developed at RARS is being supplied to KVK for trails. Promised to continue the same support in future.
3	Smt U. Maheswaramma PD, ATMA	Informed the house about the activities that can be taken up by KVK like Kisan Melas, farmer scientist interaction, exposure visits with the support of ATMA.
4	Sri. B. Sudharshan APD, APMIP	Informed the house that the focus of the farmer should on high yielding crops with low cost of cultivation.
5	M.N. Naidu, APD, DWAMA	Informed the house borewell programme was taken up under NTR Jalasiri Programme. Four thousand borewells for the entire district with 300 borewells for Banganapalle mandal. The success rate of bore well is 90%.
6	G. KesevaReddy Seed certification Officer	Informed about the availability of different varieties of seeds.

7.	Sri. Y.V. Murali Krishna DPD, ATMA	Requested to provide minikits of all millets to ATMA. Requested the house to make provision for eggs available with farmers for brooding at KVK incubator. Promotion of simple bed method of vermicompost production. Requested to provide suitable varieties for Drylands.
8.	Dr. C. Venkata Ramana Varma, ADAH, Banaganapalle.	Explained about the activities like distribution of sailage, concentrate feed and establishing Oorura Pasu Grasa Kshetralu and Mega Pasu Grasa Kshetralu. Explained about the supply of Mini Gokulalu to farmers.
9.	Vijaya Dairy	Explained about Kalyanamasthu scheme and Supply of Super Napier Fodder to farmers.
10.	Dr. Y. Rama Reddy, Senior Scientist, RARS, Nandyal	Shared his experience regarding the sustainable sheep unit reared by farm women in Atmakur Mandal Requested the house to take up exposure visits under ATMA to show new technologies like IFS, Mechanization etc.
11.	Dr. S. Saralamma, PS, Millets, RARS, Nandyal	Informed the house the importance of millets and trends in consumption. Requested the farmers to take up different types of millet crops and give value to them. To prevent diseases in the crops she recommended the seed treatment with trichodermma viridae.
12.	Dr. V. Jayalakshmi, PS, RARS, Nandyal	Informed the house about the Bengal gram varieties available at RARS. Incase of mechanical harvesting NBeG-47 was recommended. She recommended to take up Bengal gram sowings in October for Rainfed system. With Irrigation facility it was recommended to take up first or second week of November. She also informed the house about ridge and furrow method of Bengal gram sowings.

Experiences of farmers:

1.	Sri. B. Srinivasulu, Dornipadu	Informed the house about the benefits of STCR method of paddy and cotton cultivation. Reduction in use of complex fertilizers not only in his field but also in the whole village after KVK STCR demonstration intervention.
2.	T. Prasad, Hussainapuram	Shared his experience on transformation of their paddy fields with the usage of Daiacha and also shared the house about seed production of RNR-15048 paddy variety.
3.	M.V. Krishna Reddy, Kalugotla	Informed about introduction of JG-11 variety by KVK through ATMA. Expressed that Sheep rearing can be taken up as subsidiary occupation by all the farmers with subject to availability of space and fodder which is profitable than Dairy.
4.	M. Manohar, R.S. Rangapuram	Informed the house about the use of cycle weeders in horticulture crops and also expressed that harvesting of setaria is becoming very difficult and requested for supply of mechanical harvester.
5.	A. Narendranath, Ramachandrapuram	Informed the house that Super Napier is very promising and the fodder was liked by the animal. He also shared his experience in using Hydroponic Unit for green fodder.
6.	D. Pothuluri Achari, Govindapalle	Shared his experience on the targeted yields of Rice recorded with the use of STCR formula in Govindapalle village.
7.	G. Eswara Reddy, Amadala	Shared his experiences on seed production of Bengal gram under participatory seed production programme.

During the review the following Points were discussed:

The afternoon session began with the presentation of Smt. G. Dhanalakshmi, Senior Scientist and Head, KVK on significant and overall achievements of KVK.

- **Dr. Y.G. Prasad, Director, ATARI,** appreciated the efforts made by KVK in all disciplines. He also informed the house that Seed Hub progress made by this KVK is remarkable in the country.
- For all OFTs, three treatments should be taken up with Source of Technology and year of technology should be mentioned clearly.
- The package of technology should be clearly mentioned.
- All the programmes should have more scientific approach.
- The KVK demonstration units should be sustainable and serve the farming community.
- Assured to support capacity building of the scientist.
- Suggested to add style to the substance i.e. enhancing the facilities of KVK for attracting more clients across the state.

List of participants attended the SAC Meeting:

S.No	Name	Designation
1.	Dr. Y G. Prasad	Director, ATARI.
2.	Dr. A. Bhaskaran	PS, ATARI.
3.	Dr. M. Subbarao	ADR, RARS, Nadhyal.
4.	Sri D. Tagore naik	JDA, Kurnool.
5.	Smt . U. Umamaheswaramma	P.D, ATMA, Kurnool.
6.	B. Sudarshan	APD, APMIP, Kurnool.
7.	M.N. Naidu	APSSCA, Nandyal.
8.	Sri. G. KesevaReddy	Seed certification Officer, Nandhyal.
9.	Y.V. Murali krishna	DPD, ATMA, Kurnool.
10.	M SivaRama Krishna	Scientist (Ento), RARS.
11.	Dr. S. Jaffar Basha	Sr Scientist Agro, RARS, Nandhyal.
12.	Dr. Y. Raama Reddy	PS, RARS, Nandhyal.
13.	V. Jayalakshmi	PS, RARS, Nandyal.
14.	Dr. N. Saralamma	PP, RARS, Nandyal.
15.	Dr. C. Venkata Ramana Varma	AD (AH), VH, Banaganapalle.
16.	G. Dhanalakshmi	Sr. Scientist & Head
17.	S. Konda Reddy	Special Officer, SHE&CS.
18.	Dr. Naveen	VAS, Tangutur.
19.	Dr. M. Reghavendra Reddy	VAS, Pasupala.
20.	Dr. A. Bhaskaran	PS, ICAR-ATARI, Hyderabad.

List of Farmers:

S.No	Name	Designation
1	K.V. Krishna Reddy	Farmer, Jambuladinne, Banaganapalle.
2	T. Sudhakar Reddy	Farmer, Jambuladinne, Banaganapalle.
3	B. Jagadeeswara Reddy	Farmer, Giddalur, Sanjamala.
4	K. Siva Krishna Reddy	Farmer, Gundlasingavaram, Owk.
5	M. Krishnudu	Farmer, Yagantipalle, Banaganapalle.
6	B. Sivasankar Reddy	Farmer, Yagantipalle, Banaganapalle.
7	B. Gurrappa	Farmer, Yagantipalle, Banaganapalle.
8	D. Anjaneyulu	Farmer, Illurukothapeta, Banaganapalle.
9	B. Sreenivasulu	Farmer, Dornipadu.
10	M. Moulali	Farmer, Giddalur, Sanjamala.
11	D. Pothuluru Achari	Farmer, Govindapalle, Sirivella.
12	P. Siva Pratap Reddy	Farmer, Govindapalle, Sirivella.

13	T. Prasad	Farmer, Hussenapuram, Banaganapalle.
14	M.V. Krishna Reddy	Farmer, Kalugotla, Koilakuntla.
15	M. Veerabhadra Reddy	Farmer, Bethamcherla.
16	G. Eswar Reddy	Farmer, Amadala, Koilakuntla.
17	T. Bala Maddilety	Farmer, Amadala, Koilakuntla.
18	P. Pulla Reddy	Farmer, Udumulapuram, Panyam.
19	Y. Padmavathamma	Farmer, Loddipalle, Orvakal.
20	S. Yagantamma	Farmer, Yagantipalle, Banaganapalle.
21	B. Rajeswaramma	Farmer, Yagantipalle, Banaganapalle.
22	G. Thimmaraju	Farmer, Cherlokotturu, Banaganapalle.
23	G. Ramesh	Farmer, Cherlokotturu, Banaganapalle.
24	S. Siva Bhaskar Reddy	Farmer, Cherlokotturu, Banaganapalle.
25	Y. Rani	Farmer, Banaganapalle.
26	S. Vijaya Bhaskar Reddy	Farmer, Yagantipalle, Banaganapalle.
27	M. Bharathi	Farmer, R.S. Rangapuram, Bethamcherla.
28	P. Dasthagiramma	Farmer, R.S. Rangapuram, Bethamcherla.
29	D. Chinnapu Reddy	Farmer, Banaganapalle.
30	M. Manohar	Farmer, Amadala, Koilakuntla.
31	M. Nagaraju	Farmer, Amadala, Koilakuntla.
32	S. Hussain Basha	Farmer, Sriram Nagar, Gospadu.
33	G.C. Subbarayudu	Farmer, Bijinavemula, Koilakuntla.
34	A. Manohar	Farmer, Bijinavemula, Koilakuntla.
35	G. Maddilety Reddy	Farmer, Meerapuram, Banaganapalle.
36	S. Hussain Vali	Farmer, Illurukothapeta, Banaganapalle.
37	V. Ayyapu Reddy	Farmer, Cherlokotturu, Banaganapalle.
38	K. Maheswari	Farmer, Yagantipalle, Banaganapalle.

2. DETAILS OF DISTRICT (2018-19)

2.0. Operational jurisdiction of KVKs (Andhra Pradesh & Telangana only)/ Give names of districts& Tehsils

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

S. No	Farming system/enterprise
1	Agriculture + Horticulture
2	Agriculture + Dairy
3	Agriculture + Horticulture + Dairy
4	Agriculture + Horticulture + Pastural Culture

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

S. No	Agro-climatic Zone	Characteristics
1	Scarce rain fall zone	Low, scanty and erratic rainfall due to which successful crop production with good yield is unexpectable and dry land agriculture is predominant with a variety of rainfed crops in the zone.

2.3 Soil types:

S. No	Soil type	Characteristics	Area in ha
1	Black cotton soils	Heavy and deep to very deep belonging to vertisols.	3.69
2	Red earths	Clayey sub soil (association of alfisols and inceptisols)	1.29
3	Red earths	Loamy sub soil i.e chalkas (association of inceptisols and alfisols)	3.18
4	Red sandy loam soils	Dubbas & Chalkas (association of entisols, inceptisols and alfisols)-Light textured soils, poor water holding capacity, poor fertility	0.54
5	Problem soils (Saline/sodic)	High pH more than 9.0	1.04
6	Rock land and others	Undulated sloppy lands. Very shallow soils.	0.47

2.4. Area, Production and Productivity of major crops cultivated in the district for 2018-19:

Kharif:

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	PADDY	63881	33, 00,092.4	51.66
2	JOWAR	391	5,614.76	14.36
3	BAJRA	6486	1, 13,115.84	17.44
4	MAIZE	37202	15, 43,510.98	41.49
5	KORRA	3314	27,307.36	8.24
6	REDGRAM	64411	2, 42,829.47	3.77
7	GREENGRAM	593	3,071.74	5.18
8	BLACKGRAM	4364	35,741.16	8.19
9	HORSEGRAM	0	0	1.29
10	GROUNDNUT	89539	3, 75,168.41	4.19
11	SESAMUM	0	0	2.28
12	SUNFLOWER	723	5,046.54	6.98
13	CASTOR	19652	92,560.92.	4.71
14	SOYABEEN	1328	12,244.16	9.22
15	OTHER OIL SEEDS	10		
16	CHILLIES	15584		
17	ONION	19454		
18	TURMERIC	1636		
19	SUGARCANE	642		
20	COTTON	242073		
21	TOBACCO	8		
22	OTHER CROPS	25532		
	TOTAL	**596824**		

Rabi:

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	PADDY	12873	9,13,339.35	70.95
2	WHEAT	101		
3	JOWAR	63743	13,63,462.77	21.39
4	BAJRA	213	2,969.22	13.94
5	MAIZE	7302	575,251.56	78.78
6	KORRA	86	610.60	7.10
7	HORSEGRAM	203	1,006.88	4.96
8	GREENGRAM	313	1,518.05	4.85
9	BLACKGRAM	10574	67,356.38	6.37
10	REDGRAM	2206	12,860.98	5.83
11	BENGAL GRAM	146353	-	
12	COWGRAM	1	-	
13	CHILLIES	233	-	
14	CORIANDER	440	-	
15	GROUNDNUT	8802	234,485.28	26.64
16	SESAMUM	384	1,113.60	2.90
17	SAFFLOWER	71	-	
18	SUNFLOWER	942	11,445.30	12.15
19	RAPE & MUSTARD	1190	-	
20	CASTOR	393	2,043.60	5.20
21	OTHER OIL SEEDS	0		
22	SUGARCANE	20		
23	ONION	2365		
24	COTTON	3		
25	TOBACCO	5053		
26	OTHERS	5349		
	Total	**269212**		

2.5. Weather data:

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
April	11.5	39.4	25.4	
May	35.5	39.7	27.6	
June	73.5	37.2	24.3	
July	52.9	34.4	23.7	
August	65.8	34.4	24.5	
September	98.7	33.5	23.2	
October	32.5	33.5	21.5	
November	5.4	32.5	19.5	
December	0.9	33.0	18.1	
Jan	16.6	30.4	14.5	
Feb	0.4	32.7	19.1	
March	0.0	35.8	22.3	

2.6. Production and productivity of livestock, Poultry, Fisheries etc. in the district (Latest data):

Category	Population	Production	Productivity
Cattle			
Crossbred	3,167	16,468	5.2
Indigenous	4,90,397	98,079	0.2
Buffalo	6,46,453	7,75,743	1.2
Sheep			
Crossbred			
Indigenous	13,91,474		
Goats	6,07,907		
Pigs			
Crossbred	-		
Indigenous	-		
Rabbits	-		
Poultry			
Hens			
Desi	12,25,241		
Improved			
Ducks			
Turkey and others			
	Area	**Production**	**Productivity**
Fish			
Marine			
Inland			
Prawn			
Scampi			
Shrimp			

2.7. Details of Adopted Villages (2018-19):

Sl.No.	Taluk/ mandal	Name of the block	Name of the village	Year of adoption	Major crops & enterprises	Major problem identified	Identified Thrust Areas
KVK adopted villages							
1	Bethamcherla	Bethamcherla	H.kottala		Groundnut setaria	Low productivity in oilseeds Due moisture stress	Introduction of Varieties tolerant Moisture stress , Balanced nutrition and weed management Alternate crops
			H.Kottala, Kolumulapalle		Redgram, Bengalgram, Korra	Indiscriminate use of pesticides, poor knowhow on varieties suitable	ICM and IPM
2	Koilakuntla	Koilakuntla	Amadala Bijinemula		Groundnut and sunflower	Low productivity in oilseeds Due moisture stress	Introduction of Varieties tolerant Moisture stress , Balanced nutrition and weed management.

			Amadala		Bengalgram, Jowar	Indiscriminate use of Pesticides	IPM
3	Allagadda	Gospadu Servella	Sreenivasapuram Govindapalli		Rice, Sesame blackgram	Low productivity in rice –rice system Low productivity in oilseeds	Introduction of rice based cropping systems (rice-Maize and rice-sunflower) Introduction of improved varieties of Sesame
4.	Banaganapalli	Banaganapalli	Yerragudi Jolapuram Meerapuram		Redgram cotton	Low productivity	Integrated crop management in Redgram and Crop geometry in cotton
			Bhanumukkala, Yagantipalle		Rice, Maize, Vegetables	Indiscriminate use of Fertilizers and Pesticides	INM and IPM
			Meerapuram, Jolapuram		Redgram, Greengram, Korra	Indiscriminate use of Pesticides, Poor choice of varieties	ICM and IPM
5	Midthur	Midthur	Jalakanur		Cotton, Chillis, Rice, Redgram	Indiscriminate use of Fertilizers and Pesticides in Rice, Chillis and Cotton,	IPM, INM and ICM
6	Owk	Owk	K. Sunkesula		Blackgram, Redgram and Chillis	Indiscriminate use of insecticides for management of pests in cotton & Chillis	IPM, IDM and ICM
DFI villages							
1	Banaganapalle	Banaganapalle	Pandlapuram	2018	Rice, Jowar, Redgram	• Shoot fly in Jowar. • Blast, stem borer and BPH in rice.	Demonstrations on Shoot fly mgmt in Jowar. IDM in Rice.
2	Banaganapalle	Banaganapalle	Yerragudi	2018	Household food security and Kitchen gardening	• Lack of awareness on importance of consumption of green leafy and other vegetables in daily menu. • Non-availability of green	Training programmes & Demonstrations

					Value Addition Drudgery reduction technologies Development of nutrient efficiency diet with local foods Women and child care Stiching and Tailoring Rural crafts	leafy and other vegetables for daily consumption . • Lack of awareness on PHT of fruits and vegetables. • Lack of awareness on product diversification with local foods with emphasis on millets. • Drudgery among farm women in farm operations. • Nutritional deficiencies among adolescent girls, pregnant and lactating women& children. • Lack awareness on income generating activities for off season.	Training Programmes Method Demonstrations Demonstrations Training Programmes Training Programmes
3					Dairy	• Poor milk production. • Reproductive problems in milch buffaloes. • Mastitis	Demonstrations & Trainings.
4					Poultry	• No improved poultry breeds are available. • Poultry diseases	Demonstrations & Trainings.
5	Banaganapalle	Banaganapalle	Yerragudi	2018	Redgram, Paddy, Setaria, Jowar	• Pod borers and Pod fly in Redgram. • Stemborer in Rice.	IDM, IPM.

6	Banaganapalle	Banaganapalle	Yerragudi	2018	Household food security and Kitchen gardening Value Addition Drudgery reduction technologies Development of nutrient efficiency diet with local foods Women and child care Stiching and Tailoring Rural crafts	• Lack of awareness on importance of consumption of green leafy and other vegetables in daily menu. • Non-availability of green leafy and other vegetables for daily consumption . • Lack of awareness on PHT of fruits and vegetables. • Lack of awareness on product diversificatio n with local foods with emphasis on millets. • Drudgery among farm women in farm operations. • Nutritional deficiencies among adolescent girls, pregnant and lactating women& children. • Lack awareness on income generating activities for off season.	Training programmes & Demonstrations Training Programmes Method Demonstrations Demonstrations Training Programmes Training Programmes
7					Dairy	• Fodder shortage. • Poor milk production. • Reproductive problems. • Mastitis	Demonstrations & Trainings.

8					Poultry	• Non availability of improved poultry breeds.	Demonstrations & Trainings.
9					Sheep	• Poor growth in ram lambs, high lamb mortality.	Demonstrations & Trainings.

2.8 Priority/thrust areas:

Crop/Enterprise	Thrust area
Seed Production	Addressing the scarcity of quality seed : Availability of quality seed to the farmer is one of the major constraint farmer is facing every year. They are depending on the private market / government agencies for their seed requirements. The supply is not meeting the demand in time and more over farmers are being cheated by different agencies with spurious seed. Awareness should be created about the production of own seed by the farmer. For this, seed village concept is required at least in direct varieties in crops like paddy, red gram, desi cotton, Bengal gram, which have huge demand in the market has to be promoted
Cropping system:	**crop intensification in Rainfed black soils** On black soils of Kurnool district generally one crop Bengalgram/fallow-Jowar is being taken during rabi (September - october) in an area of 3.02 laksh ha. Farmers are getting low net returns/ha . Foxtail millet (korra), crop being its short duration may fit well in double cropping sequence(Korra- Bengalgram/ Jowar) under rainfed situation in black soils. Inorder to increase net returns Rs/ha and cropping intensity, Seteria- bengalgram can be successfully grown in rainfed black solis ,if on set of monsoon are intime.
Varietal replacement	The productivity of crops are lowest due to cultivation of old and traditional varieties due to non availability of improved varieties/hybrids .Seed is the vital and critical input for crop production. Crop productivity is highly influenced by selection of high yielding varieties. Among different components of recommended package of practices, improved variety contributes up to 30 percent to the over all yield improvement. Keeping this in view KVK, Yagantipalle is organized several FLDs in Cereals,oil seeds, pulses and other crops in order to popularize improved varieties in different parts of Kurnool district
Resource conservation **Zero Tillage and Direct seeding in paddy with Drum seeder**	In Kurnool district Maize crop is being cultivated in an area of 14,604 ha and 10898 ha during kharif and rabi respectively with average productivity of 6250 kg /ha. In the district recently Rice followed by maize gaining popularity moreover their reaping good yields. There is a lot of scope to increase the acreage under this cropping system.
Redgram	Suitable Varietal selection, Integrated Pest Management

Rice	IPM for Stemborer, IDM for blast and sheathblight, Organic farming
Chillis	IPM for sucking pests and IDM for root rot
Cotton	IPM for sucking pests
Bengalgram	Varietal selection and ICM
Greengram	Varietal selection and ICM
Blackgram	Varietal selection and ICM
Jowar	IPM for shoot fly and stem borer

2.9 Salient Achievements of (April 2018-March, 2019) (Mandated activities/ Projects):

S.No	Activity	Target	Achievement
1.	Technologies Assessed and refined(No.)	2	2
2.	On-farm trials conducted (No.)	44	44
3.	Frontline demonstrations conducted (No.)	237	237
4.	Farmers trained (in Lakh)	61	84
5.	Extension Personnel trained (No.)	19	26
6.	Participants in extension activities (in Lakh)	20	20
7.	Production of Seed (in Quintal)	1500	2555
8.	Planting material produced (in Lakh)	5,00,000	3,81,472
9.	Live-stock strains and finger lings produced (in Lakh)	5100	5685
10.	Soil, Water, plant, manures samples tested (in Lakh)	0.015	0.01663
11.	Mobile agro-advisory provided to farmers (in Lakh)	0.5	0.672
12.	No.of Soil Health Cards issued by Mini Soil Testing Kits (No.)	500	539
13.	No.of Soil Health Cards issued by Traditional Laboratory (No.)	3000	3785

3. TECHNICAL ACHIEVEMENTS

3.A. Details of target and achievements of mandatory activities by KVK during 2018-19:

OFT (Technology Assessment)				FLD (crop/enterprise/CFLDs)			
1				2			
Number of technologies		Total no. of Trials		Area in ha		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
20	20	118	118	253	253	661	661

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	61	84	1655	2866	20	20	1331	2056
Rural youth	11	11	265	293				
Extn. Functionaries	7	9	195	508				
Vocational	1	2	40	40				

Seed Production (Qtl.)			Planting material (Nos.)		
5			6		
Target	Achievement	Distributed to no. of farmers	Target	Achievement	Distributed to no. of farmers
1500	2555		5,00,000	3,81,472	623

3.b. TECHNOLOGY ASSESSMENT

Summary of technologies assessed under various crops by KVKs:

Thematic areas	Crop	Name of the technology assessed	Source of technology with year	No. of trials	No. of farmers
Integrated Nutrient Management	Redgram	Assessment of efficacy of potassium and zinc on productivity of redgram	ANGRAU	6	6
	Bengalgram	Assessment of Phosphorus consortia for Phosphorus management	ANGRAU	6	6
	Banana	Assessment of fertigation schedule in tissue culture Banana	Dr.YSRHU. Udyana panchangam	6	6
	Onion	Soil test based fertilizer management in Onion	Dr.YSRHU. Udyana panchangam	6	6
Varietal Evaluation	Redgram	Varietal Evaluation of medium duration Redgram varieties		1	6
	Redgran	Effect of Nipping in Hybrid Redgram		1	6
	Blackgram	Evaluation of new varieties against YMV		1	6
	Chrysanthemum	Assessing the performance of chrysanthemum varieties	Dr.YSRHU.Udyana panchangam	6	6
Cropping systems	Redgram	Regram based intercropping systems		1	6
	Rice	Rice based cropping sequences under limited irrigation		1	6
Integrated Pest Management	Redgram	Management of Pod borers with special reference to pod fly		1	6
Integrated Crop Management	Jowar	Management of Shoot fly and Stem borer		1	6
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology	Rice	Evaluation of Organic farming for pest management and yield		1	6
Farm Machineries					
Integrated Farming System					

Seed / Plant production					
Post Harvest Technology / Value addition					
Drudgery Reduction	Rice Jowar Redgram	Triple layer hermatic storage bags for storing of Rice, Redgram dhal & Jowar at household level	RDT,Ananthpur	3	60
	Chillies	Easy planter for transplanting chillie seedlings to reduce Drudgery of farm women	ICRISAT	1	2
Storage Technique					
Others (Pl. specify)					
Total				**42**	**140**

Summary of technologies assessed under livestock by KVKs:

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Disease Management				
Evaluation of Breeds				
Feed and Fodder management	Dairy	Feed with agricultural waste	5	5
	Dairy	Concentrate supplementation with wet distillery grains	5	5
Nutrition Management	Dairy	Bypass fat supplementation	10	10
	Dairy	Balanced feeding	10	10
Production and Management				
Others (Pl. specify)				
Total			30	30

3.c. TECHNOLOGY ASSESSMENT IN DETAIL

OFT: 1

S.No	Item		Particulars
1	Thematic Area	:	Cropping systems
2	Title	:	Assessment of redgram based intercropping Systems in rainfed situation
3	Scientists Involved	:	M.Sudhakar, SMS(Agronomy)
4	Details of Farming Situation	:	Rainfed, Medium black soils, fertility Status
5	Problem definition/description	:	In Kurnool district generally Redgram is being cultivated in an area of 45,000 ha and yields are limited by the amount and distribution of rainfall during monsoon period. There is a limited scope for increasing pulse productivity by increasing in area. The increasing demand can be met by increasing the productivity through adopting appropriate agronomic practices of which intercropping is one of the best way to increase production.
6	Technology assessed	:	T1: Redgram + Greengram (1:5) T2: Redgram + blackgram(1:5) T3: Redgram + setaria 1:5) Farmers practice: Redgram (Sole)
7	Critical Inputs given	:	Seed

8.Results:

Table: Performance of the technology

Technology Option	No.of trials	Yield (t/ha)		Net Returns (Rs. in lakh./ha)	B:C ratio	LER	Redgram Equivalent Yield(Kg/ha)
		Redgram	Inter crop				
Farmers practice: Redgram (Sole)	6	898	-	17984-00		1.00	898
T1: Redgram + Greengram (1:5)		833	211	20414-00		1.42	1019
T Redgram + blackgram(1:5)		817	187	15010-00		1.39	992
T3: Redgram + setaria 1:5)		840	1045	33435-00		1.74	1302

Mean Yield and Economic Returns of Redgram based for the last three years-2016-18

Treatments	Row ratio	Yield (Kg/ha)		LER	Gross returns Rs/ha	Redgram Equivalent yield (kg/ha)
		Redgram	Inter crop			
Redram+ Greengram	**1:5**	**876**	**411**	**1.50**	**24360**	**1263**
Redgram+ Blackgram	**1:5**	**854**	**333**	**1.40**	**19786**	**1198**
Redgram+ Setaria	**1:5**	**840**	**1117**	**1.67**	**26826**	**1244**
Redgram	**sole**	**986**	**-**	**-**	**18972**	**986**

Description of the results:

on farm testing on **Assessment of redgram based intercropping Systems in rainfed situation** was conducted during the kharif season of 2016-18 at Differeent villages of Banaganapalli mandal. The results indicated that growing of Redgram as sole crop recorded higher grain yield (986kg ha-1) over Redgram in intercropping system.

Among the cropping systems, intercropping of Greengram, setaria and Blackgram with pigeonpea resulted in maximum pigeonpea equivalent yield (1263 kg ha-1), 1244 and 1198 kg ha-1) over other intercropping system and sole pigeonpea.

The LER is high with Pigeonpea + Setaia intercropping system compared to inter cropping syatems Ahmad and prasad (1996) also reported higher LER with little millet + Pigeonpea intercropping system.


Constraints faced:

9. Feed back of the farmers involved:

- Redgram based intercropping system found to be remunerative than sole crops of seteria/redgram/Greengram /blackgram even under drought conditions. Fodder needs of cattle and milch animals was met.
- While maintaining the yield levels of the sole crop, additional yields with the intercropping component have been realized.
- Since, a food legume is involved in the system, it will not only enhance the income of the farmer, but also provide with the much-needed protein to supplement the predominantly cereal diet of farmers, besides adding fertility to the Soil.

10. Feed back to the scientist who developed the technology:

❖ Research on development of medium duration Redgram varieties has to be strengthened.

OFT 2:

S. No	Item		Particulars
1	Thematic Area	:	Cropping systems
2	Title	:	Assessment of alternate crops for paddy under limitted irrigated conditions in paddy-padddy cropping sequences
3	Scientists Involved	:	M.Sudhakar, SMS(Agronomy)
4	Details of Farming Situation	:	Irrigated, black soils, fertility Status:
5	Problem definition/description	:	Rice is one of the popular food crops being grown in canal, tank fed and under bore wells of the kurnool district. In recent years farmers are growing winter crops. But still majority of farmers grow rice as summer crop if the water is available. It is established that rice requires more water along with more quality farm inputs and low net returns/ha due to high cost of cultivation.
6	Technology assessed	:	Padd-Paddy(Farmers Practice) T1: Paddy- Mustard T2: Paddy- Setaria T3: Paddy- Blackgram
7	Critical Inputs given	:	Seed

8. Results:

Table: Performance of the technology

Technology Option	No.of trials	Yield (t/ha)	Net Returns (Rs. in lakh./ha)	B:C ratio	Paddy equivalent yyieldyyy
Padd-Paddy(Farmers Practice)	6	6366	37820-00	1:1.63	6366
T1: Paddy- Mustard		805	43096-00	1:3.01	4203
T2: Paddy- Setaria		2407	27153-00	1:2.67	2828
T3: Paddy- Blackgram		960	47450-00	1:1.84	3169

Description of the results:

In the present study , the yields of crops considered were converted into a common standard Rice equivalent yield. Based on Rice equivalent yield the results shows that among all the rice based cropping sequences, Rice-rice sequence found to be superior followed by Paddy- Blackgram and Paddy- Mustard. But the CB ratio was highest with Paddy- Mustard sequence followed by paddy-setaria. But the net returns were highest in case of Paddy-Blackgram and Paddy- Mustard followed by Paddy-paddy. The CB ratio analysis showed that the paddy sequence with mustard gave highest returns followed by paddy-setaria.

9. Feed back of the farmers involved:

Among all Paddy based sequences Paddy- Mustard followed by paddy-setaria will immense use for the farmers to reap maximum net returns per unit area and time.

10. Feed back to the scientist who developed the technology:

- Research on development High yielding Mustard varieties suitable for relay cropping/Rice fallows has to be strengthened.

OFT: 3

S.No	Item		Particulars
1	Thematic Area	:	Cropping systems
2	Title	:	Assessment of Nipping on Yield of Rainfed Redgram
3	Scientists Involved	:	M.Sudhakar, SMS(Agronomy)
4	Details of Farming Situation	:	Irrigated, black soils, fertility Status
5	Problem definition/description	:	Redgram is an important pulse crop. The cropis largely grown under rainfed situation, its agronomic practices are required to be standardized for realizing yield potential. Among them plant population and the number reproductive sink/plant are the key factors for determining the yield. In Kurnool district Redgram being cultivated in an area of 45000 ha under rainfed situation. The productivity levels are low due to high plant densities, increased plant height, less no of Primary & secondary branches, terminal moisture stress.
6	Technology assessed	:	T1: Farmers practice T2: Sowing at 180cm and Nipping at 50 DAS T3: Sowing at 180cm and Nipping at 50 DAS and 70DAS
7	Critical Inputs given	:	Seed

8. Results:

Table: Performance of the technology

Technology Option	No.of trials	Yield (t/ha)	Net Returns (Rs. in lakh./ha)	B:C ratio
T1: Farmers practice	6	**1835**	**63527**	**1:2.58**
T2: Sowing at 180cm and Nipping at 50 DAS		2135	78127	1:2.83
T3: Sowing at 180cm and Nipping at 50 DAS and 70DAS		2212	81828	1:2.89

Mean Yield and Economic Returns of Nipping in Hybrid Redgram for the last three years-2016-18

Technology Option	No.of trials	Yield (t/ha)	Net Returns (Rs. in lakh./ha)	B:C ratio
T1: Farmers practice	6	**2001**	**69148**	**1:2.80**
T2: Sowing at 180cm and Nipping at 50 DAS		2287	83170	1:3.09
T3: Sowing at 180cm and Nipping at 50 DAS and 70DAS		2356	89148	1:3.12

Description of the results:

The results indicated that Nipping of terminal bud at 50DAS &70DAS and Nipping at 50DAS were recorded on-par yield. Nipping of terminal bud significantly reduced the plant height and increased the number of primary and secondary branches, pods per plant and test weight. The increased yield components may be attributed to activation of lateral dormant buds. The increase in yield due to nipping was 16.0 per cent over control. The low yields in farmers practice may be attributed to reduction in yield components.

The highest net returns and CB ratio was realized when nipping was done at 50DAS & 70DAS followed by nipping at 50DAS.

9.Feed back of the farmers involved:

- Nipping of terminal bud at 50DAS &70DAS and Nipping at 50DAS were recorded higher yields than farmers practice, but it is labour intensive.
- Farmers opined that, if nipping machinery are available ,it is advantageous.

10. Feed back to the scientist who developed the technology:

Development of power operated for machinery for nipping operation is necessary to overcome labour scarcity during peak season.

OFT: 4

S. No	Item		Particulars
1	Thematic Area	:	Varietal Evaluation
2	Title	:	Assessment of medium duration varieties of Redgram
3	Scientists Involved	:	M.Sudhakar, SMS(Agronomy)
4	Details of Farming Situation	:	Rainfed, Redsoils,
5	Problem definition/description	:	In Kurnool district Redgram being cultivated in an area of 45000 ha under rainfed situation. The productivity levels are low due to high plant densities, increased plant height, less no of Primary & secondary branches and terminal moisture stress.
6	Technology assessed	:	T1: Asha T2: LRG-52 T3: PRG-176
7	Critical Inputs given	:	Seed

8. Results:

Table: Performance of the technology

Technology Option	No.of trials	Yield (t/ha)	Net Returns (Rs. in lakh./ha)	B:C ratio
T1: Asha	6	**1515**	**41027**	**1:1.97**
T2: LRG-52		**1927**	**65210**	**1:2.49**
T3: PRG-176		**1645**	**49227**	**1:2.12**

Description of the results:

The results indicated that Redgram varieties ie LRG-52, PRG-176 and Asha were recorded on-par yield. In Redgram variety LRG-52 and Prg-176 the number of primary and secondary branches, pods per plant more compared local variety ie Asha..

The highest net returns and CB ratio was realized with LRG-52 followed by PRG-176 due to its short duration and more number pods/plant.

9.Feed back of the farmers involved:

- Among three varieties LRG-52 performed better than PRG-176 and Aha.
- Farmers were impressed with performance of LRG-52

10. Feed back to the scientist who developed the technology:

- Incidence of wilt observed in PRG-176.

OFT: 5

S.No	Item		Particulars
1	Thematic Area	:	Nutrient Management
2	Title	:	Assessment of efficacy of potassium and zinc on productivity of redgram
3	Scientists Involved	:	K.V. Ramanaiah
4	Details of Farming Situation	:	Kharif-2017. Rainfed Red Soils of OFT plots were high in Phosphorus content and medium in potassium. Zinc deficiency was observed in these soils.
5	Problem definition/description	:	**Redgram is a major pulse crop cultivating in of Kurnool district during kharif season. ARS Utukur, Kadapa presented technical program on application of Potassium and zinc in redgram which increases yields significantly during pre Action plan workshop at Tirupati**
6	Technology assessed	:	T_1- Farmers practice (No K and Zinc application) T_2- Basal application of K-60 Kg/ha T_3 - Basal application of K-60 Kg/ha + Zinc sulphate-25 Kg./ha
7	Critical Inputs given	:	(along with quantity as well as value)- MOP- 100/ha Value- Rs.1500/ha Zinc sulphate-25 Kg./ha Value-Rs.1000/ha

8. Results:

Table : Performance of the technology :

Technology Option	No.of trials	Yield (t/ha)	Net Returns (Rs. in /ha)	B:C	Data on Other performance indicators*
Farmers Practice- (No K and Zinc application)	6	0.691	0.15584	1:1.82	
Technology1 -Basal application of K-60 Kg/ha		0.727	0.16268	1:1.81	
Technology2- Basal application of K-60 Kg/ha + Zinc sulphate-25 Kg./ha		0.748	0.16582	1:1.80	

Description of the results:

The result indicated that the yield in both T_{-2} (0.727/ha) and T_3 (0.748t/ha) were on par and higher than farmer's practice -T_1 (0.691 t./ha)

Constraints faced:

9. Feed back of the farmers involved:

Pre seasonal training on soil sampling and testing, fertilizer application and mid seasonal field visits finally field days were organized. However, application of potassium and Zinc is effective in yield improvement.

10. Feed back to the scientist who developed the technology:

Efficacy of zinc was observed in zinc deficient soils when compared sufficient range soils.

OFT: 6

S. No	Item		Particulars
1	Thematic Area	:	Integrated Nutrient Management
2	Title	:	**Assessment of Phosphorus consortia for Phosphorus management**
3	Scientists Involved	:	K.V. Ramanaiah
4	Details of Farming Situation	:	Rabi-2018. Rainfed black soils .Soils of OFT plots were high in Phosphorus content and medium to high potassium.
5	Problem definition/description	:	Bengalgram is major rabi pulse crop in Kurnoo distict. It was observed that high P content in 85 % bengalgrm growing areas .farmers were applying excess dose of complex fertilizers than recommendation. Hence P consortia is required to solublise fixed P thereby reduce P application and cost of production on phosphotic fertilisers.
6	Technology assessed	:	**T_1- Basal application of PSB consortia +N-20 Kg/-ha** **T_2-50 % RDP+ PSB consortia-NPK-20-25-0 Kg./ha** **Check: Farmers practice : No PSB consortia-NPK-42-78-0 Kg./ha**
7	Critical Inputs given	:	**PSB consortia-PSB+PSF+VAM @5 Kg/ha each along with FYM-500 Kg** Value- Rs.3600/ha

8. Results:

Table : Performance of the technology:

Technology Option	No.of trials	Yield (t/ha)	Net Returns (Rs. in /ha)	B:C	Data on Other performance indicators*
Farmers Practice- **no PSB consortia**	6	1.762	0.47711	1:2.44	
Technology 1-- **Basal application of PSB consortia**		1.627	0.44294	1:2.48	
Technology 2- **50 % RDF+ PSB consorti**		1.807	0.51676	1:2.65	

Description of the results:

The result indicated that the yield of T_3 (1.807 t/ha) is higher than -T_1(1.627 t./ha)and farmers practice(1.762 t./ha)

Constraints faced:

9. Feed back of the farmers involved:

Pre seasonal training on soil sampling and testing, fertilizer application and mid seasonal field visits finally field days were organized at initial stages, but application of PSB consortia is more effective in P availability and cost reduction on phosphotic fertilisers.

10. Feed back to the scientist who developed the technology:

Efficacy of Phosphorus consortia was observed in high phosphorus soils when compared low range soils.

OFT: 7

S.No	Item		Particulars
1	Thematic Area	:	Production of organic inputs
2	Title	:	**Assessment of waste decomposer for recycling of farm waste**
3	Scientists Involved	:	K.V. Ramanaiah
4	Details of Farming Situation	:	Rabi-2018.
5	Problem definition/description	:	Most of the farmers are not following proper recycling of farm waste and crop residues are being burnt at road sides after threshing. Hence, waste decomposer technology is more potential to meet the organic manure requirement in both irrigated and rainfed areas. It has tremendous prospects in converting agro-wastes/ crop residues through waste decomposer into valuable agricultural organic input. Burning and removing crop residues decreases SOC.
6	Technology assessed	:	T_1- Drenching of farm waste with diluted waste decomposer @200 lit/ 1 tonne of farm waste at 10 days interval T_2 (Farmers practice) : No Waste decomposer application for recycling-drenching with water
7	Critical Inputs given	:	**Jaggary-48kg-Rs.2400/-** Value- Rs.2400/ha

8. Results:

Table: Performance of the technology:

Technology Option	No .of trials	Time taken for complete decomposition(Days)-and decomposition percentage								
		15 days	30 days	45	60 days	75 days	90 days	105 days	120 days	135 days
Farmers Practice- No Waste decomposer application for recycling-drenching with water	6	No	Started decomposition	20%	30%	40%	50%	75%	90%	100%
Technology 1 Drenching of farm waste with diluted waste decomposer @200 lit/ 1 tonne of farm waste at 10 days interval		No	Started decomposition	20%	30%	40%	50%	75%	90%	100%

Description of the results:

The result indicated that the decomposition rate in both technology and control was on par and Almond leaves residue used for recycling in both treatments

Constraints faced:

9. Feed back of the farmers involved:

Farmers expressed that usage waste decomposer may be continued with different crop residues.

10. Feed back to the scientist who developed the technology:

Efficacy of waste decomposer was observed that more time taken for decomposition(135 days) than recommended time(40-45 days).Hence it may be continued with different crop residues .

OFT: 8

S.No	Item		Particulars
1	Thematic Area	:	Integrated Pest Management
2	Title	:	**Evaluation of Organic Package on Yield and Pest Management in Rice (New)**
3	Scientists Involved	:	D.Balaraju, SMS – Plant Protection
4	Details of Farming Situation	:	Rice is generally grown under Canal Aycut area and under bore wells both in black soils and red soils of the district in about 1 lakh ha. Annually. Rice – Rice farming system followed in canal areas has resulted in soils becoming salt affected and yields gradually declining from year to year.
5	Problem definition/description	:	Indiscriminate use of chemical fertilizers and pesticides for management of soil fertility and pest and disease management in rice, leading to pesticide residues in grain and deterioration of soil health and fertility over years. There is a serious concern among the consumers too with regard to pesticide residues in rice. To revive the lost health of soil and to produce the quality rice on sustainable basis the there needs some new intervention.
6	Technology assessed	:	Organic package of crop and pest management in Rice will be assessed against conventional indiscriminate use of fertilizers and pesticides followed by farmers. T1 – Farmers practice – Indiscriminate use of pesticides. • No FYM or Green Manuring. • NPKS (kg/ha) – 365 – 188 – 110 – 85 • Zinc Sulphate (kg/ha) - 50 • 1 granule application and 5 rounds of pesticide application. • Carbofuron @ 25 kg/ha basal or PI stage • Mono 36% SL or Chloro 50 EC or L-cyhalothrin spray @ 1 lt/ha + 19-19-19 2.5 kg/ha or Zinc 12% @ 250 g/ha • Cartap Hydrochloride 50 % SP @ 1 kg/ha + Carbendazim @ 500 g/ha or Car+Maco @ 1 kg/ha • Profenophos @ 1 lt/ha + Hexaconazole @ 1 lt/ha / • Buprofezen @ 1 lt/ha or Dinotefuron 20% SC @ 250 g/ha + Tricyclazole @ 300 g/ha • Pymetrozine 50% WG @ 120 g/ac + Tricyclazole @ 300 g/ha T2 – Assessment – Organic package • FYM/Green manure, Neem cake (100 kg/ac); • Pseudomonas /PSB /Azospirillum (1 kg each) seed/seedling/soil treatment; • Neem oil, Botanical extracts, Pf, Jeevamrith, Beauveria for PP,
7	Critical Inputs given	:	Neem cake @ 100 kg/ac = Rs. 1500/ac Pseudomonas 2 kg, PSB, Azospirillum @1 kg each/ac = Rs.300/ac Neem oil @ 1 lt/ac = Rs. 400/ac and Beauveria @ 1 lt/ac = Rs.300/ac Total of Critical inputs Rs. 2500-00 per ac.

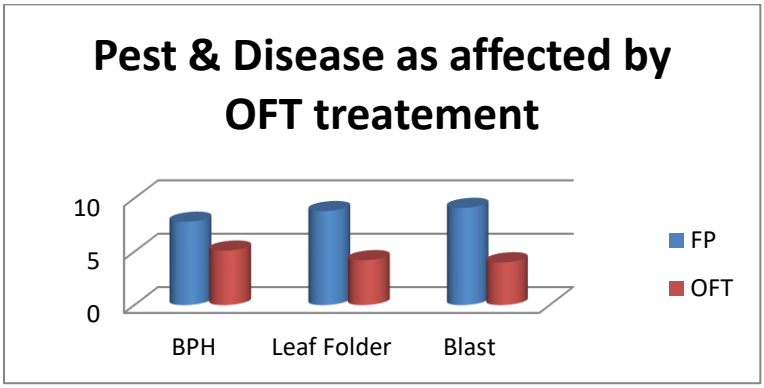
8. Results :

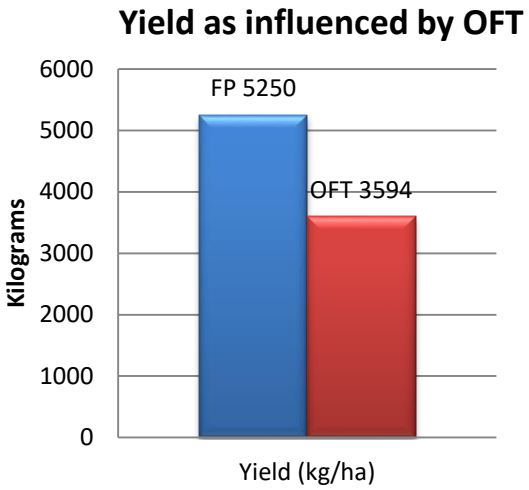
Table: Performance of the technology:

Technology Option	No.of trials	Yield (t/ha)	Net Returns(Rs. lakh./ha)	B:C ratio	Data on Other performance indicators*
Farmers Practice : Indiscriminate use of pesticides.	6	5.25	0.44	1.72	BPH-7.8/plant Leaf folder–8.8 % Blast - 9.1 % Cost of PP – Rs. 8,750/ha
Technology 1 : Organic package • FYM/Green manure, Neem cake (100 kg/ac); • Pseudomonas /PSB /Azospirillum (1 kg each) seed/seedling/soil treatment; • Neem oil, Botanical extracts, Pf, Jeevamrith, Beauveria for PP,		3.594	0.29	1.67	BPH - 5.1/plant Leaf folder–4.2 % Blast - 4.0 % Cost of PP – Rs. 2,375/ha

Description of the results:

The result indicated that organic practice gave 31.5% lower yield compared to farmers practice. But the cost benefit ratio in organic products is better as it fetches premium price. Incidence of pests and diseases is also low.





Constraints faced:

9. Feed back of the farmers involved:

- ✓ The farmers are not readily accepting the technology as it involves lot of labour, patience and there is no ready made solutions for all pest / disease problems and basically the fear of reducing yields due to non application of fertilizers.
- ✓ Farmers were to some extent convinced that with no fertilizer regime, the incidence of pest and diseases itself will be low.

10. Feed back to the scientist who developed the technology:

OFT: 9

S. No	Item		Particulars
1	Thematic Area	:	Integrated Pest Management
2	Title	:	Management of pigeonpea pod borers with special reference to pod fly (Melanagromyzaobtusa).
3	Scientists Involved	:	D.Balaraju, SMS – Plant Protection
4	Details of Farming Situation	:	Redgram crop is being cultivated both in Kharif under Rainfed Conditions in the selected village. The soils are black soils with medium to high P and K and low N content. Normal rainfall of this mandal is 600-630 mm, which is mostly received in SW Monsoon period especially from July to September. In case of necessity, the fields can be given supplemental irrigation, from near by SRBC Canal, that boosts the yields.
5	Problem definition/description	:	In Kurnool district, in recent times, pod fly assumed as a major pest contributing to increasing losses in grain yield of Pigeonpea year by year. It was reported in Maharashtra that, with the advent of Bt cotton and its large scale cultivation the podfly assumed as important biotic constraint in increasing production and productivity in Pigeonpea and the damage by pod fly ranged from 25.5% to 36% (Anonymous 2008).

6	Technology assessed	:	Recommended module of Borer and Pod fly management in Redgram is assessed against indiscriminate use of pesticides followed by farmers. T1 – Farmers practice – Spraying New generation molecules starting from flowering till pod maturation at 15-20 days interval. Thus, 3 – 5 sprays are given depending on the duration of the crop. T2 – Recommended – • Spraying of Neem oil (300 ppm) @ 5ml/lt at bud formation stage of the Crop. • Spraying chlorpyriphos @ 2.5 ml/lt or Acephate @ 1.5 g/lt at 50% flowering stage. • Spraying Emamectin benzoate 5% @ 0.5g/lt + Thiomethoxam 25WG @ 0.25 g/lt 15 days after 2nd spray and • Spraying Flubendiamide 39.35% SC @ 0.25 ml/lt + Acetamaprid 20 SP @ 0.2 g/lt 15 days after 3rd spray.
7	Critical Inputs given	:	✓ Neem oil 300 ppm @ 1 lt/ac = Rs. 300/ac ✓ Acephate 75% SP @ 500 g/ac = Rs.300/ac ✓ Emamectinbenzoate @100 g/ac = Rs. 600/ac . ✓ Thiomethoxam 25 WG @ 40 g/ac = Rs. 175/ac ✓ Flubendiamide 39.35% SC @ 50 ml/ac = Rs. 450/ac ✓ Acetamaprid 20 SP @ 40 g/ac = Rs. 175/ac Critical inputs of worth Rs. 2000/- per ac or Rs. 5000/- per ha were provided to the trial farmers.

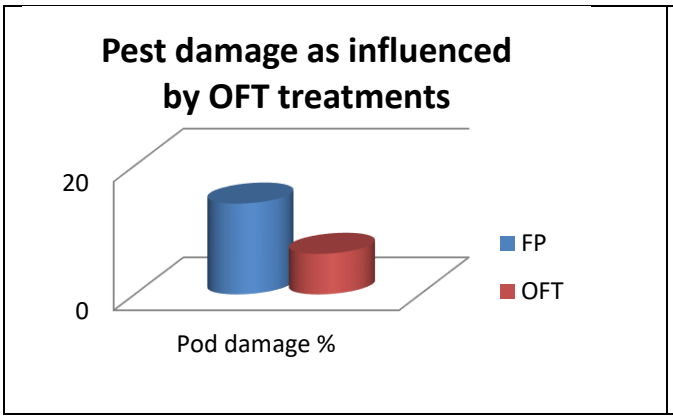
8.Results:

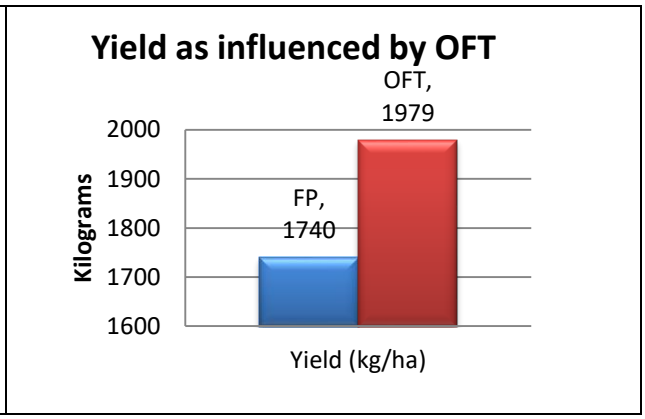
Table: Performance of the technology

Technology Option	No.of trials	Yield (t/ha)	Net Returns(Rs. lakh./ha)	B:C ratio	Data on Other performance indicators*
Farmers Practice : Spraying New generation molecules starting from flowering till pod maturation at 15-20 days interval. Thus, 3 – 5 sprays are given depending on the duration of the crop.	6	17.40	0.27	1.63	Pod damage – 14.1 %t Cost of PP – Rs. 8,125/ha
Technology 1 : ✓ Spraying of Neem oil (300 ppm) @ 5ml/lt at bud formation stage of the Crop. ✓ Spraying chlorpyriphos @ 2.5 ml/lt or Acephate @ 1.5 g/lt at 50% flowering stage. ✓ Spraying Emamectin benzoate 5% @ 0.5g/lt + Thiomethoxam 25WG @ 0.25 g/lt 15 days after 2nd spray and ✓ Spraying Flubendiamide 39.35% SC @ 0.25 ml/lt + Acetamaprid 20 SP @ 0.2 g/lt 15 days after 3rd spray.		19.79	0.35	1.80	Pod damage - 6.3 % Cost of PP – Rs. 9,375/ha

Description of the results:

In addition to the farmers knowledge and adoption of spraying new generation chemicals viz., Emamectin benzoate, Flubendiamide starting from flowering in schedules of 15 – 20 days interval for management of pod borers, the farmers have added one conventional systemic insecticide in each spray to check the incidence of pod fly, which is normally observed from pod formation stage. With adoption of treatements in OFT, the farmers could effectively manage both the pests that resulted in less damage of pods and grains (55.6 % less damage).





Constraints faced:

9. Feed back of the farmers involved:

It is easy to adopt the package, as it needs only few combinations of chemicals to be sprayed compulsorily at flowering and pod initiation stages of the crop, which involves very less cost and gives better yield, by effective management of both pod borers and pod fly.

10. Feed back to the scientist who developed the technology:

OFT: 10

S.No	Item		Particulars
1	Thematic Area	:	Integrated Pest Management
2	Title	:	**Integrated Management of Shoot fly and Stem borer in Jowar**
3	Scientists Involved	:	D.Balaraju, SMS – Plant Protection
4	Details of Farming Situation	:	Jowar is being cultivated in late Kharif or Maghi Season, mostly under Rainfed Conditions in the selected village. The soils are light black soils with moderate P and K and low N content. Normal rainfall of this mandal is 550-600 mm, which is mostly received in SW Monsoon period especially from July to September.
5	Problem definition/description	:	In Kurnool district, shoot fly and stem borer are the regular pests occurring on Jowar. The farmers are not adopting recommended PP measures, hence the initial loss is more and leaving less plant population in the field which has direct bearing on yield.
6	Technology assessed	:	Recommended module of pest management for shoot flyl and stem borer is assessed against indiscriminate use of pesticides followed by farmers.

			T1 – Farmers practice – **Indiscriminate use of pesticides.** T2 – Recommended – • Increased seed rate @ 6 kg/ac • Seed treatment with Imidacloprid @ 3 ml/kg seed. • Spraying of Thiodicarb @ 1.5g/lt and Lambda Cyhalothrin 5% SC @ 2 ml/lt alternately at 7, 14 and 21 days after sowing. • Whorl application of Carbofuron 3G @ 4 kg /ac at 30-35 DAS. T3 - Seed treatement with Imidacloprid @ 3 ml/kg + Chlorantraniliprole @ 0.3 ml/lt at 15 DAS.
7	Critical Inputs given	:	• Imidacloprid @ 50 ml /ac = Rs. 100/ac • Thiodicarb @ 500 g/ac = Rs.500/ac • Carbofuron@ 4 kg/ac = Rs. 400/ac . • Chloranthraniliprole @ 60 ml/ac = Rs. 800/ac Critical inputs of worth Rs. 1800/- per ac or Rs. 4500/- per ha were provided to the trial farmers.

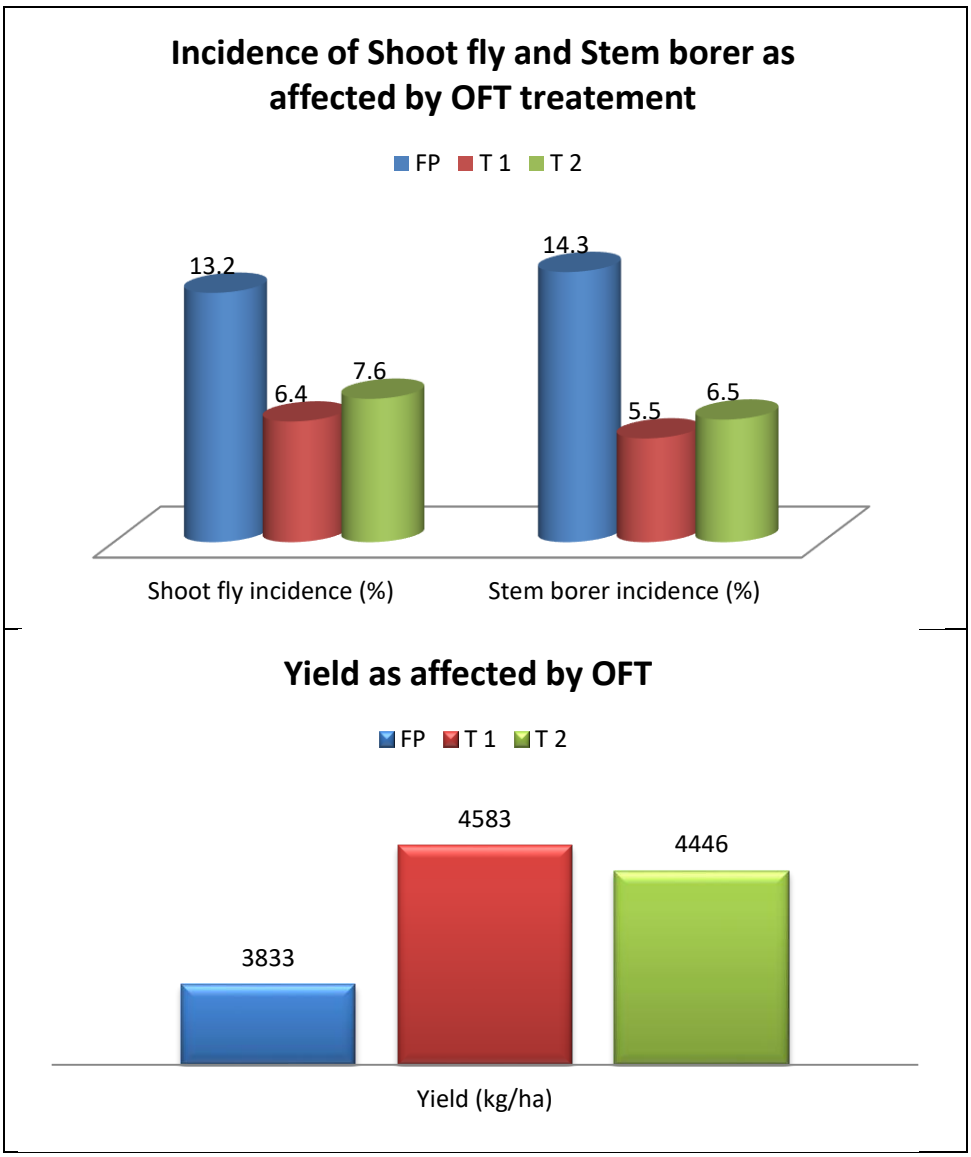
8.Results :

Table: Performance of the technology

Technology Option	No.of trials	Yield (t/ha)	Net Returns(Rs. lakh./ha)	B:C ratio	Data on Other performance indicators*
Farmers Practice : Indiscriminate use of pesticides.	6	38.33	0.14	1.34	Shoot fly – 13.2 % Stem borer - 14.3 % Cost of PP – Rs.4,125/ha
Technology 1 : • Increased seed rate @ 6 kg/ac • Seed treatment with Imidacloprid @ 3 ml/kg seed. • Spraying of Thiodicarb @ 1.5g/lt and Lambda Cyhalothrin 5% SC @ 2 ml/lt alternately at 7, 14 and 21 days after sowing. • Whorl application of Carbofuron 3G @ 4 kg /ac at 30-35 DAS.		45.83	0.26	1.66	Shoot fly –6.4 % Stem borer - 5.5 % Cost of PP – Rs.2,875/ha
Technology 2 : • Seed treatementwith Imidacloprid @ 3 ml/kg + Chlorantraniliprole @ 0.3 ml/lt at 15 DAS.		44.46	0.25	1.62	Shoot fly – 7.6 % Stem borer - 6.5 % Cost of PP – Rs.2,450/ha

Description of the results:

Seed treatement with Imidacloprid followed by Spraying of Thiodicarb and Lambda Cyhalothrin at weekly intervals for shoot fly management and whorl application of Carbofuron 3 G granules at 30 DAS for stem borer management has given better plant stand and better yield compared to farmers practice and other treatement where Seed treatement followed by Spray of Rynaxypyr at 15 DAS was taken up.



Constraints faced:

9. Feed back of the farmers involved:

- ✓ Farmers were convinced about the seed treatement with Imidacloprid followed either by spraying with Rynaxypyr or whorl application of Carbofuron as these could greately reduce the incidence of both shoot fly and stem borer.

10. Feed back to the scientist who developed the technology:

OFT: 11

S.No	Item		Particulars
1	Thematic Area	:	Varietal Selection and Integrated Disease Management
2	Title	:	Assessing the Performance of different varieties of Blackgram against YMV.
3	Scientists Involved	:	D.Balaraju, SMS – Plant Protection
4	Details of Farming Situation	:	Blackgram crop is being cultivated both in Kharif (as intercrop with redgram) and Rabi Seasons, both under Rainfed and Irrigated Conditions in the district. It is mostly grown in Black soils with moderate P and K and low N content. Normal rainfall of the area of blackgram is 600-630 mm, which is mostly received in SW Monsoon period especially from July to September.
5	Problem definition/description	:	In Kurnool district, the major diseases of Blackgram occurring regularly are YMV, powdery mildew and leaf spots. YMV can cause damage more than 50% in severe cases.
6	Technology assessed	:	Various varieties released in recent times by different universities for YMV tolerance are being tested. T1 – Farmers practice – LBG 752 T2 – PU 31 T3 – MASH 338 Management of whitefly with yellow sticky traps and need based pesticide sprays.
7	Critical Inputs given	:	• Cost of 8 kg seed (4 kg of PU 31 and 4 kg of MASH 338 per beneficiary to cover 0.4 ha) @ 200/- per kg. = Rs.1600/- per ac. • Yellow sticky traps @ 20/ac = Rs. 300/ac Critical inputs (Seed) of worth Rs. 1900/- per ac or Rs. 4,750/- per ha were provided to the trial farmers.

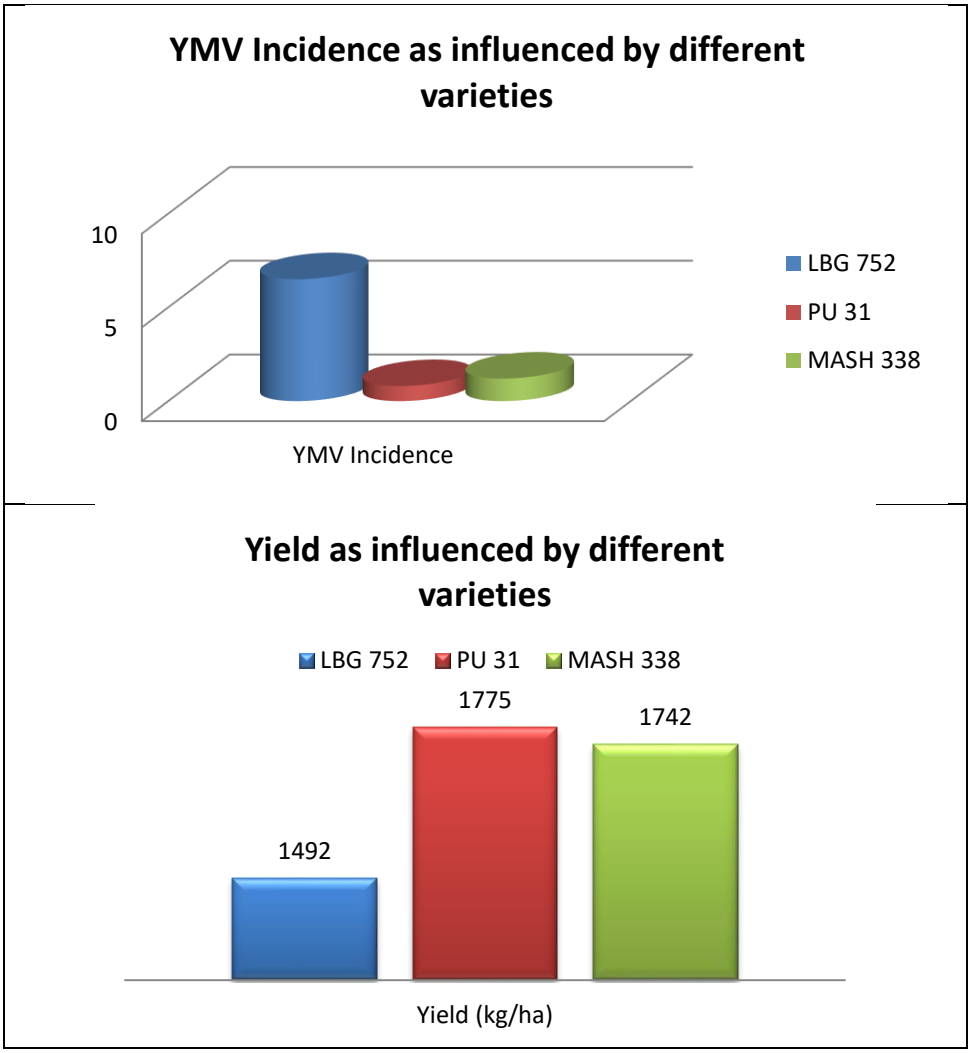
8.Results :

Table : Performance of the technology

Technology Option	No.of trials	Yield (t/ha)	Net Returns(Rs. lakh./ha)	B:C ratio	Data on Other performance indicators*
Farmers Practice : LBG 752	6	14.92	0.28	1.76	YMV – 6.5% Cost of PP – Rs. 10,625/ha
Technology 1 : PU 31 + Mgmt. of whitefly (Yellow sticky traps @ 20/ac and spray of Acetamaprid or Triazophos).		17.75	0.42	2.15	YMV – 0.8% Cost of PP – Rs. 9,50 0/ha
Technology 1 : MASH 338 + Mgmt. of whitefly (Yellow sticky traps @ 20/ac and spray of Acetamaprid or Triazophos).		17.42	0.40	2.11	YMV – 1.2 % Cost of PP – Rs. 9,500/ha

Description of the results:

Both the varieties of Blackgram viz., PU 31 and MASH 338 out performed the variety LBG 752 being sown by farmers, with regard to incidence of YMV as well as yielding . The yields obtained in PU 31 and MASH 338 were 1775 kg/ha and 1742 kg/ha respectively which are higher than the yield of variety LBG 752 (Farmers practice). Almost negligible incidence of YMV is noticed in the introduced varieties, which is better than that of LBG 752.



Constraints faced:

9. Feed back of the farmers involved:

- ✓ The farmers have accepted both the varieties PU 31 and MASH 338 and now they are widely cultivating these varieties, in preference to LBG 752 which showed YMV incidence and leaf crinkle virus incidence.

10. Feed back to the scientist who developed the technology:

OFT: 12

S.No	Item		Particulars
1	Thematic area	:	Varietal Evaluation
2	Title	:	Assessing the performance of chrysanthemum varieties
3	Scientists Involved	:	M. Adinarayana, SMS (Horticulture)
4	Details of Farming Situation	:	Irrigated, Redsoils,
5	Problem definition/description	:	Farmers are getting low yields due to cultivation of non notified varieties
6	Technology assessed	:	T_1 – Kundan (Yellow) T_2 – Chandra kiran (Violet) T_3 – Local (Nati chamanthi)
7	Critical inputs given	:	Chrysanthemum seedlings

8. Results:

Table : Performance of the technology

Technology Option	No.of trials	Flower Yield qt/ha	Net Returns (Rs. in lakh./ha)	B:C ratio	Yield/plant
Kundan (T1)	6	167.35	4,83,635/-	3.60	0.47kg/plant
Chandra Kiran (T2)		171.10	4,74,914/-	3.46	0.51kg/plant
Local (T3)		104.87	2,41,780/-	2.78	0.32kh/plant

Description of the results:

- Kundan yellow coloured variety has compact petals which is having wide consumer acceptance. Harvesting of Chandra kiran is continued up to end of February. With the on farm testing on assessing the performance of chrysanthemum crop varieties, it is found that the highest yield was observed in Chandra kiran 171.1q/ha and Kundan 167.35q/ha then the local variety Nati chamanthi 104.87q/ha.

9. Feed back of the farmers involved:

- The farmers have accepted both the varieties Kundan and Chandra kiran. Now they are widely cultivating these high yielding varieties.

10. Feed back to the scientist who developed the technology: nill

OFT: 12

S.No	Item		Particulars
1	Thematic area	:	Nutrient Management
2	Title	:	Soil test based fertilizer management in Onion
3	Scientists Involved	:	M. Adinarayana, SMS (Horticulture)
4	Details of Farming Situation	:	Irrigated, Sandy loam & clay loam
5	Problem definition/description	:	Due to continuous use of chemical fertilizers in Irrigated conditions, soil compaction was seen which hinders the bulb development in onion, resulting in poor yields.
6	Technology assessed	:	T_1 – STBF T_2 – Farmers practice indiscriminate use of fertilizers
7	Critical inputs given	:	Urea, SSP, MOP

8. Results:

Table : Performance of the technology

Technology Option	No.of trials	Yield qt/ha	Net Returns (Rs. in lakh./ha)	B:C ratio
STBF (T1)	6	112.5	88,750/-	2.38
(FP) (T2)		105.23	69,503/-	1.78

Description of the results:

- With the on farm testing on soil test based fertilizers in onion, it is found that the 6.46% higher yield was observed in STBF trial (112.5q/ha), when compared to farmers practice (105.23q/ha) and saving of Rs.15,842/ha.

9. Feed back of the farmers involved:

- Application of soil test based fertilizer involves less cost and more effective in yield improvement and good net returns.

10. Feed back to the scientist who developed the technology: nill

OFT: 13

S.No	Item		Particulars
1	Thematic area	:	Nutrient Management
2	Title	:	Assessment of fertigation schedule in tissue culture Banana
3	Scientists Involved	:	M. Adinarayana, SMS (Horticulture)
4	Details of Farming Situation	:	Irrigated, Sandy loam & clay loam
5	Problem definition/description	:	The cost of cultivation in banana is very high due to high cost of soluble fertilizers that are being indiscriminately used in banana cultivation, which is resulting in low or at times negative net returns.
6	Technology assessed	:	T_1 – Fertigation schedule by Dr.YSRHU T_2 – Farmers practice (indiscriminate use of soluble fertilizers)
7	Critical inputs given	:	Urea & MOP

8. Results:

Table: Performance of the technology

Technology Option	No.of trials	Yield qt/ha	Net Returns (Rs. in lakh./ha)	B:C ratio
Fertigation Schedule (T1)	6	608.5	249805	1:2.71
(FP) (T2)		575.7	202385	1:2.17

Description of the results:

Observed less cost of cultivation in demo fields compared to farmer practices. It is about Rs. 26,100/- saving from fertilizers. The yield is increases about 5.39%.

9. Feed back of the farmers involved:

- It is easy to adopt the schedule, which involves very less cost and gives better yield.

10. Feed back to the scientist who developed the technology:

Most of the farmers are heavily using fertigation with complex water soluble fertilizers. It leads to high cost of cultivation & also keeps on decreases the soil health and yields.

OFT: 14

S.No	Item		Particulars
1	Thematic area	:	Feed and fodder technology
2	Title	:	Evaluation of different feed formulations using agricultural by products.
3	Scientists involved	:	A.Krishna Murthy, SMS (AH)
4	Details of farming situation:	:	Under irrigated black soils, Ground nut, Black gram and sunflower are cultivating in the district.
5	Problem definition / description: (one paragraph)	:	Heavy wastage of valuable agricultural by products was observed in Kurnool dist. These can be utilized in animals feeding to reduce the cost of concentrates.
6	Technology Assessed:	:	T_1 – Rice Bran T_2 –Black gram haulms (30%) + Concentrate feed (70%) T3- G.N.Haulms (30%) + Concentrate feed (70%)
7	Critical inputs given:	:	Concentrate feed @ 3kg / animal/day
8	Results	:	The results indicated that 16.9% increased milk yield in T2 over T1 and increase of 3.4%milk yield in T3 over T1.

8. Results:

Table: Performance of the technology

Technology Option	No.of trials	Avg. milk yield in 60 days	Net (Rs.	B:C	Data on Other performance indicators*
Rice Bran	5	198.6	5331.00	1:4.3	
Black gram haulms (30%) + Concentrate feed (70%)		223.1	6637.80	6.7:1	
G.N.Haulms (30%) + Concentrate feed (70%)		213.1	6107.1	5.5:1	

Description of the results:

The trial was conducted to assess the three different feed formulated incorporating legume haulms to reduce the cost of concentrate feed and tested at 5 farmers. The results indicated that more milk yield recorded on feeding of 30% Black Gram haulms supplemented feed followed by GNH feed and Rice bran. There is no significant difference in the milk yield on feeding of GNH and BGH feeds.

9. Feed back of the farmers involved: Palatability of the feed is less compare to regular concentrate feed.

11. Feed back to the scientist who developed the technology: Nil

OFT: 15

S.No	Item		Particulars
1	Thematic area	:	Nutrition management
2	Title	:	Supplementation of concentrate feed along with wet distillery grains to milch buffaloes
3	Scientists involved	:	A.Krishna Murthy, SMS (AH)
4	Details of farming situation:	:	The dairy farmers feeding wet distillery grains as concentrate feed to milch buffaloes. As this is wet form, more prone to growth of mould growth and cannot preserve for more than 2 days.
5	Problem definition / description: (one paragraph)	:	Farmers are feeding sole wet distillery grain as concentrates which is low in all essential nutrients. The protein and energy are not balanced which lead to metabolic disorders.
6	Technology Assessed:	:	T_1 – Wet distillery grains (Farmers practice) T2- wet distillery grains (50%) + Concentrate feed (50%) (1:1)
7	Critical inputs given:	:	Concentrate feed @ 3kg / animal/day
8	Results	:	The results indicated that 10.16% increased milk yield was observed in the treatment over farmers practice.

8. Results:

Table: Performance of the technology

Technology Option	No.of trials	6%FCM yield/day (kg)	Net Returns (Rs. /lamb)	B:C ratio	Data on Other performance indicators*
Wet distillery grains (Farmers practice)	5	6.92	10576.30	2.9:1	
Wet distillery grains (50%) + Concentrate feed (50%) (1:1)		8.2	14157.50	4.4:1	

Description of the results:

The results indicated that 18.49% increase of 6%FCM yield was observed in the on supplementation of 50% concentrate feed along with wet distillery grains over farmers practice on whole wet distillery grain feeding as concentrates.

9. Feed back of the farmers involved: Well accepted the technology by the farmers. Brewers waste was completely eliminated from the ration.

10. Feed back to the scientist who developed the technology: Nil

OFT: 16

S.No	Item		Particulars
1	Thematic area	:	Nutrition management
2	Title	:	Supplementation of bypass fat to milch buffaloes
3	Scientists involved	:	A.Krishna Murthy, SMS (AH)
4	Details of farming situation:	:	Dairy farming provides sustainable income to the farmers and the cost of milk production completely depends on concentrate feeding. Farmers are not having knowledge on scientific management of pregnant cows.
5	Problem definition / description: (one paragraph)	:	Neglect towards pregnant buffaloes resulted in negative energy balance soon after calving and effects the milk production.
6	Technology Assessed:	:	T_1 – Farmers practice (concentrate feeding) T2- Concentrate feeding + Bypass fat @ 100g/day
7	Critical inputs given:	:	Bypass fat @ 100g / animal/day
8	Results	:	The results indicated that 23.13% increased milk yield was observed in the treatment over farmers practice.

8. Results:

Table: Performance of the technology

Technology Option	No.of trials	6%FCM yield/day (kg)	Net Returns (Rs. /lamb)	B:C ratio	Data on Other performance indicators*
Farmers practice (Concentrate feeding)	10	7.30	6128.80	3.8:1	
Concentrate feed + 100g Bypass fat/day/animal		9.19	7688.50	3.76:1	

Description of the results:

The results indicated that 25.9% increase of 6%FCM yield was observed on supplementation of bypass fat along with regular concentrate feed over farmers practice. The improved peak milk yield resulted in increased lactation yield.

9. Feed back of the farmers involved: Well accepted the technology by the farmers.

10. Feed back to the scientist who developed the technology: Nil

OFT: 17

S.No	Item		Particulars
1	Thematic area	:	Nutrition management
2	Title	:	Feeding of balanced ration to milch buffaloes through ration balancing techniques.
3	Scientists involved	:	A.Krishna Murthy, SMS (AH)
4	Details of farming situation:	:	Dairy farming provides sustainable income to the farmers and the cost of milk production completely depends on concentrate feeding.
5	Problem definition / description: (one paragraph)	:	Over feeding resulted in heavy wastage of available feeding resources as well as increased cost of feeding. Imbalanced feeding leads to nutritional deficiencies.
6	Technology Assessed:	:	T_1 – Farmers practice (regular feeding feeding) T2- Balanced feeding
7	Critical inputs given:	:	Concentrate feed and mineral mixture
8	Results	:	The results indicated that 20.44% increased milk yield was observed in the treatment over farmers practice.

8. Results:

Table: Performance of the technology

Technology Option	No.of trials	6%FCM yield/day (kg)	Net Returns (Rs. /lamb)	B:C ratio	Body weight gain (kg)
Farmers practice (Regular feeding)	10	6.42	4239.00	2.38:1	
Balanced feeding		8.24	6780.00	3.59:1	16.3

Description of the results:

The results indicated that 28.34% increase of 6%FCM yield along with 16.3kg weight gain was observed on balanced feeding over farmers practice of regular feeding. The android application “Ration Formulator” developed by Sri Venkateswara Veterinary University, Tirupati was used to formulate the ration. The application found to very useful to the dairy farmers.

9. Feed back of the farmers involved: Well accepted the technology by the farmers.

10. Feed back to the scientist who developed the technology: Nil

OFT: 18

S.No	Item		Particulars
1	Thematic Area	:	Drudgery Reduction
2	Title	:	Assessment of performance of Triple layer hermatic storage bags for storing of Rice, Redgram dhal & Jowar at household level
3	Scientists Involved	:	K.Lakshmipriya
4	Details of Farming Situation	:	
5	Problem definition/description	:	In Cereals and pulses, post harvest losses occurred due to incidence of storage pests. In the villages farm women usually store their farm produce in conventional methods i.e, polyethelene bags/gunny bags. Due to this type of storing method, there is lot of storage losses and also more drudgery of farm women for repeat cleaning and change of produce.
6	Technology assessed	:	T1: Farmers Practice (Storing of produce in Polyethlene/Gunny Bags) T2: Storing of Rice in hermatic bags T3: Storing of Redgram dhal in hermatic bags T4: Storing Of Jowar in hermatic bags
7	Critical Inputs given	:	Triple layer hermatic storage bags @ Rs60/- Bag

8. Results:

Table:

Observations	Farmers practice	Demo.
Incidence of Storage Pest	Rice4-months Redgram-4months Jowar5-months	Rice6-months Redgram6-months Jowar-Under Progress
Percentage of damaged grains	Under Progress	
Cost effectiveness	Rs.150/qt	Rs.60/-/bag
Feed back of farm women about storage in hermatic bags	With the use of hermatic storage bags, pest incidence was not observed up to six months. Drudgery was reduced on frequent cleaning and storing of grains and it was recorded as minimum. And it was also noticed that, for cleaning of grains Rs.150/-/qt has to be paid as labour charges. One time purchasing of triple layer hermatic bags have longetivity for storing of food grains and helps to save amount on labour charges on cleaning.	

Table: Performance of the technology

Technology Option	No.of trials	Yield (t/ha)	Net Returns (Rs. in lakh./ha)	B:C ratio	Data on Other performance indicators*
Farmers Practice	3				
Technology 1(Mention details)					
Technology 2(Mention details)					
Technology 3(Mention details)					

Description of the results:

With the use of hermatic storage bags, pest incidence was not observed up to six months. Drudgery was reduced on frequent cleaning and storing of grains and it was recorded as minimum. And it was also noticed that, for cleaning of grains Rs.150/-/qt has to be paid as labour charges. One time purchasing of triple layer hermatic bags have longetivity for storing of food grains and helps to save amount on labour charges on cleaning.

Constraints faced: No

9. Feed back of the farmers involved:

Farm women expressed that, with the use of hermatic bags reduced repetitive cleaning of grains thereby reduced drudgery and cost on labour for cleaning purpose.

10. Feed back to the scientist who developed the technology:

OFT: 19

S.No	Item		Particulars
1	Thematic Area	:	Drudgery Reduction
2	Title	:	Assessment of Performance of easy planter for transplanting chillie seedlings to reduce drudgery of farm women
3	Scientists Involved	:	K.Lakshmipriya
4	Details of Farming Situation	:	Kharif/Irrigated/Black soils
5	Problem definition/description	:	1.Farm women face lot of strain and body pains in tranplanting operations. 2. Farm women are not aware of improved implements for agriculture operations.
6	Technology assessed	:	T1-Manual Transplanting T2-Transplanting with easy planter
7	Critical Inputs given	:	Easy planter @Rs2000/-each

8. Results:

Observations	T1:Manual	T2: Transplanting with planter
Labour required/ac for Transplantation	5	3
Cost Saving on labour for Transplanting	Rs.750/-	Rs.450/-
Feed Back on work related Stress factors	With the use of easy planter, Cost saving on labour by 40% . Drudgery was reduced from **moderate to minimum** than manual which was recorded from **moderate to maximum.** But Farm women also expressed that, they needs practice for operation of the implement.	

Table : Performance of the technology

Technology Option	No.of trials	Yield (t/ha)	Net Returns (Rs. in lakh./ha)	B:C ratio	Data on Other performance indicators*
Farmers Practice	2				
Technology 1(Mention details)					
Technology 2(Mention details)					
Technology 3(Mention details)					

Description of the results:

With the use of easy planter, Cost saving on labour by 40%. Drudgery was reduced from **minimum to moderate** than manual which was recorded from **moderate to maximum.** Farm women expressed that, they needs practice for operation of the implement.

Constraints faced:-

9. Feed back of the farmers involved: Farm women expressed that, with the easy planter, drudgery reduced than their regular practice but they needs practice of the implement.

10. Feed back to the scientist who developed the technology:-

3.d. FRONTLINE DEMONSTRATION

a. Follow-up of FLDs implemented during previous years:

S. No	Crop/ Enterprise	Thematic Area*	Technology demonstrated	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
					No. of villages	No. of farmers	Area in ha
1	Bengalgram	Varietal Evaluation	Varietal Demonstration in Bengalgram with Jaki-9218, digvijay and Nandyala sanaga-1	Demonstrations, Exposure visits, Field Days Seed village Concept	30	21000	55000
2	Cotton and Paddy	Weed management	Post-emrgence herbicides	Demonstrations, Exposure visits, Field Days, Seed village Concept	15	18000	55000
3	Paddy	Resource conservation	Direct Seeding	Demonstrations, Exposure visits, and Field Days	10	120	300
4	Paddy	Resource conservation	Zero tillage	Demonstrations, Exposure visits, and Field Days	8	200	500
5	Seteria	Varietal Evaluation	Varietal Demonstration with Suryanandi	Demonstrations, Exposure visits, and Field Days	50	5000	10000
6	Redgram Seteria	Cropping system	Redgram+ seteria Inter cropping System	Demonstrations, Exposure visits, and Field Days	35	5000	25000
7	Redgram	Varietal Evaluation	Varietal Demonstration in Redgram-PRG-176& LRG-52	Demonstrations, Exposure visits, Field Days Seed village Concept	50	5000	18000
8	Rice	Soil testing	Soil testing crop response based nutrient application in rice	Demonstration, exposure visits, Field Days .	30	918	5250
9	Bt Cotton	IPM	IPM	Method Demonstrations, Exposure visits, and Field Days	14	360	1100
10	Redgram	IPM	Realtime contingent mgmt. of pests & diseases	Village Action Plan meetings, Rythu Chaitanya Yatras. Trainings	12	250	220
11	Bengalgram	IDM	Biopriming for soil borne disease management	Method Demonstration, Rythu Chaitanya Yatras, CFLDs, trgs.	25	450	600
12	Brinjal	IPM	Mgmt of fruit & shoot borer	Exposure visit, Farmers trainings, trgs	8	80	50
13	Onion	IPM	Thrips& Leaf blight	Training, Demonstration, RCY	10	150	140

14	Blackgram	IPM	Realtime contingent mgmt. of pest s & diseases	Training, Demonstration, Village Action Plan Meetings. RCY,CFLD	15	230	200
15	Chilli	ICM	ICM whole package	Demonstrations, Exposure visits, and Field Days	25	4500	6000
16	Dolichos bean	Varietal evalution	Cultivation of Dolichos bean during the rabi as alternate to traditional vegetables.	Demonstrations, Exposure visits, and Field Days	6	45	70
17	Brinjal	ICM	ICM whole package	Demonstrations, Exposure visits, and Field Days	15	500	1000
18	Acid lime	IDM	Dry root rot management with bio agents	Demonstrations, Exposure visits, and Field Days	5	90	130
19	Pomegranate	ICM	Best management practices from pruning to harvest	Demonstrations, Exposure visits, and Field Days	8	40	100

b. Details of FLDs implemented during the current year (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	Source of funds	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
						Proposed	Actual	SC/ST	Others	Total	
Oilseeds:											
1	Groundnut	ICM	Variety, STBF, Sucking pest management	Kharif-2018		20	20	6	19	25	
2	Castor	ICM	Variety, STBF, Sucking pest management	Kharif-2018		10	10	4	9	13	
3	sunflower	ICM	Spacing and micro nutrient	Rabi-2018		10	10	4	9	13	
4	Rabi groundnut	ICM	Variety, STBF, Sucking pest management	Rabi-2018		20	20	5	20	25	
5	Sesame	ICM	Variety, STBF, weed management	Rabi-2018		10	10	3	10	13	
6	Safflower	ICM	Variety, STBF, weed management	Rabi-2018		10	10	3	10	13	

Pulses:											
1	Redgram	ICM	Variety, STBF, Sucking pest management	Kharif-2018		30	30	7	30	37	
2	Blackgram	ICM	Variety, STBF, Sucking pest management	Kharif-2018		20	20	6	19	25	
3	Blackgram	ICM	Spacing and micro nutrient	Rabi-2018		20	20	5	20	25	
4	Bengalgram	ICM	Variety, STBF, Sucking pest management	Rabi-2018		30	30	7	30	37	
Other Demonstrations											
1	paddy	Weed management	Herbicides+ Manual weeding	K-2018		4	4	4	6	10	
2	Paddy	Crop Establishment	Semi dry Rice cultivation	K-2018		4	4	3	7	10	
3	Seteria-Bengalgram	Cropping sequence	ICM	K-2018 R-2018		4	4	4	6	10	
4	Bt cotton	Crop geometry	spacing	K-2018		4	4	3	7	10	
5	Blackgram	Direct seeding	Herbicides+ Manual weeding	R-2018		4	4	4	6	10	
6	Bengalgram	Mechanical harvesting	-	R-2018		4	4	4	6	10	
7	Cotton	Nutrient management	Soil test based nutrient management	Kharif-2018	KVK	4	4	3	7	10	

8	Chilli	Integrated Nutrient management	Soil test based nutrient management	Kharif-2018	KVK	4	4	3	7	10	
9	Bengalgram	Nutrient management	Sulphur and Zinc management	Rabi-2018	KVK	4	4	3	7	10	
10	Jowar	Micro-Nutrient management	Zinc management	Rabi-2018	KVK	4	4	3	7	10	
11	Rice	Nutrient management	STCR based nutrient Management	Kharif-2018	KVK	4	4	3	7	10	
12	Bt Cotton	IPM	Sucking pest management	K 2017	ICAR	4.0	4.0	3	7	10	
13	Chillis	IDM	Viral disease management	K 2017	ICAR	4.0	4.0	2	8	10	
14	Chillis	IDM	Mgmt of root rot	K 2017	ICAR	4.0	4.0	2	8	10	
15	Rice	IDM	Mgmt.of blast and sheath blight	K 2017	ICAR	4.0	4.0	1	9	10	
16	Rice	IPM	Mgmt of stem borer	R 2017	ICAR	4.0	4.0	2	8	10	
17	Chilli	ICM	ICM whole package	Kharif, 2018	KVK	4	4	4	6	10	
18	Dolichos bean	Alternate crop	Cultivation of Dolichos bean during the rabi as alternate to traditional vegetables.	abi, 2018	KVK	4	4	7	3	10	
19	Brinjal	ICM	ICM whole package	Rabi 2018	KVK	4	4	5	5	10	

20	Acid lime	IDM	Dry root rot management with bio agents	Rabi, 2018	KVK	4	4	4	6	10	
21	Pomegranate	ICM	Best management practices from pruning to harvest	Kharif 2018	KVK	4	4	5	5	10	

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					
Groundnut	Kharif-2018	Rainfed	Red soil	L	Med	High	Jowar	2nd week of July	Last week of october		
Castor	Kharif-2018	Rainfed	Red soil	L	Med	High	Jowar	3rd week of July	Last week of December		
sunflower	Rabi-2018	Irrigated	Black soil	L	High	High	Jowar	2nd week of oct	Last week of Jan		
Rabi groundnut	Kharif-2018	Rainfed	Red soil	L	Med	High	Jowar	3rd week of July	Last week of December		
Sesame	Kharif-2018	Rainfed	Red soil	L	Med	High	Jowar	3rd week of July	Last week of December		
Pulses:											
Redgram	Kharif-2018	Rainfed	Red soil	L	Med	High	Jowar	3rd week of July	Last week of December		
Blackgram	Rabi- 2018	Irrigated	Black	L	Med	High	Jowar	2ndrd week of oct	1st week of jan		
Blackgram	Kharif-2018	Irrigated	Black	L	Med	Med	Jowar	3rd week of nov	First week of Feb		
Bengalgram	Rabi- 2018	Irrigated	Black	L	Med	High	Jowar	2ndrd week of oct	1st week of feb		

Other Demonstrations											
paddy	K-2018	irrigated	Black soil	L	M	High	Jowar	2nd week of sep	2nd Week of Dec		
Paddy	K-2018	irrigated	M.Black soils	L	M	M	Chillies	1st week of August	Last Week of January		
Seteria-Bengalgram	K-2018 R-2018	Rainfed	Clay loam	L	M	M	Blackgram	2nd week of july	2nd Week of Dec		
Bt cotton	K-2018	Rainfed	Black soil	L	H	H	Jowar	3nd week of July	3rd week of January		
Blackgram	R-2018	irrigated	Black Soil	L	Med	High	Jowar	2nd week of Nov	2nd Week of Feb		
Bengalgram	R-2018	Rainfed	Black Soil	L	Med	High	Jowar	2nd week of October	1st Week of Feb		
Soil Science											
Bt.cotton	Kharif-18	I/D	Black soil	Low	Medium	Medium to high	Jowar	Last week of July	Last picking 3rd week of January		
Chilli	Kharif-18	I/D	Black soil	Low	High	Medium to high	Maize	2nd to 3rd week of August.	Last week of February		
Bengalgram	Rabi-18	Rainfed	Black	Low	M to H	Medium to high	Bengalgram	3rd week of Oct.	3rd week of Jan.		
Jowar	Rabi-18	I/D	Black	Low	High	Medium to high	Paddy	2nd to 3rd week of January.	Last week of April		
Paddy	Kharif-18	Irrigated	Black soil	low	High	Medium to high	Paddy	3rd week of August	Last week of December		
Bt Cotton	K 2017	ID	BC soil	L	M	H	Chillis	4th week of July	2nd wk of Feb		
Chillis	K 2017	Irrigated	BC soil	L	M	H	Cotton	1st wk of Sep	1st wk of Mar		
Chillis	K 2017	Irrigated	BC soil	L	M	H	Cotton	1st wk of Sep	1st wk of Mar		

Rice	K 2017	Irrigated	BC soil	L	M	H	Rice	2nd wk of Sep	4th wk of Jan		
Rice	R 2017	Irrigated	BC soil	L	M	H	Rice	2nd wk of Feb	3rd wk of May		
Chilli	Kharif, 2018	Irrigated	Clay loam	L	M	H	Chilli	2nd week of July	3rd week January		
Dolichos bean	abi, 2018	Irrigated	Clay loam	L	M	H	Tomato	1st week of Nov	3rd week of Feb		
Brinjal	Rabi 2018	Irrigated	Clay loam	L	M	H	Chilli	1st week of Sep	4th week of Feb		
Acid lime	Rabi, 2018	Irrigated	Clay loam	L	Medium to high	H	Acid lime	September	May		
Pomegranate	Kharif 2018	Irrigated	Clay loam	L	M	H	Bengal gram	July	April		

Technical Feedback on the demonstrated technologies:

S. No	Feed Back
1	Cost on manual weeding was reduced (Rs 950/- per ha) Weed control efficiency was 82-86.0Per cent Weed density was less in demo plot up to critical periods
2	**Semi dry method of Rice cultivation:** • Reduced cost of cultivation as compared to transplanting(Labour,Puddling costs) • Reduced seedr ate (8-12 KG /acre as against 30kg /acre) • Saves 35-40 per cent water. • Reduced fertilizers and pesticides uses
3	➢ Soil test based nutrient management and foliar application of K,Mg,Zn and B would improve the productivity of Bt.cotton
4	➢ Cost reduction on chemical fertilisers was observed in demonstration plots
5	➢ STCR based nutrient management helped in cost reduction on chemical fertilizers.
6	➢ Productivity enhancement due to application of sulphur and zinc in respective nutrient deficient soils
7	Bt Cotton : Stem application with Mono and Imida at 20,40 and 60 DAS is effective than spraying the same for sucking pest management.
8	Chillis : Seed treatment with TSOP and Imida 600 FS followed by installation of Yellow sticky traps @ 50/ha for white fly management is better for management of viral diseases.
9	Chillis : Soil application of Trichoderma and Pseudomonas @ 1 kg each mixed with 100 kg FYM and 10 kg Neem cake (after incubation) is better for management of root rot.

10	Spraying Tricyclazole on early detection of Blast symptoms could manage blast most effectively, without much damage to the crop.
11	Pinching off the tips of seedlings while transplanting, application of Cartap 4G @ 8kg/ac are better for management of YSB.
12	STBF based nutrient management helped in cost reduction on chemical fertilizers in onion
13	Cost reduction on water soluble fertilizers was observed in banana demonstration plots
14	Chilli: `observed less incidence of viral diseases and cost reduction from pesticides in demonstration plots
15	Acid lime: dry root rot management with soli application Trichoderma resulted less incidence in demo plots.

Farmers' reactions on specific technologies:

S. No	Feed Back
1	❑ **Groundnut:** ❑ The Groundnut variety Kadiri Harithandra is fairly tolerant to moisture stress than K6. ❑ Farmers were more impressed with performance of Dharani variety. ❑ Incidence of sucking pest is less in Dharani variety. ❑ Dark green foliage with less vegetative growth than K6 variety
2	❖ **SunFlower:** ❖ No significant difference in duration of sunflower hybrids cultivated by farmers. ❖ Due to adoption of 60cm spacing between the rows and practicing thinning at 10-15DAS crop was not affected with moisture stress. Basal application of P in form of SSP & boron spray @ 0.2% had positive effect on seed filling & test weight
3	❑ Sesame: ❑ The sesame variety YLM-66 is fairly tolerant to phyllody. ❑ Farmers were more impressed with performance of YLM-66 during summer after rice. ❑ Dark green foliage with more no of branches/plant

4	❑ **Redgram** ❑ The Redgram variety PRG-176 is fairly tolerant to moisture stress than LRG-41,ICPL-87119 ❑ Farmers were more impressed with performance of PRG-176 ❑ It is suitable for Redsoils and light soils. ❑ Long duration varieties affected due to moisture stress.
5	❖ **Blackgram** ❑ The Blackgram variety TBG-104 is fairly tolerant to YMV ❑ Farmers were more impressed with performance of TBG-104 due to its short duration. ❑ Dark green foliage with more no of branches/plant and pods ❑ The incidence of sucking pest also less.
6	❑ Bengalgram: ❑ The Bengalgram variety NBeG-3 is tolerant moisture stress ❑ Dark green foliage with more no of branches/plant and pods ❑ The incidence of wilt less in NBeG-3 compared to JG-11 ❑ Seeds are bold and attractive
7	Farmers were satisfied with crop performances and expressed that Soil test based nutrient management is a viable technology in Bt.cotton, because of less cost of chemical fertilizers and without reduction in yield compared to their own practice . They realized that they are resorting to higher expenditure on fertilizers in absence of soil testing of their fields. They are now willing to adopt STBR technology in succeeding seasons for raising crops. Pest incidence was less in demonstration plots than farmers practice fields.
8	Farmers were satisfied with crop performances and expressed that Soil test based nutrient management is a viable technology in chilli, because of less cost of chemical fertilizers and without reduction in yield compared to their own practice . They realized that they are resorting to higher expenditure on fertilizers in absence of soil testing of their fields. They are now willing to adopt the STCR technology in succeeding seasons for raising crops. Pest incidence was less in demonstration plots than farmers practice fields.
9	Need based application of Sulphur and zinc is more essential for bengalgram yield increments.
10	Application of Zinc is required to enhance yield of Jowar.

11	Soil test based nutrient management helped in cost reduction on chemical fertilizes. They realized that they are resorting to higher expenditure on fertilizers in absence of soil testing of their fields. They are now willing to adopt the STCR technology in succeeding seasons for raising crops. Pest incidence was less in demonstration plots than farmers practice fields.
12	Stem application in Bt cotton is useful for management of sucking pests and it is cheap.
13	Seed treatment with TSOP and Imida gave good control of virus disease in Chillis compared to continuous spraying of different chemical pesticides.
14	Root rot in Chillis is better managed by Soil application of Trichoderma and Pseudomonas than drenching with COC and sprayings of systemic fungicides.
15	Timely spraying of Tricyclazole and Propiconazole effectively controlled the blast and sheath blight disease in rice.
16	Chilli: integrated crop management practices are useful for management of pest & diseases in chilli.
17	Dolichos bean: alternate crop during rabi helped to get good additional income and less cost of cultivation
18	Brinjal: integrated crop management practices are useful for management of sucking pests and shoot & fruit borer
19	Pomegranate: scheduled spray was helped to control pest and diseases and good marketable quality fruits

Extension and Training activities under FLD:

Sl.No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	3	17-10-2018 03-01-2019 23.12.2018	70 85 265	
2	Farmers Training	13	01.07.2018 10.08.2018 15.09-2018 12.11.2018 18.01.2019 20.02.2019 29.9.2018 12.11.2018 2.2.2019 13.2.2019	25 25 30 52 50 45 45 75 197	
3	Media coverage	5			
4	Training for extension functionaries	3	20-12.2018 28-01.2019	50 20	

Performance of Frontline demonstrations

Frontline demonstrations on crops:

Crop	Thematic Area	technology demonstrated	Name of the Variety/ Hybrid		No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
			Domo	Check			Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
							High	Low	Average										
Pulses																			
Blackgram	Weed management	Post-emergence application of acflorofen+cladino pop propajil@750 ml/ha	TBG-104	TBG-104	10	4	1856	1660	1738	1632	9.25	30150	92114	61964	3.0	31375	864965	55121	2.75
Setaria-Bengalgram	Cropping system	Doubble cropping	Suryanandi/ Nandyalasanaga-1	Nandyala sanaga-1	10	4	850/ 1089	630/ 925	743/ 1025	1104	-	40550	69825	29275	1.71	30450	55200	24750	
Bengalgram	Nutrient Management	Sulphur and zinc management	NS-1	NS-1	10	4	18.80	16.80	17.62	15.85	11.14	33596	81029	47433	2.41:1	31029	63400	32371	1.99:1
Oilseeds																			
Cereals																			
Paddy	Crop establishment	Semidry cultivation	BPT-5204	BPT-5204	10	4	7519	7250	7424	7465	-	**57857**	**123683**	65826	2.13	**65375**	124366	60991	1.96
Paddy	Weed management in directed seed rice	Directed seed Rice	BPT-5204	BPT-5204	10	4	7650	7310	7432	7363	1.24	52857	123817	70960	2.34	64375	124333	59958	1.93
Paddy	Nutrient Management	STCR based nutrient management	BPT-5204	BPT-5204	10	4	79.85	66.70	71.64	70.05	2.26	49341	150434	101093	3.17:1	54364	147112	92465	2.70:1
Jowar	Nutrient Management	Zinc management	Private hybrid	Private hybrid	10	4	52.30	46.25	49.7	43.45	14.38	33505	99390	65885	2.98:1	31755	86894	55129	2.75:1
Rice	IDM	Mgmt of Blast and Sheath Blight	BPT 5204	BPT 5204	10	4.0	6125	5350	5494	4988	10.14	59,125	1,09,880	50,755	1.86	61,000	99,760	38,760	1.64
Rice	IPM	Mgmt of yellow stem borer	555	555	10	4.0					Crop is at grain maturation								
Commercial crops																			
Bt cotton	Crop geometry	Spacing	Swapna Bt	Swapna Bt	10	4	3200	2797	2960	2545	15.50	54375	162800	108475	2.99	52750	1399750	87225	2.65
Bt.Cotton	Nutrient Management	INM	Jadhu Bt.	Jadhu Bt.	10	4	28.25	22.50	25.15	23.11	8.83	53186	125750	72564	2.37:1	58148	115550	57402	1.99:1

Crop	Thematic Area	technology demonstrated	Name of the Variety/ Hybrid		No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
			Domo	Check			Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
							High	Low	Average										
Bt Cotton	IPM	Management of sucking pests	Nuziveedu	Nuziveedu	10	4.0	2950	2175	2613	2348	11.3	64,650	1,07,133	42,483	1.66	64,365	96,268	31,903	1.50
Chillis	IPM	Management of Viral disease complex	Super 10	Super 10	10	4.0	5460	4875	5120	4503	13.71	325488	419840	94352	1.29	312638	369246	56608	1.18
Chillis	IDM	Management of root rot	Super 10	Super 10	10	4.0	4420	3650	4025	3670	9.67	281125	330050	48925	1.17	265600	300940	35340	1.13
Millets																			
Vegetables																			
Chilli	Nutrient Management	STCR based Nutrient Mangmt.	Super-10	Super-10	10	4	62.50	56.10	58.67	57.35	2.3	219755	469360	249605	2.14:1	240762	458800	218038	1.91:1
Chilli	ICM	ICM whole package	NO-5	No-5	10	4	56.23	48.23	53.32	48.87	8.34	207624	469216	261592	2.25	220833	430056	209223	1.94
Dolichos bean	Alternate crop	Cultivation of Dolichos bean during the rabi as alternate to traditional vegetables.	Arka amogh (Dolichos bean)	448 (tomato)	10	4	84.65	79.48	82.5	380	-	42500	165000	122500	3.88	86350	171000	84650	1.98
Brinjal	ICM	ICM whole package	Poluru	Poluru	10	4	425.97	411.54	418.30	343.21	17.95	81503	209150	127647	2.56	87825	171605	83780	1.95
Fruits																			
Acid lime	IDM	Dry root rot management with bio agents	Balaji	Balaji	10	4													
Pomegranate	ICM	Best management practices from pruning to harvest	Baguva	Baguva	10	4	142	119	135	118	14	203053	513000	309947	2.52	241230	401200	159970	1.66
Plantation crops																			
Spices and condiments																			

FLD on Livestock:

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No.of Units (Animal/ Poultry/ Birds, etc)	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.)				Economics of check (Rs.)			
					Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Sheep	Animal nutrition management	Creep feed supplementation to pre weaned lambs	10	50	6.71	5.26	27.56	-	-	180.00	1342.00	1162.00	7.46	150.00	1052.00	902.00	7.01
					6%FCM yield/day (kg)		Milk yield in 60days (l)										
Dairy	Feed and Fodder technology	Feeding of Hydroponic Maize fodder to milch buffaloes	5	10	7.32	5.97	22.61	390.8	328.8	2708.00	13152.70	10444.70	4.86	3288.00	12584.60	9296.60	3.83
					Body weight gain in 90 days (kg)												
Sheep	Feed Management	Supplementation of 50%GNH feed to post weaned ram lambs	10	50	7.75	5.84	33.13	-	-	337.50	1937.50	1600.00	5.74	337.50	1460.00	1122.50	4.33
					Incidence of RP observed												
Dairy	Animal nutrition management	Supplementation of Selenium and Vit E	10	10	3/10	-	67.00	-	-	-	-	-	-	-	-	-	-
					Fodder yield (t/ha)		Milk yield/day (l)										
	Feed and fodder	Cultivation of improved fodder var.Super napier	10	10	229.20	187.50	22.24	6.89	6.03	-	-	-	-	-	-	-	-

FLD on Women Empowerment:

Category	Name of technology	No. of demonstrations	Name of observations	Demonstration	Check
Drudgery Reduction	Cotton Hand Gloves	30	Feed back on work related stress factors presented in a separate table	With the introduction of cotton hand gloves for Green Fodder harvesting, the farm women protects hands from scratches, itching and irritation caused while harvesting of green fodder and drudgery was recorded as minimum.	Green fodder harvesting with bare hands causes itching and irritation and drudgery was recorded from moderate to max..
Drudgery Reduction	Three Pronged Wheelhoe	5	Labour required/ac/day	8	18
			Reduction on Cost on weeding/ac	Rs.1200/-	Rs.2700/-
			Feed Back on work related Stress factors	With three pronged Wheel hoes for weeding in onion crop, cost on weeding was reduced by Rs.1500/- /ac and drudgery was recorded as **moderate** than manual weeding which was recorded from **moderate to max..** Farm women expressed that they need practice for easy operation of the implement.	With manual weeding drudgery was recorded and it is ranged from **moderate to maximum.**
Drudgery Reduction	Cycle weeders	5	Labour required/ac/day	6	15
			Reduction on Cost on weeding/ac	Rs.900/-	Rs.2250/-
			Feed Back on work related Stress factors	With Cycle weeders for weeding in Tomato crop, cost on weeding was reduced by Rs.1350/- /ac and drudgery was recorded as moderate than manual weeding which was recorded from moderate to max.. Farm women expressed that they need practice for easy operation of the implement.	With manual weeding drudgery was recorded and it is ranged from **moderate to maximum.**

FLDs conducted with the funding of other sources including CFLD/ATMA/NABARD/other ICAR institutes etc:

Crop	Source of fund	Thematic Area	technology demonstrated	Name of the Variety/ Hybrid		No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
				Domo	Check			Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
								High	Low	Average										
Oil Seeds:																				
Groundnut	**NMOOP**	ICM	Variety, STBF, Sucking pest management	Kadariharithandra	Irrigated	25	8	16.25	14.25	**15.40**	**12.30**	**25.2**	39565	80080	40515	2.02	37950	63960	26010	1.69
			Variety, STBF, Sucking pest management	Kadariharithandra	Rainfed		12	10.50	7.50	9.35	7.78	20.1	35228	48620	13392	1.38	36073	40473	4400	1.12
Kharif Castor	**NMOOP**	ICM	Variety, STBF, Micronutrient	DCH-519	Rainfed	12	10	11.38	9.00	9.88	8.02	23.1	18233	37525	19292	2.06	20945	30321	9376	1.4
Rabi Groundnut			Variety, STBF, Sucking pest management	Kadariharithandra	Irrigated	25	20	33.00	30.63	32.13	24.66	30.2	44616	176688	132072	4.0	42628	135630	93002	3.2
Sunflower	**NMOOP**	ICM	Spacing and micro nutrient	NDSH-1012	Irrigated	12	10	22.75	19.50	20.78	16.35	27.0	31683	65417	33733	2.1	29585	83125	53540	2.8
Sesame	**NMOOP**	ICM	Variety, STBF, weedmanagement	YLM-66	Non-specified	12	10	10.50	8.75	9.71	7.96	21.90	**17017**	**77667**	60650	4.6	15465	63667	48200	4.1
Safflower	**NMOOP**	ICM	Variety, STBF, weedmanagement			12	10	8.75	7.50	9.58	8.02	19.40	**21563**	**38333**	16771	1.8	20488	32087	11599	1.6
Pulses																				
Redgram	**NFSM**	ICM	Variety, STBF, weedmanagement and IPM	PRG-176	Rainfed	40	30	12.00	8.75	11.00	9.38	17.2	**25563**	**62150**	36588	2.4	27535	52997	25462	1.92
Blackgram	**NFSM**	ICM	Variety, STBF, weedmanagement and IPM	TBG-104	Irrigated	25	20	26.25	18.75	22.91	18.50	23.80	**33270**	**128296**	95026	3.86	35720	103573	67853	2.9
Blackgram	**NFSM**	ICM	Variety, STBF, weedmanagement and IPM	TBG-104	Irrigated	25	20	26.25	22.50	2471	20.31	21.66	**34049**	**138376**	104327	4.06	35960	113736	77776	3.16
Bengalgram	**NFSM**	ICM	Variety, STBF, weedmanagement and IPM	NBeG-3	Irrigated	56	22	20.50	17.50	18.70	15.81	18.2	**31998**	**93500**	61502	2.9	34820	79050	44230	2.2
				NBeG-47	Irrigated	10	08	18.70	16.50	17.72	15.81	12.0	**31998**	**88600**	56602	2.7	34820	79050	44230	2.2
Greengram	NFSM	ICM	Variety + IPM	WGG 42	NS	7	5.6	812	650	748	679	10.16	22,300	32,164	9,864	1.38	23,250	29,197	5,940	1.26
Redgram	NFSM	ICM	Vareity + IPM	PRG 176	ICPL 87119	50 (ID)	20	1875	1250	1553	1640	-5.3	35,975	83,862	47,887	1.33	34,525	88,560	54,035	2.57
						39 (Int.crp-RF)	16.0	1250	600	755	640	17.96	32,875	40,770	7,895	1.24	29,425	34,560	5,135	1.17
						10 (RF)	4.0	1000	750	850	730	16.4	33,475	45,900	12,425	2.33	30,025	39,420	9,395	1.57

Blackgram (K-2017)	NFSM	ICM	Variety + IPM	TBG 104	PU 31	17 (ID)	13.6	1062	700	910	750	21.3	25,760	36,400	10,640	1.41	23,925	30,000	6,075	1.25
						8 (RF as in.cr. in Rg)	6.4	750	580	679	620	9.51	32910 (blg+rg)	58480 blg+rg	25570 blg+rg	1.78	31,625 blg+rg	56,120 blg+rg	24,495 blg+rg	1.77
Blackgram (R-2017)				LBG 787	PU 31	13 (ID)	10.4	1625	1125	1352	1750	-22.7	28,388	60,840	32,452	2.14	30,875	78,750	47,875	2.55
				TBG 104	PU 31	13 (ID)	9.6	2125	1625	1940	1750	10.86	28,388	87,300	58,912	3.08	30,875	78,750	47,875	2.55
Bengalgram	NFSM	ICM	Vareity + IPM	NS 1	JG 11	8 (ID)	6.4	1875	1650	1800	1688	6.60	36,375	72,000	35,625	1.98	37,125	67,520	30,395	1.82
						7 (RF)	5.6	1375	1000	1196	1125	6.31	34,375	47,840	13,465	1.39	35,125	45,000	9,875	1.28
				NBeG 49	JG 11	24 (ID)	19.2	2000	1500	1760	1688	4.30	36,375	70,400	34,025	1.93	37,125	67,520	30,395	1.82
						11 (RF)	8.8	1500	1000	1261	1125	12.1	34,375	50,440	16,065	1.47	35,125	45,000	9,875	1.28

FLD on Livestock:

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No.of Units (Animal/ Poultry/ Birds, etc)	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.)				Economics of check (Rs.)			
					Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Sheep	Animal nutrition management	Creep feed supplementation to pre weaned lambs	10	50	6.71	5.26	27.56	-	-	180.00	1342.00	1162.00	7.46	150.00	1052.00	902.00	7.01
					6%FCM yield/day (kg)		Milk yield in 60days (l)										
Dairy	Feed and Fodder technology	Feeding of Hydroponic Maize fodder to milch buffaloes	5	10	7.32	5.97	22.61	390.8	328.8	2708.00	13152.70	10444.70	4.86	3288.00	12584.60	9296.60	3.83
					Body weight gain in 90 days (kg)												
Sheep	Feed Management	Supplementation of 50%GNH feed to post weaned ram lambs	10	50	7.75	5.84	33.13	-	-	337.50	1937.50	1600.00	5.74	337.50	1460.00	1122.50	4.33
					Incidence of RP observed												
Dairy	Animal nutrition management	Supplementation of Selenium and Vit E	10	10	3/10	-	67.00	-	-	-	-	-	-	-	-	-	-
					Fodder yield (t/ha)		Milk yield/day (l)										
	Feed and fodder	Cultivation of improved fodder var.Super napier	10	10	229.20	187.50	22.24	6.89	6.03	-	-	-	-	-	-	-	-

4. Training Programmes

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	1	40	-	40	10	-	10	50	-	50
Resource Conservation Technologies										
Cropping Systems	1	19	-	19	6	-	6	25	-	25
Crop Diversification										
Integrated Farming										
Micro Irrigation/irrigation	1	25	-	25	5	-	5	30	-	30
Seed production	1	15	-	15	3	-	3	18	-	18
Nursery management										
Integrated Crop Management	3	76	4	80	28	-	28	108	4	112
Soil & water conservatioin										
Integrated nutrient management										
Production of organic inputs										
Others (pl specify)										
Total	**7**	**175**	**4**	**179**	**52**		**52**	**227**	**4**	**231**
II Horticulture										
a) Vegetable Crops										
Production of low value and high valume crops	1	15		15	14		14	29		29
Off-season vegetables										
Nursery raising	1	22		22	10		10	32		32
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl specify) fertilizer management in onion	1	11		11	16		16	27		27
Total (a)	**3**	**48**	**0**	**48**	**40**	**0**	**40**	**88**	**0**	**88**
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Management of young plants/orchards	1	32		32	13		13	45		45
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl specify)										
Total (b)	**1**	**32**		**32**	**13**		**13**	**45**		**45**
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl specify)										
Total (c)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (d)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (e)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (f)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl specify)										

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Total (g)										
GT (a-g)										
III Soil Health and Fertility Management										
Soil fertility management	1	48	26	74	16	10	26	64	36	100
Integrated water management										
Integrated Nutrient Management	2	71	-	71	21	-	21	92	-	92
Production and use of organic inputs	1	20	-	20	5	-	5	25	-	25
Management of Problematic soils	1	20	-	20	5	-	5	25	-	25
Micro nutrient deficiency in crops										
Nutrient Use Efficiency	1	20	-	20	5	-	5	25	-	25
Balance use of fertilizers										
Soil and Water Testing	1	19		19	6		6	25		25
Others (pl specify)										
Total	**7**	**198**	**26**	**224**	**58**	**10**	**68**	**256**	**36**	**292**
IV Livestock Production and Management										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Disease Management										
Feed & fodder technology	1	-	18	18	-	34	34	-	52	52
Production of quality animal products										
Others (Integrated Farming systems)	1	6	5	11	4	3	7	10	8	18
Total	**2**	**6**	**23**	**29**	**4**	**37**	**41**	**10**	**60**	**70**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	1	-	28	28	-	12	12	-	40	40
Design and development of low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Value addition	3	-	40	40	-	20	20	-	60	60
Women empowerment										
Location specific drudgery reduction technologies	1	-	26	26	-	4	4	-	30	30
Rural Crafts										
Women and child care										
Others (pl specify)										
Total	**5**	**-**	**94**	**94**	**-**	**36**	**36**	**-**	**130**	**130**
VI Agril. Engineering										
Farm Machinary and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl specify)										
Total										
VII Plant Protection										
Integrated Pest Management	4	80		80	20	0	20	100		100
Integrated Disease Management										
Bio-control of pests and diseases	2	53	5	58	7		7	60	5	65
Production of bio control agents and bio pesticides	1	42		42	8		8	50		50
Others (pl specify)										
Total	**7**	**175**	**5**	**180**	**35**		**35**	**210**	**5**	**215**
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl specify)										
Total										
IX Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom Production										
Apiculture										
Others (pl specify)										
Total										
X CapacityBuilding and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others (Importance of Farmer Producer Organizations for profitable agriculture)	1	25	2	27	5	0	5	30	2	32
Others (Awareness training programme on e-NAM)	2	33	10	43	7	0	7	50	10	50
Others (Promotion and Marketing of Bio-products)	1	13	8	21	6	2	8	19	10	29
Others (Strategies for marketing of Organic products)	**1**	**13**	**0**	**13**	**2**	**0**	**2**	**15**	**0**	**15**

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Others (Importance and application of ICTs in agriculture)	1	17	4	21	5	0	5	22	4	26
Total	**6**	**101**	**24**	**125**	**25**	**2**	**27**	**136**	**26**	**152**
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	**38**	**735**	**176**	**911**	**227**	**85**	**312**	**962**	**261**	**1223**

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	1	25	-	25	5	-	5	30	-	30
Resource Conservation Technologies	1	40	-	40	5	-	5	45	-	45
Cropping Systems										
Crop Diversification	1	35	-	35	15	-	15	50	-	50
Integrated Farming										
Micro Irrigation/irrigation										
Seed production										
Nursery management										
Integrated Crop Management	2	100	-	100	25	-	25	125	-	125
Soil & water conservatioin										
Integrated nutrient management										
Production of organic inputs										
Others (pl specify)										
Total	**5**	**200**		**200**	**50**		**50**	**250**		**250**
II Horticulture										
a) Vegetable Crops										
Production of low value and high valume crops	2	23	24	47	20	16	36	43	40	83
Off-season vegetables										
Nursery raising										

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl specify)										
Total (a)	**2**	**23**	**24**	**47**	**20**	**16**	**36**	**43**	**40**	**83**
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit	2	37	27	64	30	20	50	67	47	114
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl specify)										
Total (b)	**2**	**37**	**27**	**64**	**30**	**20**	**50**	**67**	**47**	**114**
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl specify)										
Total (c)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (d)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (e)										

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (f)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl specify)										
Total (g)										
GT (a-g)										
III Soil Health and Fertility Management										
Soil fertility management										
Integrated water management										
Integrated Nutrient Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing	1	39	-	39	11	-	11	50	-	50
Others (Soil and water conservation)	1	30	5	35	6	-	6	36	5	41
Total	**2**	**69**	**5**	**74**	**17**	**-**	**17**	**86**	**5**	**91**
IV Livestock Production and Management										
Dairy Management	1	11	-	11	6	-	6	17	-	17
Poultry Management	1	6	8	14	2	18	20	8	26	34
Piggery Management										
Rabbit Management										
Animal Nutrition Management	1	12	5	17	3	2	5	15	7	22
Disease Management	2	29	3	32	10	2	12	39	9	48
Feed & fodder technology	1	14	-	14	4	-	4	18	-	18
Production of quality animal products										
Others (Integrated farming systems)	1	18	-	18	4	-	4	22	-	22

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Others (Sheep & Goat management)	1	16	2	18	5	-	5	21	2	23
Total	**8**	**106**	**18**	**124**	**34**	**22**	**56**	**140**	**44**	**184**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	1	-	64	64	-	36	36	-	100	100
Design and development of low/minimum cost diet	1	-	21	21	-	9	9	-	30	30
Designing and development for high nutrient efficiency diet	1	-	19	19	-	11	11	-	30	30
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs	1	-	22	22	-	18	18	-	40	40
Storage loss minimization techniques										
Value addition	1	-	18	18	-	12	12	-	30	30
Women empowerment	2	-	82	82	-	28	28	-	110	110
Location specific drudgery reduction technologies										
Rural Crafts	1	-	27	27	-	5	5	-	32	32
Women and child care										
Others (pl specify)										
Total	**8**	**-**	**253**	**253**	**-**	**119**	**119**	**-**	**372**	**372**
VI Agril. Engineering										
Farm Machinary and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl specify)										
Total										
VII Plant Protection										
Integrated Pest Management	6	157	14	171	19	2	21	176	16	192
Integrated Disease Management										
Bio-control of pests and diseases	3	79	14	93	14	2	16	93	16	109
Production of bio control agents and bio pesticides										
Others (pl specify)										

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Total	**9**	**236**	**28**	**264**	**33**	**4**	**37**	**269**	**32**	**301**
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl specify)										
Total										
IX Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom Production										
Apiculture										
Others (pl specify)										
Total										
X Capacity Building and Group Dynamics										

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others (Awareness to the farmers regarding various Government schemes of Agriculture and allied sectors)	1	20	0	20	2	0	2	22	0	22
Others (Awareness training programme on e-NAM)	1	15	0	15	3	0	3	18	0	18
Total	**2**	**35**	**0**	**35**	**5**	**0**	**5**	**40**	**0**	**40**
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	**38**	**706**	**361**	**1,067**	**183**	**175**	**358**	**889**	**536**	**1425**

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	2	65	-	65	15	-	15	80	-	80
Resource Conservation Technologies	1	40	-	40	5	-	5	45	-	45
Cropping Systems	1	19	-	19	6	-	6	25	-	25
Crop Diversification	1	35	-	35	15	-	15	50	-	50
Integrated Farming										
Micro Irrigation/irrigation	1	25	-	25	5	-	5	30	-	30
Seed production	1	15	-	15	3	-	3	18	-	18
Nursery management										
Integrated Crop Management	5	176	4	180	53	-	53	229	4	233
Soil & water conservatioin										
Integrated nutrient management										

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Production of organic inputs										
Others (pl specify)										
Total	**12**	**375**	**4**	**379**	**102**	**-**	**102**	**477**	**4**	**481**
II Horticulture										
a) Vegetable Crops										
Production of low value and high valume crops	3	38	24	62	34	16	50	72	40	112
Off-season vegetables										
Nursery raising	1	22		22	10		10	32		32
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl specify)	1	11		11	16		16	27		27
Total (a)	**5**	**71**	**24**	**95**	**60**	**16**	**76**	**131**	**40**	**171**
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit	2	37	27	64	30	20	50	67	47	114
Management of young plants/orchards	1	32		32	13		13	45		45
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl specify)										
Total (b)	**3**	**69**	**27**	**96**	**43**	**20**	**63**	**112**	**47**	**159**
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl specify)										
Total (c)										
d) Plantation crops										
Production and Management technology										

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Processing and value addition										
Others (pl specify)										
Total (d)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (e)										
f) Spices										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (f)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl specify)										
Total (g)										
GT (a-g)										
III Soil Health and Fertility Management										
Soil fertility management	1	48	26	74	16	10	26	64	36	100
Integrated water management										
Integrated Nutrient Management	2	71	-	71	21	-	21	92	-	92
Production and use of organic inputs	1	20	-	20	5	-	5	25	-	25
Management of Problematic soils	1	20	-	20	5	-	5	25	-	25
Micro nutrient deficiency in crops										
Nutrient Use Efficiency	1	20	-	20	5	-	5	25	-	25
Balance use of fertilizers										
Soil and Water Testing	2	58	-	58	17	-	17	75	-	75
Others (Soil and Water conservation)	1	30	5	35	6	-	6	36	5	41
Total	**9**	**267**	**31**	**298**	**75**	**10**	**85**	**342**	**41**	**383**
IV Livestock Production and Management										
Dairy Management	1	11	-	11	6	-	6	17	-	17

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Poultry Management	1	6	8	14	2	18	20	8	26	34
Piggery Management										
Rabbit Management										
Animal Nutrition Management	1	12	5	17	3	2	5	15	7	22
Disease Management	2	29	3	32	10	2	12	39	9	48
Feed & fodder technology	2	14	18	32	4	34	38	18	52	70
Production of quality animal products										
Others (Integrated farming systems)	2	24	5	29	4	3	7	32	8	40
Others (Sheep and Goat management)	1	16	2	18	5	-	5	21	2	23
Total	**10**	**112**	**41**	**153**	**34**	**59**	**93**	**150**	**104**	**254**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	2	-	92	92	-	48	48	-	140	140
Design and development of low/minimum cost diet	1	-	21	21	-	9	9	-	30	30
Designing and development for high nutrient efficiency diet	1	-	19	19	-	11	11	-	30	30
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs	1	-	22	22	-	18	18	-	40	40
Storage loss minimization techniques										
Value addition	5	-	76	76	-	44	44	-	120	120
Women empowerment	2	-	82	82	-	28	28	-	110	110
Location specific drudgery reduction technologies	1	-	26	26	-	4	4	-	30	30
Rural Crafts										
Women and child care										
Others (pl specify)										
Total	**13**	**-**	**338**	**338**	**-**	**162**	**162**	**-**	**500**	**500**
VI Agril. Engineering										
Farm Machinary and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Post Harvest Technology										
Others (pl specify)										
Total										
VII Plant Protection										
Integrated Pest Management	10	237	14	251	39	2	41	276	16	292
Integrated Disease Management										
Bio-control of pests and diseases	5	132	19	151	21	2	23	153	21	174
Production of bio control agents and bio pesticides	1	42		42	8		8	50		50
Others (pl specify)										
Total	**16**	**411**	**33**	**444**	**68**	**4**	**72**	**479**	**37**	**516**
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl specify)										
Total										
IX Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and										

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom Production										
Apiculture										
Others (pl specify)										
Total										
X CapacityBuilding and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others (Importance of Farmer Producer Organizations for Profitable agriculture)	1	25	2	27	5	0	5	30	2	32
Others (Awareness training programme on e-NAM)	3	48	10	58	10	0	10	58	10	68
Others (Promotion and marketing of Bio-products)	1	13	8	21	6	2	8	19	10	29
Others (Strategies for marketing of Organic products)	1	13	0	13	2	0	2	15	0	15
Others (Importance and application of ICTs in agriculture)	1	17	4	21	5	0	5	22	4	26
Others (Awareness to farmers regarding various Government schemes of Agriculture and allied sectors)	1	20	0	20	2	0	2	22	0	22
Total	**8**	**136**	**24**	**160**	**30**	**2**	**32**	**176**	**26**	**192**
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	**76**	**1441**	**537**	**1978**	**410**	**268**	**670**	**1851**	**797**	**2648**

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	14		14	9		9	25		25
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production	2	32	-	32	8	-	8	40	-	40
Production of organic inputs	2	62	13	75	13		13	75	13	88
Planting material production										
Vermi-culture	1	14	10	24	4	2	6	18	12	30
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										

Fry and fingerling rearing										
Any other (Self employment opportunities to rural youth in agriculture)	1	15	4	19	4	4	8	19	8	27
Organic farming	2	25	6	31	4		4	35		35
High value floriculture	1	12		12	3		3	15		15
TOTAL	**10**	**174**	**33**	**207**	**47**	**6**	**53**	**221**	**39**	**260**

Training for Rural Youth 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
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching	1	-	12	12	-	13	13	-	25	25
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										

Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (EDP awareness trainings)	3	-	89	89	-	38	38			127
TOTAL	**4**	**0**	**101**	**101**	**0**	**51**	**51**	**0**	**152**	**152**

Training 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	14		14	11		11	25		25
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production	2	32	-	32	8	-	8	40	-	40
Production of organic inputs	2	62	13	75	13		13	75	13	88
Planting material production										
Vermi-culture	1	14	10	24	4	2	6	18	12	30
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching	1	-	12	12	-	13	13	-	25	25
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										

Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (EDP awareness trainings)	3	-	89	89	-	38	38			127
Any other (Self employment opportunities to rural youth in agriculture)	1	15	4	19	4	4	8	19	8	27
Organic farming	2	25	6	31	4		4	35		35
High value floriculture	1	12		12	3		3	15		15
TOTAL	**14**	**174**	**134**	**208**	**47**	**57**	**104**	**221**	**191**	**412**

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	**2**	**20**	**40**	**60**	**5**	**10**	**15**	**25**	**50**	**75**
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs	**3**	**113**	**42**	**155**	**10**	**6**	**16**	**123**	**48**	**171**
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production	1	12	4	16	3	1	4	15	5	20
Household food security										
Any other (production technology and postharvest management of horticulture crops)	**1**	**8**	**5**	**13**	**7**	**5**	**12**	**15**	**10**	**25**
TOTAL	**7**	**153**	**91**	**244**	**25**	**22**	**47**	**178**	**113**	**291**

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	66	11	77	10		10	76	11	87
Integrated Nutrient management	2	56	-	56	10	-	10	66	-	66
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care	1	-	176	176	-	37	37	-	213	213
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
TOTAL	5	122	187	309	20	37	57	142	224	366

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	2	20	40	60	5	10	15	25	50	75
Integrated Pest Management	2	66	11	77	10		10	76	11	87
Integrated Nutrient management	2	56	-	56	10	-	10	66	-	66
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs	3	113	42	155	10	6	16	123	48	171
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										

Women and Child care	**1**	**-**	**176**	**176**	**-**	**37**	**37**	**-**	**213**	**213**
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production	1	12	4	16	3	1	4	15	5	20
Household food security										
Any other (production technology and postharvest management of horticulture crops)	**1**	**8**	**5**	**13**	**7**	**5**	**12**	**15**	**10**	**25**
TOTAL	**12**	**275**	**278**	**553**	**45**	**59**	**104**	**320**	**337**	**657**

Table. Sponsored training programmes:

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop production and management										
Increasing production and productivity of crops	**1**	**32**	**-**	**32**	**8**	**-**	**8**	**40**	**-**	**40**
Commercial production of vegetables										
Production and value addition										
Fruit Plants										
Ornamental plants										
Spices crops										
Soil health and fertility management										
Production of Inputs at site										
Methods of protective cultivation										
Others (pl. specify)										
Total	**1**	**32**	**-**	**32**	**8**	**-**	**8**	**40**	**-**	**40**
Post harvest technology and value addition										
Processing and value addition										
Others (pl. specify)										
Total										
Farm machinery										
Farm machinery, tools and implements										
Others (pl. specify)										
Total										
Livestock and fisheries										

Livestock production and management										
Animal Nutrition Management										
Animal Disease Management										
Fisheries Nutrition										
Fisheries Management										
Others (pl. specify)										
Total										
Home Science										
Household nutritional security	**3**	-	**73**	**73**	-	**37**	**37**	-	**110**	**110**
Economic empowerment of women										
Drudgery reduction of women										
Others (Value addition to millets)	6	-	115	115	-	70	70	-	185	185
Total	**9**	-	**188**	**188**	-	**107**	**107**	-	**295**	**295**
Agricultural Extension										
CapacityBuilding and Group Dynamics										
Others (pl. specify)										
Total										
GRAND TOTAL	**10**	**32**	**188**	**220**	**8**	**107**	**115**	**40**	**295**	**335**

Name of sponsoring agencies involved

Details of vocational training programmes carried out by KVKs for rural youth:

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop production and management										
Commercial floriculture	**1**	**14**		**14**	**1**		**1**	**15**		**15**
Commercial fruit production										
Commercial vegetable production										
Integrated crop management										
Organic farming	**2**	**26**	**4**	**30**	**3**		**3**	**29**	**4**	**33**
Others (pl. specify)										
Total	**3**	**40**	**4**	**44**	**4**		**4**	**44**	**4**	**48**
Post harvest technology and value addition										
Value addition										
Others (pl. specify)										
Total										

Livestock and fisheries										
Dairy farming	1	18	-	18	14	-	14	32	-	32
Composite fish culture										
Sheep and goat rearing										
Piggery										
Poultry farming										
Others (pl. specify)										
Total	**1**	**18**	**-**	**18**	**14**	**-**	**14**	**32**	**-**	**32**
Income generation activities										
Vermicomposting										
Production of bio-agents, bio-pesticides,	**2**	**85**	**27**	**112**	**13**	**2**	**15**	**98**	**29**	**127**
bio-fertilizers etc.										
Repair and maintenance of farm machinery										
and implements										
Rural Crafts										
Seed production										
Sericulture										
Mushroom cultivation										
Nursery, grafting etc.										
Tailoring, stitching, embroidery, dying etc.										
Agril. para-workers, para-vet training										
Others (pl. specify)										
Total										
Agricultural Extension										
Capacity building and group dynamics										
Others (pl. specify)										
Total										
Grand Total	**6**	**143**	**31**	**174**	**31**	**2**	**33**	**174**	**33**	**207**

5. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	346	1064	52	1116
Diagnostic visits	77	539	34	573
Field Day	8	356	45	401
Group discussions	12	224	16	240
Kisan Ghosthi	2	346	16	362
Film Show				
Self -help groups				
Kisan Mela	1	490	40	530
Exhibition	11	869	42	911
Scientists' visit to farmers field	133	632	50	682
Plant/animal health camps	5	168	5	173
Farm Science Club				
Ex-trainees Sammelan				
Farmers' seminar/workshop	1	127		127
Method Demonstrations	10	145	2	147
Celebration of important days (World Soil Day)	1	484	28	512
Celebration of important days (World milk day on 01.06.2018)	1	35	-	35
Celebration of important days	3	150	213	363
Special day celebration				
Exposure visits	15	742	27	769
Others (Resource person)	12	582		582
Total	**638**	**6853**	**570**	**7423**

Details of other extension programmes:

Particulars	Number
Electronic Media (CD./DVD)	
Extension Literature	
News paper coverage	43
Popular articles	1
Radio Talks	9
TV Talks	
Animal health amps (Number of animals treated)	226
Others (pl. specify)	
Total	**279**

Messages sent

MOBILE ADVISORY SERVICES THROUGH MKISAN PORTAL

No of registered farmers: 1789

Types of Messages	Type of messages													
	Crop		Livestock		Weather		Marketing		Awareness		Other enterprise		Total	
	No of messages	No of farmers	No of messages	No of farmers	No of messages	No of farmers	No of messages	No of farmers	No of messages	No of farmers	No of messages	No of farmers	No of messages	No of farmers
Text only	16	67253											16	67253
Voice only														
Voice & Text both														
Total Messages	**16**													
Total farmers Benefitted		**67253**												

MOBILE ADVISORY SERVICES THROUGH OTHERS

No of registered farmers:

Types of Messages	Type of messages													
	Crop		Livestock		Weather		Marketing		Awareness		Other enterprise		Total	
	No of messages	No of farmers	No of messages	No of farmers	No of messages	No of farmers	No of messages	No of farmers	No of messages	No of farmers	No of messages	No of farmers	No of messages	No of farmers
Text only	104	191			104	19864							104	19864
Voice only														
Voice & Text both														
Total Messages	**104**				**104**								**104**	
Total farmers Benefitted		**191**				**19864**								**19864**

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

Production of seeds by the KVKs (give quantity of seed in quintals only)

Enterprise	Name of crop	Variety	Seed produced		Seed supplied to farmers						Seed supplied to other agencies	
			Quantity (q)	Value (Rs)	Free seed			Priced seed				
					Quantity (q)	No of farmers	Value (Rs)	Quantity (q)	No of farmers	Value (Rs)	Quantity (q)	Value (Rs)
CEREALS	Wheat											
	Paddy	BPT-5204	**657.38**									
		NDLR-7	**343.47**									
		NDLR-8	**6.30**									
		NJ-2446	**7.85**									
	Setaria	SIA-3222	**15.69**									
		Suryanandi	**100.0**									
		SIA-3156	**50.0**									
	Maize											
	Sorghum (Jowar/Cholam/Jonna)											
	Pearl Millet (Bajra/Cumbu/Sajja)											
	Finger millet (Ragi)		**15.0**									
	Foxtail Millet (Korra/Thenai)											
	Barnyard Millet (Kuthiraivali/Udalu, Kodisama)		**5.00**									
	Kodo Millet (Varagu/Arikelu)											
	Little Millet (Samai/Samalu)											
	Proso Millet (Pani Varagu/variga)		**1.00**									
	Barley											
	Brown top millet		**10.0**									
	Total Cereals	**7**	**1211.69**									

OIL SEEDS	Groundnut	Kadiri Harithandra	145.0									
	Sunflower											
	Safflower											
	Sesame											
	Castor	DCH-519	5.0									
	Niger											
	Rapeseed & Mustard											
	Linseed											
	Soybean											
	Total Oil Seds	2	150.0									
PULSES	Pigeon pea (Red Gram)	PRG-176	64.70									
		ICPL-87119	22.0									
		LRG-52	211.31									
	Chick pea (Bengal gram)	NBeG-3	100.0									
		NBeG-49	466.30									
		NBeG-119	74.15									
	Green gram											
	Black gram	TBG-104	250.03									
	Cowpea											
	Horse gram											
	Lentil											
	Rajma											
	Field pea											
	Total Pulses	**7**	**1188.49**									
VEGATABLES	Bhendi (Okra/Ladies finger)											
seeds	French bean											
	Radish											
	Onion											
	Chilli (Seeds)											

	Tomato (Seeds)											
	Brinjal (Seeds)											
	Gourds (snake, bottle, bitter, ribbed etc)											
	Pumpkin											
	Vegetable Pea											
	Total Vegetables											
FRUITS												
seeds												
	Total Fruits											
FLOWERS												
seeds												
	Total Flowers											
SPICES	Turmeric rhizome											
seeds	Coriander											
	Garlic											
	Fenugreek											
	Total Spices											

FODDER	Fodder Sorghum											
seeds	Fodder Cowpea											
	Desmanthus/Hedge lucerne											
	Lucerne											
	Stylo											
	Alfalfa											
	Berseem											
	Total Fodder											
Special Planting	Potato											
Materials	Small onion bulb											
(Quintals)	Sugarcane setts (if sold by weight)											
	Total special planting materials											
GREEN	Dhaincha											
MANURE	Sesbania											
seeds	Sunnhemp											
	Other Green manure seeds											
	Total Green Menure seeds											
COMMERCIAL	Cotton											
CROPS	Other Commercial Crop seeds											
seeds	Other Commercial Crop seeds											
	Total Commercial Crops											
	Grand Total of Seeds	16	**2555.18**									

Production of planting materials by the KVKs (seedlings, cuttings. Slips in numbers)

Enterprise	Name of crop	Variety	Planting material produced		Planting material supplied to farmers						Planting material supplied to other agencies	
			Quantity (Nos)	Value (Rs)	Free supply			Priced				
					Quantity (Nos)	No of farmers	Value (Rs)	Quantity (Nos)	No of farmers	Value (Rs)	Quantity (Nos)	Value (Rs)
VEGATABLES	Brinjal seedlings											
	Chilli seedlings	Indam-67, No-5, Teja, nagma, suryamukhi, sarika-11tmph-411, navya teja	342964	103190				342964	12	103190		
	Tomato seedlings	Arka samrat	4566	2415	1250	5	625	3316	4	1790		
	Cabbage seedlings											
	Cauliflower seedlings											
	Broccoli seedlings											
	Capsicum seedlings											
	Onion seedlings											
	Onion bulb (aggregatum)											
	Cucumber seedlings											
	Bottle gourd seedlings											
	Bitter gourd seedlings											
	Sponge gourd seedlings											
	Pumpkin seedlings											
	Knolkhole seedlings											
	Summer Squash seedlings											
	Marrow seedlings											
	Total Vegetable planting materials	**2**	**3,47,530**	**1,05,605**	**1250**	**5**	**625**	**3,46,280**	**16**	**1,04,980**		

FRUITS	Aonla											
grafts	Litchi											
seedlings and	Mango											
cuttings	Papaya seedlings											
	Guava											
	Jack fruit											
	Beal											
	Citrus											
	Lemon											
	Mausammi											
	Karonda											
	Pomegranate											
	Custard apple											
	Apple											
	Ber											
	Jamun											
	Pear											
	Peach											
	Kiwi											
	Apricot											
	Walnut											
	Banana succers											
	Banana seedlings											
	Total Fruit planting materials											
FLOWERS AND	Marigold	Yellow gold	100	300				100	2	300		
ORNAMENTAL	Tube Rose (Rajnigandha)											
PLANTS	Chrysanthmum											
seedlings and	Rose											
cuttings	Hibiscus (Gudhal)											

	Crotan plant											
	Calandula (Pot marigold)											
	Vervina											
	Pendula											
	Baugain villia											
	Durenta Golden											
	Gladiolus											
	Harshingar											
	Glardia											
	Ficus benajamina											
	Red erration											
	Poppy											
	Sweet William											
	Chirayata											
	Ashok											
	Total Flowers and Ornamental planting materials	**1**	**100**	**300**				**100**	**2**	**300**		
MEDICINAL	Lemon Grass											
AND	Aswagandha											
AROMATIC	Satawar											
PLANTS	Mahogani											
seedlings and	Turmeric											
cuttings												
	Total medicinal and aromatic											
FORESTRY	Poplar											
AND	Arjun											
PLANTATION	Siris											
CROPS	Catechu											
seedlings and	Chironji											

cuttings	Mahua											
	Karanj											
	Neem											
	Teak											
	Eucalyptus											
	Saguan											
	Samel											
	Casuarina											
	Coconut seedlings											
	Arecanut seedlings											
	Total forest and plantation crops											
FODDER	Napier grass											
slips	Para grass											
	Super Napier grass											
	Sudax Chery											
	Cumbu Napier grass (Co 3, Co 4, Co 5 etc)											
	Other fodder plants (Specify)											
	Total Fodder crops											
SPICES	Turmeric											
	Coriander											
	Garlic											
	Fenugreek											
	Other Fibre Crops (Specify - seed only)											
	Total Spices											
	Fodder Sorghum											
	Fodder Cowpea											
	Desmanthus/Hedge lucerne											
	Lucerne											

	Stylo											
	Alfalfa											
	Berseem											
	Other Fodder Seeds											
	Total Fodder											
GREEN	Dhaincha											
MANURE	Sesbania											
	Sunnhemp											
	Other Green manure seeds Glyricidia	Local	30800	9240				30800	1	9240		
	Total Green Menure seeds	**1**	**30800**	**9240**				**30800**	**1**	**9240**		
Special Planting	Mushroom spawn											
Materials	Sugarcane setts (If sold by Numbers)											
sold by numbers	Other seed materials (sold by numbers)											
	Total special planting materials											
Any other planting material sold by numbers	Paddy seedlings											
	Any other (specify)											
	Drumstick	PKM-1	1100	3420				1100	600	3420		
	Total Commercial Crops	**1**	**1100**	**3420**				**1100**	**600**	**3420**		
	Grand Total of Seeds	**5**	**3,79,530**	**1,18,565**	**1250**	**5**	**625**	**3,79,380**	**619**	**1,17,940**		

Production of Bio-Products:

Category	Name of the product	Commercial name (if any)	Bio-products produced		Bio-products supplied to farmers						bio-products supplied to other agencies	
			Quantity (kg)	Value (Rs)	Free distribution			Priced			Quantity (kgs)	Value (Rs)
					Quantity (kgs)	No of farmers	Value (Rs)	Quantity (kgs)	No of farmers	Value (Rs)		
Bio-fertilizers	Rhyzobium											
	Azotobacter											
	Acetobacter											
	Azospirillum		187	9,350.00	187							
	BGA											
	Azolla											
	VAM											
	Phosphate solubilizers											
	Potassium Solubilizers											
	Sulphur Solubilizers											
	Waste decomposer											
	Bio composting culture											
	Other Effective Micro Organisms (PSB)		302	15,100.00	302							
	Other Effective Micro Organisms (Potash Mobilizing Bacteria)		190	9,500-00	190							
	Total bio-fertilizers		**679**	**33,950**	**679**							
Bio-inputs	Panchakavya											
	Vermicompost		223000	1338000	-	-	-	223000	176	1338000		
	Earthworms for vermicompost		3384	169200				3384	83	169200		
	Compost											
	Other bio-inputs (specify)											
	Total bio-inputs		2,26,384	1507200	-	-	-	2,26,384	259	1507200		
Bio-Pesticides	Beauveria bassiana											
for insect pests	Trichoderma viridi		390	39,000-00	390							
Fungal diseases	Metarrhizium anisoplae											
Nematodes	Psuedomonas fluorescens		502	50,200-00	502							
	EPN											
	Trichogramma (Unit)											
	Insect Parasitoids (Specify)											
	Insect Parasitoids (Specify)											

	Insect Parasitoids (Specify)											
	Insect Parasitoids (Specify)											
	Insect Parasitoids (Specify)											
	Neem Soap											
	Pongamia Soap											
	Botanicals (Specify)											
	Total bio-pesticides		**892**	**89200**	**892**							
	Total bio-products		**227955**	**1630350**	**1571**	**-**	**-**	**2,26,384**	**259**	**15072 00**	**-**	**-**

Production of livestock materials:

Category	Name of the livestock/fish/feed	Variety/improved species name/Commercial name (if any)	Production		Supplied to farmers						Supplied to other agencies	
					Free distribution			Priced				
			Quantity (No)	Value (Rs)	Quantity (No)	No of farmers	Value (Rs)	Quantity (No)	No of farmers	Value (Rs)	Quantity (No)	Value (Rs)
Dairy cattle	Cow											
	Cow											
	Cow Calf											
	Cow Calf											
	Bufallo											
	Bufallo											
	Bufallo calf											
	Bufallo calf											
	Other diary cattle (Specify)											
	Total Dairy Cattle											
Goat and Sheep	Goat	Black Bengal	20	67500				20	12	67500	-	-
	Goat											
	Goat											
	Sheep											
	Sheep											
	Sheep											
	Lamb		16	39500				16	12	39500	-	-
	Lamb											
	Other goat/sheep (Specify)											
	Total goat and sheep	**1**	**36**	**10700 0**				**36**	**24**	**10700 0**	**-**	**-**
Poultry	Desi bird	Kadaknath	50	7500				50	8	7500		
	Desi bird											
	Desi bird chicks											
	Desi bird chicks											
	Broiler											
	Layer											
	Dual purpose birds											

	Japanese Quail											
	Turkey											
	Emu											
	Ducks											
	Desi bird egg											
	Broiler hybrid egg											
	Layer egg (breeding)											
	Egg (Commercial)											
	Quail egg (breeding)											
	Quail egg (commercial)											
	Improved poultry	Rajasri	5599	419925				3799	62	284925	1800	135000
	Total poultry	**2**	**5649**	**427425**	**-**	**-**	**-**	**3849**	**70**	**292425**	**1800**	**135000**
PIGGERY	Pigs adults											
	Piglets											
	Pork											
	Others related to piggery)											
	Total Piggery											
FISHERY	Fingerlings of Fish type (specify)											
	Fish meat (kg)											
	Total Fishery											
	Grand Total Livestock and fishery	**3**	**5685**	**534425**	**-**	**-**	**-**	**3885**	**94**	**399425**	**1800**	**135000**

8. DETAILS OF SOIL, WATER AND PLANT ANALYSIS

Samples/ SHC	No. of Samples		No. of Farmers	No. of Villages	Amount realized (Rs.)
	Using Mini Soil Testing Lab	Through Traditional Lab			
Soil samples	**235**	**1428**	**1388**	**53**	**166900**
Soil Health Cards (SHC)	**539**	**3785**	**2892**	**53**	

Samples	No.of Samples	No.of Farmers	No.of Villages	Amount realized (Rs.)
Water	**23**	**19**	**11**	**2300**
Plant	**4**	**2**	**2**	**2400**
Manure				
Others (pl.specify)				
Total	**26**	**21**	**13**	**4700**

9. SCIENTIFIC ADVISORY COMMITTEE

Date of SAC meeting	Number of members attended
21.02.2019	58

10. PUBLICATIONS

Publications in journals:

S. No	Authors	Year	Title	Journal
1	A.Krishna Murthy	2018	Effect of graded levels of urea fertilizer on growth and biomass yield of maize under low cost hydroponic fodder production system	Forage Research Journal 43 (4): pp. 283-286 (2018)
2	A.Krishna Murthy	2018	Production Performance of Graded Murrah Buffaloes on Supplementation of Hydroponic Maize Fodder Grown under Low Cost Devise	Research Journal of Agricultural Sciences (International Journal) Vol :9 Issue : 2 , 91-93
3	A.Krishna Murthy	2018	Study on effect of hydroponic maize fodder supplementation on milk yield in milch buffaloes	Forage Res., 44 (1) : pp. 43-45 (2018)
4	A.Krishna Murthy	2018	Effect of Balanced Ration Supplementation on Body Weight Gain and Milk Yield in Different Breeds of Cattle	International Journal of Current Microbiology and Applied Sciences (2018) 7(11): 2443-2446

Other publications:

S.No	Item	Year	Authors	Title	Publisher
1	Books				
2	Book chapters / manuals				
3	Training manuals				
4	Conference, proceeding papers, popular articles, Bulletins, Short communications	2019	M.Adinarayana, P. Nagarjuna Redyy, D. Balaraju, G. Dhanalakshmi	Viral disease management in papaya	Annadatha
		2019	A.Krishna Murthy	Effect of balanced ration on body weight gain and production performance in different breeds of cattle	compendium page no.139 of National conference held at Thrissur during 23-25th Jan'19
5	Technical bulletin/ Folders				
6	Reports				
7	others				

Newsletter/Magazine:

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

3. Training/workshops/seminars etc details attended by KVK staff:

Name of the staff	Title	Dates	Duration	Organized by
KVRamanaiah	Specialty Fertilizers for Enhancing the Quality and Productivity of Crops organised by FAI Sothern Zone	18.9.2018	1	FAI, South Zone, Chennai
G.Dhanalakshmi, K.V. Ramanaiah & A.Krishnamurthy	Inclussive Development In India:Issues and Chalenges	22-23 March,19	2	Sri Krishnadevaraya University, Ananthapur
M. Adinarayana	State Level Seminar on "Strategic management in production & post harvest technologies of onion, okra, solanaceous vegetables for doubling up farmers income in A.P" at Kurnool Dist.	6.3.2019	1 day	NHRDF at Kurnool

M. Adinarayana	AMC level farmer scientist interaction at Dhone division	20.7.2018 03.8.2018 16.8.2018 09.9.2018 26.9.2018	1 day 1 day 1 day 1 day 1 day	ATMA Dhone
M. Adinarayana	Cultivation aspects in papaya	11.7.2018	1 day	Department of Horticulture, Bethamcherla
M. Adinarayana	Cultivation aspects of chilli	28.7.2018	1 day	Department of Horticulture, Koilakuntla
M. Adinarayana	Cultivation aspects of chilli	28.7.2018	1 day	Department of Horticulture, Koilakuntla
M. Adinarayana	Package of practices for cultivation of chilli and importance of mulching	10.8.2018	1 day	Department of Horticulture, Koilakuntla
M. Adinarayana	Cultivation aspects of chrysanthemum and marigold	19.9.2018	1 day	Department of Horticulture, Bethamcherla
M. Adinarayana	Cultivation of crops under ZBNF	15.10. 2018	1 day	Private society
M. Adinarayana	Viral disease management in papaya	02.02. 2019	1 day	Department of Horticulture, Bethamcherla
M. Adinarayana	Management of flowering & fruiting in mango	13.02. 2019	1 day	Department of Horticulture, Bethamcherla
M. Adinarayana	Integrated crop management in chilli	28.02. 2019	1 day	Department of Horticulture, Koilakuntla
M. Adinarayana	Management of flowering & fruiting in mango	15.02. 2019	1 day	Department of Horticulture, Kurnool
M. Adinarayana	Cultivation aspects of chilli	28.02. 2019	1 day	Department of Horticulture, Koilakuntla
K.Lakshmipriya	Trainers Training Programme for Homescientists on Value Addition at LAM ,Guntur	5.1.19 to 9.1.19	5 days	College Of Homescience, ANGRAU and SERP
K.Lakshmipriya	Participated in Action Plan Meeting Of KVKs at LAM, Guntur	21.5.18 to 22.5.18	2 days	ICAR-ATARI & ANGRAU
K.Lakshmipriya	Participated in National Level workshop On Nutri-Cereals at VAMNICOM, PUNE	28.9.18	1 day	Dept.of Agriculture,Cooperation &Farmers Welfare & ICAR & Dept.Of Agri.Maharastra.

K.Lakshmipriya	Participated in SERP Orientation Meeting for Home scientists at LAM, Guntur.	6.12.18		ANGRAU & SERP.

13. Awards/rewards by KVK and staff

Recognitions &Awards/Special attainments and Achievements of Practical Importance			
Recognitions & Awards (Team Award/individual)			
Item of Recognition	Year	Awarding Organization National / International / Professional; Society	Individual/ collaborative
Best Extension Worker Award	2018	Rythunestham	G. Dhanalakshmi Senior Scientist & Head
Commendation Certificate	2019	District Collector	M. Sudhakar SMS (Agronomy)
Best paper award	2019	Indian Society of Animal Production management	A.Krishna Murthy

Special Attainments & Achievements of Practical Importance(patents, technologies, varieties, products, concepts, methodologies etc.)

Category	Title	Year	Individual/ Collaborative	Additional Details/Information

14. Details of sponsored projects/programmes implemented by KVK

S.No	Title of the programme / project	Sponsoring agency	Objectives	Duration	Amount (Rs)
1	NICRA	CRIDA			10,25,000.00
2	CONSERVATION AGRICULTURE	CRIDA			75,000.00
3	APRIGP	ANGRAU-SERP			90,000.00
4	APDMP	State Government			2,34,300.00
5	ATMA	State Government			1,92,679.00

15. Success stories

15. A.

Site Specific nutrient management for sustainable productivity and income in irrigated Rice domains of Kurnool district of Andhra Pradesh

A case Study of Paddy in Govindapalle village of Sirivella Mandal

Introduction:

The agricultural production technologies of late are dovetailed with fertilizer application. Farmers have been using chemical fertilizers from mid fifties as part of soil fertility management and crop production. During the year 1950-51 fertilizer consumption in India was 0.065 million tonnes and by 2008-09 it reached to 24.90 million tonnes (DAC, 2010). The future requirement by 2025 is 35.00 million tonnes. This alarming situation may create lot of problems in soil health, cost of production, subsidies on chemical fertilizers and environmental degradation.

KC canal and TBLLC command area is the most potential belt for paddy cultivation in Kurnool district of Andhra Pradesh. Paddy is being cultivated nearly in one lakh hectares in both Kharif and rabi seasons. The selected village Govindapalle of Srivella mandal is having 800 ha of Rice cultivated area. In order to get highest yields farmers are resorted to excess use of chemical fertilizers, but fertilizer usage requires knowledge of the expected crop yield responses to nutrient application, which is a function of crop nutrient needs, supply of nutrients from indigenous sources, and the short- and long-term fate of the fertilizer applied (Dobermann et al., 2003). The present study was carried out on Soil test crop response based nutrient management with the following objectives.

Objectives:

1. To motivate the farmers towards soil testing.
2. To optimize nutrient application in rice based on STCR formula.
3. To improve soil health by reducing chemicals and by adding organics.
4. To reduce the cost of cultivation.

Methodology:

Two levels of fertilizer treatments were imposed viz. farmers practice (NPK:292-188-28 Kg./ha) and Soil test crop response(STCR) based nutrient application (NPK:207-42-66 Kg./ha.) based on STCR equation.

Results:

Soil characteristics:

The soils were neutral to moderate alkali in reaction with pH varying from 7.65 to 8.48 and EC ranged from 0.22 to 0.76 dSm^{-1}. The organic carbon content varied from 0.34 % to 0.86 %. Texture of the surface soil varied from sandy clay loam to clay loam. The soils were low in N (ranging from156 to 276 kg/ha), medium to high in P (ranging from 48 to 284 kg/ha) and medium to high in K (from 175 to 569 kg/ha). Though these soils are considered to be fertile, they are deficient in nitrogen in all demonstrations but moderately high with available phosphorus and potassium in all trials (Table.1).

Table 1: Soil physico- chemical properties and soil nutrient status:

Sl.no.	Nutrient status(Kg./ha)	Ranged	
		From	To
1	p^H	7.65	8.48
2	EC(dSm^{-1})	0.22	0.76
3	Organic carbon(%)	0.34	0.86
4	Nitrogen	156	276
5	Phosphorus	48	284
6	Potash	175	569

Yield and Economics:

The data in table.2 revealed that the average grain yield of paddy under STCR approach was higher (7164 kg/ha) than the grain yield produced under farmer's practice (7005 kg/ha) which is 2.26 percent higher than control.

Table 2: Yield & Economics of demonstration and farmer's practice plots:

Sl.No.	Particulars (ha)	Farmers Practice	STCR
1	Yield(Kg./ha)	7005	7164
2	Cost of production (Rs./ ha)	54647	49341
3	Gross income (Rs./ ha)	147112	150434
4	Net income (Rs./ ha)	92465	101093
5	Cost-benefit ratio	1:2.70	1:3.17
6	Percent Yield increase		2.26

FP : Farmers practice i.e. the fertilizer doses -farmers generally applied in the area

STCR-Soil test crop response equation based Nutrient Management:

The cost of production was less in STCR trials (Rs. 49341/ha) as compared to farmers practice (Rs.54647/ha) and net difference in cost of production was Rs.5306 /ha due to controlled application of chemical fertilizers based on Soil testing. Gross and net income were significantly higher in STCR demonstrations (Rs.150434 ha^{-1} and Rs. 101093 ha^{-1}, respectively) as compared to the farmer's practice(Rs. 147112 ha^{-1} and Rs. 92465 ha^{-1}, respectively). It was also observed that an amount of Rs.8628/ha was realized as additional income due to low cost of production and yield increments in demonstrations. Benefit-cost ratio was also higher in STCR demonstrations(1:3.17) as compared to farmer's practice(1:2.70) due to low cost of production and higher gross income (Table:2) Similar trends were noticed in the findings of Bera et al., (2006).

Outcome:

The STCR based fertilizer recommendations were tested as demonstration in the selected village and it has been successfully proved that, in fields of high phosphorus built up, even without applying phosphotic fertilizers especially complexes, farmers got the same yields similar to that of applied ones. In other words, saving costs on fertilizers to the tune of Rs. 5306 per ha. which is almost 50% of costs on fertilizers and also got an additional income of Rs.8628/ha. Farmers of the other villages through exposure visits have seen these demonstrations and one to one farmer interactions arranged effectively.

Home Science:

Establishment of Millet Bakery Unit For Self Sustainability of SHG Women

Situation analysis/Problem statement:

Millets are important traditional Crops in Andhra Pradesh growing in sizeable area. Millets are high energy, nutritious foods with good amount of dietary fibre and essential minerals compared to other cereals. The added advantage of Millets is the slow digestibility and it is good diet for the diabetics. The consumption of Millets is limited to traditional recipes i.e. roti and sangati. Supplementation of millet based products has become increasingly popular due to nutritional and economic advantages. The decentralized, small scale house hold based economy of food production and food processing is advantageous for SHG Women for Economic Sustainability. Keeping this in view, KVK focused on establishment of small scale food processing units at village level by motivating and involving SHG women in rural areas with locally grown crops.

Smt Y.Rani D/o Sunkanna of Banaganapalle Village of Banaganapalle mandal visited KVK for establishing viable income generating unit for economic sustainability due to family problems she got

separated from her husband and staying with parents with two children and she decided not to depend on parents for financial support.

Plan, Implement and Support:

KVK suggested her to establish Millet bakery unit due to high market demand of Millet bakery products. She has attended bakery training programme at KVK and got trained in preparation of various millet based *i.e,* Sorghum, Seteria, Ragi, Bajra sweet and salt cookies, cakes, breads, Buns, multi grain sweet and salt biscuits, Millet biscuits with jaggery, Sugarfree etc. She purchased oven by hiring loan from SHG and started preparation of millet based bakery products. KVK helped in getting the FSSAI registration number. Under KVK she has been send to training at Nutritech bakery solutions, hyd as a part of EDP for strengthening her bakery skills.

Output:

She got expertise in preparation of various millet based bakery products i.e, Cookies, cakes buns and breads etc.

Outcome:

She is preparing 200 kgs /month and earning an net income of Rs.8,500/- month excluding loan amount. She is supplying and selling millet bakery products to Local shops, Super markets, NGOs, Exhibitions, Offices etc.

mpact of Intervention:

This income generating activity helped her in getting name for the brand of millet based bakery products in the district and also this would helped her in getting relief from her marital life problems and able to meet the expenses for her livelihoods. She has also applied for GST no. for further market diversification of the products.





IMPACT:

Introduction Of Cotton Knitted hand gloves To reduce Drudgery Of women in harvesting Operations:

Situation analysis:

- Bendi and green fodder harvesting is a tedious job with drudgery involved mainly handled by the farm women.
- For harvesting of Bendi, the farm women wear polythene covers and sometimes cotton cloth around the hand to avoid irritation and itching.
- Though they wear covering materials during harvesting , they feel difficulty while harvesting
- They failed to have grip for speed harvesting
- Harvesting of Bendi is a challenging task for farm women
- After bendi harvesting, the farm women attend the household activities with great difficulty especially with food preparation, because the people of this region have the habit of taking Jowar roti as staple food in their daliy diet.
- For the preparation of Jowar rotis requires palm and hand support.

Technology, Implement and Support:

- To reduce drudgery and gain income for farm families KVK Introduced Cotton Knitted Hand Gloves under Front Line Demonstrations in five villages for 100 farm women
- For harvesting of Bendi, the farm women wear knitted hand gloves which protected their hands from itching and physical injuries
- Drudgery parameters were recorded and it was recorded that harvesting with hand gloves recorded as minimum than farm women practice which was recorded as maximum.

Uptake, spread and Benefits:

With conventional method of harvesting farm women experienced injuries, itching and irritation. The farm women expressed positive attitude towards improved technology. They have realized that the technology has improved their work efficiency and physical health. This has resulted in increased adoption of the protective clothing *i.e,* hand gloves. With this feedback from fellow farmers, farmers and women are coming to KVK to purchase on their own. KVK purchased hand gloves from revolving fund and selling gloves to the farming community especially the demand was found high from farmers of Bengal gram, Tobacco and pomegranate cultivars.




Farm women Using Hand Gloves For Harvesting Of Castor, Bendi and Green Fodder

Establishment of Dhal Processing Units for Economic Sustainability And Doubling Farmers's income

Situation analysis/Problem statement:

Pulses are important traditional Crops in Andhra Pradesh growing in 231500 ha, in Kurnool 69368 ha . Pulses are high energy, nutritious foods with good amount of energy, protein, dietary fibre, vitamins and minerals. In in Kurnool district, Pulses especially Redgram and Bengal gram is widely used for daily household consumption. Establishment of small scale dhal processing units at the door steps of farm families is advantageous especially for young farmers for Economic Sustainability. Keeping this in view, KVK focused on establishment of small scale dhal processing units at village level by motivating and nvolving young farmers in rural areas .

Sri R.Suresh Reddy S/o Viswanath Reddy of Yanakandla Village of Banaganapalle mandal approached KVK for establishing income generating unit for economic sustainability and to make the primary processing facilities available at the door steps of farming community with high out put.

Plan, Implement and Support:

KVK suggested the entrepreneur to establish the dhal processing units and technically guided for the procurement of machineries. KVK extended technical guidance right from the purchase of machineries till the processing of dhal. He purchased dhal processing Unit from Akola, Maharastra.

Output:

He got expertise in running dhal processing units and started dehusking of Redgram, Bengalgram, Greengram and Blackgram with high out of 78-80kgs/qt..

Outcome:

His turn over is 1 ton to 1.5 ton/month and earning an net income of Rs.5,500/- month excluding loan amount.

Impact of Intervention:

This income generating activity helped him as alternate income source. He is known in the mandal and adjoining mandals for dhal processing activity.

Success Story

I. Title of the Success Story:

Gender Main Streaming in Promotion of Millets for Economic Sustainability & Public Health –A Success Stories of Women Agripreneurs of Kurnool dt., Andhra Pradesh.

II. Category:

Value addition to Agriculture Produce

III. Introduction:

KVK focused on establishment of small scale food processing units at village level by motivating and involving SHG women in rural areas with locally grown crops. The establishment of small scale units at village level also helps farmers for fetching remunerative prices by avoiding middle men and also improves area and productivity of the crops grown in KVK adopted villages. Since half a decade millet based products have become increasingly popular due to nutritional and economic advantages.

In 2015, Sri Umamaheswara Self Help Group of Yagantiplle village of Banaganapalle mandal approached Krishi Vigyan Kendra for establishing income generating unit for their economic and self

sustainability. KVK encouraged SHG women to take up Millet processing unit with predominant crops of the village i.e, Jowar and Seteria.

IV. Previous Background:

Farming and dairy is the basic occupation of the entrepreneurs . They cultivate paddy, maize, Redgram and millets like Jowar and Seteria. Their annual income meets their household expenses and children's education.

V. Challenge:

Abundant raw material availability is the opportunity for the women and their passion to initiate and sustain the millet startup is the strength. However they were not technically and economically sound to take up the activity. Marketing the output is the challenge in the system. KVK was behind the Woman group in bridging the gaps and converting the weakness into strengths and threats into opportunities.

VI. Interventions/Initiatives:

KVK took initiative in giving technical guidance and SHG women were taken to the various millet processing units for Primary, Secondary and Tertiary processing of millets at Incubation centers of Indian Institute of Millet Research, and Millet processing Unit, PJTSAU, R'nagar, Hyd.

KVK Motivated and encouraged SHG Women to start Millet processing activities. They hired loan from SHG for construction of shed, got 3 phase electricity supply and installed machineries. They also hired loan from Shree Shakthi for purchase of raw material.

KVK behind the SHGs in unit registration, training in products preparation, Sample analysis, Products Registration with FSSAI, Advertisement of the products, product promotion in various forums , Packing, Labelling and Marketing .

VII. Results/Insights:

First Millet Processing Unit established with SHG Women in the State in 2015 and running successfully till to date.

VIII. Outout/Impact:

The products produced by the group are Seteria rice, Seteria suji, sorghum flour, sorghum bold & fine semolina, sorghum snacks, Ragi flour, Mixed millet flours, Mixed millet suji, Bajra suji,flours, Ragi,Bajra, Sorghum and Seteria snack items etc... The initial production was two qtls per month over a period of eight months geared their production from 80 to 100 qtls/month, with an net income of Rs. 9,000/- to 10,000/-per month. They employed three women and paying Rs.150/day for 20 days in a month. The products are being sold to departmental stores, Super markets at Nandyal, Kurnool, and also to the

wholesale dealers throughout the state. At present the annual output is 25 tonnes of different primary and secondary products. The average income gained was Rs.2,40,000/- per annum.

IX. Present Position (Personal/Economical):

- Dr K. Raja Reddy, Former Director Of Extension Visited Millet Processing Unit.
- A team of Scientists from UAS, Bangalore visited Millet Processing Unit.
- Programme Coordinators of Karnataka state and Orissa Visited the Unit.
- Enthusiastic business people, Students, Farmers, Line department officials, Fellow SHG women visited the unit.

X. Awards & Recognitions:

- Received Best Women Agripreneurs in 2015 During Kisan Diwas celebrations.
- Received best appreciation from district level administration in millet value addition

XI. Lessons Learnt:

Millet processing and marketing is catching every one's attention. At present awareness on Consumption of millets has increased several folds. For further up scaling of the products…

- Advanced machinery with high output.
- Promotion by Government for establishment of the units by SHGs
- Policy frame work of the government for inclusion of millets and millet bi products into Public Distribution System, Mid Day Meal and Supplementary Nutrition Programme in Anganwadi Centres.

XII. Supporting Quotes & Images:

Destonning Of Millets

Dehulling Of Millets

Dr K.RajaReddy, Former Director of Extension Visit To Millet Processing Unit.

Scientists Team UAS, Bangalore Visit to Millet processing Unit.

Best women Agripreneurs During kisan Mela Celebrations in 2015-16

Appreciation from District Administration In Millet value Addition

Participation In International Trade fair On Organics And Millets 2018

Participation In Millet Fests

XIII. Message to Fellow farmers By the Achiever: Farmers to be united under FPO's and take up different value addition activities for agriculture produce for doubling farmers income.

XIV. Contact Details Of Achiver inclosing E-mail, Phone No. & Pin code:

1. K.Maheswaramma,W/o SivaramiReddy,YagantipalleVillage, Banaganapalle(M), Kurnool Dt. Pin: 518124, A.P, Mobile No: 9493375873, 9618984600

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16. IMPACT

16.A. Impact of KVK activities (Not to be restricted for reporting period):

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Blouse Designing 	33	84.8	Rs.1500/-	3,200/-/month
Basic& Advanced tailoring 	30	73.3	2800/-month	6,500/-month

I. Impact of NICRA project

Objectives:

1. To study the profile characteristics of the farmers in Yagantipalle village
2. To measure the knowledge about climate resiliency among NICRA farmers.
3. To know the adoption pattern of climate resilient technologies by NICRA farmers.
4. To study the economic impact of climate resilient technologies.
5. To find out the expectations of the farmers from NICRA Project.

Methodology:

The study was conducted in Kurnool district of Andhra Pradesh. The research locales were selected purposively, as the NICRA has been implemented in this district since its inception. To record the impact of NICRA, a period of action intervention is essential. Kurnool district represent dry land and rainfed agro ecosystem and is mostly affected by drought and poor soil health. The selected study locale is vulnerable to climatic variability. Recently the frequency of drought has increased to 5-6 times in 10 year span.

Selection of the sample:

Yagantipalle and Meerapuram villages which are located at a distance of 4 km and 7km from Yagantipalle Panchayat of Banaganapalle mandal, Kurnool district of Andhra Pradesh were selected for the project with climate vulnerability of drought, with 70% of rainfed agriculture by Krishi Vigyan Kendra Yagantipalle. Banaganapalle mandal is one of the rainshadow area Kurnool district

Selection of farmers:

The respondents for the study were the beneficiaries and non-beneficiaries of NICRA. The list of NICRA beneficiaries was taken from KVK and 100 respondents were selected by simple random sampling technique. Thus, a total of hundred beneficiary farmers were selected.

Statistical tools:

Frequency, percentages, Mean, Standard Deviation and Correlation were the statistical tools used for the study.

Results and Discussion:

The results are based on analysis of the data with regard to Knowledge about climate resiliency, adoption pattern of climate resilient technologies, factors responsible for adoption and economic impact of these technologies and expectations for up-scaling and out-scaling the technologies.

1. Profile characteristics
2. Knowledge about climate resilient technologies among the respondents
3. Adaptation pattern of climate resilient technologies
4. Economic impact of the climate resilient technologies.
5. Expectations of the respondents for upscaling the technologies.

1. Profile characteristics of the respondents

1. Age :

Majority of the farmers (65%) belongs to middle age group followed by twenty five per cent belongs to young age group. Only ten per cent of the sample belongs to old age group.

It was evident from the table that the majority of the farmers who are in middle and old age are stuck with agriculture and the youth are leaving to towns and cities for better options other than agriculture**.** The findings are in agreement with Ramesh I Chadachal (2017).

2. Education:

From the table it was found that the majority of the farmers were illiterate (37.%) followed by high school education (25%), primary school education (15%), intermediate(13%) education.

It can be concluded that majority of the farmers are literate they can read write and understand any information regarding climate and agriculture. Old aged farmers had not gone to school, it may be due to lack of awareness about education. It was also keenly observed that none of the farmers in the sample were graduate, this is a sign that educated were not keen to take up agriculture as profession.

Table 1: Profile characteristics of the respondents

Sl.No	Variables	NICRA farmers (n=100)	
		Frequency	Percentage
1.	**Age**		
	Young (<35 years)	25	25.00
	Middle (35-50 years)	65	65.00
	Old (>50 years)	10	10.00
2.	**Education**		
	Illiterate	37	37.00
	Primary school	15	15.00
	Middle school	10	10.00
	High school	25	25.00
	Intermediate	13	13.00
	Graduation	0	0.00
3.	**Land Holding**		
	Less than 2.5 acres	17	17.00
	2.5-5 acres	39	39.00
	Greater than 5 acres	44	44.00
4.	**Farming Experience**		
	Less than 10 years	10	10.00
	10-20 years	15	15.00
	> 20 years	75	75.00

3. Land Holding:

From the table it was evident that the majority of the farmers (44%) possess land holding more than five acres, followed by small and marginal farmers. It can be concluded that majority of the land holdings belong to small and marginal category followed by medium category land holdings.

4. Farming Experience:

Majority of the farmers (75%) had more than twenty years of experience, followed by 10-20 years experience (15%) and ten per cent of the respondent have experience less than 10 years. It can be concluded that the middle and old aged farmers were in to agriculture and youth are not interested in agriculture.

5. Mass media exposure:

From the table it was indicated that majority of the respondents (45%) have medium exposure to mass media followed by low exposure to mass media(30%) and high exposure to mass media.

It can be concluded that majority of the respondent have exposure to mass media, this can be attributed to the mass media such as TV and mobiles. Only few farmers with high exposure to mass media can be attributed to their personal interest on agriculture and availability of mass media.

Table 2. Distribution of respondents according to their mass media exposure:

Sl.no	Category	Frequency	Percentage
1	Low (<9.66)	30	30.00
2	Medium (9.66 – 13.03)	45	45.00
3	High (>13.03)	25	25.00
Mean: 11.35 SD: 3.36			

From the table it was found that distribution of respondents to extension conatact was medium with 41 per cent followed by high and low extension contacts. It can be concluded that the extension contacts are fairly maintained by the respondents.

Table 3. Distribution of respondents according to their extension contact:

Sl.No	Category	Frequency	Percentage
1	Low (<14.27)	23	23.00
2	Medium (14.27 – 17.52)	41	41.00
3	High (>17.52)	36	36.00
Mean: 15.90 SD: 3.25			

2. Knowledge about climate resilient technologies among the respondents:

From the table it was evident that the majority of the respondents have medium level of knowledge (45%) on climate resiliency, followed by high level of knowledge and low level of knowledge.

Table 4. Distribution of respondents according to their Knowledge on Climate Resiliency:

sl.no	Category	Frequency	Percentage
1	Low (<15.79)	25	25.00
2	Medium (15.79 – 19.30)	45	45.00
3	High (>19.30)	30	30.00
Mean: 17.55 SD: 3.50			

It can be concluded that seventy five per cent of the respondents have good knowledge on climate resiliency. The reason behind their knowledge levels on climate resiliency is attributed for their participation in the different activities such as taking up demonstrations on climate resiliency and capacity building programmes under NICRA project**.**

3. Adaptation pattern of climate resilient technologies:

It was recorded that majority of the respondents (60%) were adopting climate resilient technologies in their farms.

Table 5. Distribution of respondents according to their Adoption of Climate Resilient Practices:

sl.no	Category	Frequency	Percentage
1	Low (< 4.81)	25	25.00
2	Medium (4.81 – 9.81)	60	60.00
3	High (>9.81)	15	15.00
Mean: 7.00 SD: 4.36			

It can be concluded that majority of the farmers were adopting climate resilient technologies due to their increased levels of knowledge and availability and feasibility of the resilient technologies.

From the table it was found that under Natural resource management majority of the farmers (84%) are adopting the practice of ridges and furrows to conserve moisture at 30 to 35 DAS in all rainfed crops like red gram, Bengal gram , jowar etc. Thirty seven per cent of the farmers have adopted drip irrigation method to irrigate their fields. Thirty per cent of the farmers reclamated their saline soils with the application of recommended dose of gypsum.

It can be concluded that the importance of conserving moisture in rainfed crops was well taken by the farmers of the Project village. Drip irrigation method was practiced by the horticulture farmers.

The adoption farm pond technology was meagre because the technology was adopted by only big farmers.

Reclamation of soils was taken up by the farmers whose soils are saline in nature. Traditional compost pits are existing in the village for every farmers .The farmers who had gone for modernized compost pits are young educated and economically better.

Table 6. Adoption pattern of climate resilient technologies by NICRA farmers:

Sl.No.	Technology		Adoption	
			F	%
1	NRM	Compost pits	**10**	**10.00**
		Insitu moisture conservation measures like Formation of ridges furrow between crop rows at 30-35 DAS	**84**	**84.00**
		Resource conservation measures like introduction of drip irrigation	**37**	**37.00**
		Reclamation of sodic soils with gypsum as per pH	**30**	**30.00**
2	Crop production	Alternate cropping pattern like fox tail millet - Suryanandi and SIA-3085	**72**	**72.00**
		Drought tolerant varieties of red gram Seteira, & Bengal gram	**92**	**92.00**
		Intercropping systems like Seteria+Redgram (5:1)	**68**	**68.00**
3.	Live stock	Calf registration	**81**	**81.00**
		Hydroponic fodder production	**2**	**2.00**
		Establishment of foggers to protect livestock from extreme weather conditions	**3**	**3.00**
		Green fodder	**69**	**69.00**

In crop production majority of the farmers (92%) are adopting drought tolerant varieties of rainfed crops like , red gram, Seteria, Yellow jowar and Bengal gram. Seventy two per cent of the farmers are going for alternate crops like Seteria in place of cotton and maize. Likewise intercropping system with Seteria and Red gram (68%) was also being widely practiced by the farmers.

It can be concluded that the majority of the farmers practicing of sowing drought tolerant varieties can attributed to the availability of seed at KVK, seed bank of the village and the increased capacities of the

farmers on climate resilient agriculture. Alternate crop taken up farmers can be attributed for their past experience (failure of long duration crops like cotton and maize) and increased knowledge level through project. Intercropping of Red gram and Seteria was widely accepted because of the several demonstrations organized in the village and visualization of the economic benefits of bimodal distribution of rainfall.

Regarding live stock majority of the farmers (81%) are going for calf registration followed by establishment of green fodder units with hybrid napier varieties (69%).

It can be concluded that the majority of the farmers realized the importance of calf health and its period of conversion to heifer. It was observed that the calf mortality was completely stopped and the farmers had economical advantage in short period. As the importance of live stock was well under stood by the rainfed farmers, they sought livestock as an important livelihood opportunity and prioritized to establish green fodder in their farms or went for lease in.

3.a. Relationship between independent variables with Knowledge

Table 7: Relationship between independent variables with Knowledge:

S.No.	Independent variables	Correlation Coefficients('r'value)
1.	Age	0.60**
2.	Education	0.90**
3.	Land holding	0.51**
4.	Farming experience	0.58**
5.	Mass media exposure	0.76**
6.	Extension contact	0.36**

From the table it was analyzed that all the independent variables Age, education, land Holding, Farm experience, Mass media exposure and extension contact are highly correlated with the knowledge of farmers on climate resiliency at 5 per cent level of significance**.**

3.b. Relationship between independent variables with Adoption

From the table it was analysed that the independent variables like Age, Education, Farming experience, and Mass media exposure are highly correlated at 5 per cent level of significance. Whereas land holding and Extension contact are significant at 1 per cent level of significance.

Table 8: Relationship between independent variables with Adoption:

S.No.	Independent variables	Correlation Coefficients('r'value)
1.	Age	0.70**
2.	Education	0.69**
3.	Land holding	0.23*
4.	Farming experience	0.70**
5.	Mass media exposure	0.76**
6.	Extension contact	0.27*

3.4.1 Economic impact of climate resilient technologies

a. Inter Cropping of Foxtail millet (Seteria)+Red gram (5:1):

Crop/Cropping System	Seed yield (kg/ha)	Fodder (kg/ha)	Cost of cultivation (ha/ac	Gross income (Rs/ac)	Net income (Rs/ac)	B:C ratio
Farmers' Practice Setaria (Sole)	1400	1588	14070	21000	6930	1:1.49
Demo Seteria+Redgram	919 (S) 394 (R)	1470	15228	38080	22852	1:2.5

It was evident from the table that intercropping of red gram with Seteria (5:1 ratio) proved economical over the farmers practice. With the practice of intercropping there is addition net income of Rs 15,620/ha

It can be concluded that intercropping system is more economical in scarce rainfall zone of Andhra Pradesh. The bimodal distribution of rainfall helped to give better economic returns in intercropping system with different crop durations.

b. Management of sucking pest in Bt cotton:

Treatments	yield (kg/ha)	Cost of cultivation (Rs/ha)	Gross income (Rs/ha)	Net income (Rs/ha)	B:C ratio
Farmers practice	1278	42905	69873	26969	1:1.62
Improved method /IPM	1334	39765	73346	33580	1:1.84

From the table it was recorded that the farmers practicing improved climate smart technologies harvested more yield with more economic advantage compared to their traditional practice. It can be concluded that farmers are aware of the climate resilient technologies like foliar sprayings of nutrients, sucking pest management etc.

c. Reduction of calf mortality through calf registration programme:

Particulars	Farmers practice	Demonstration
Initial body weight (kg)	28.4	26.9
Final body weight (Kg)	76.7	84.3
Body weight gain (kg)	48.3	57.4
% increased in body Weight gain	18.84	
Calf mortality	12%	4%

The table reveals that the calf mortality was reduced by 66 per cent with increased body weight gain of 18.8 per cent. It was concluded that the mortality of calves can be reduced by proper health and nutrition care of the calf**.**

D. Influence of Urea molasses in milk production of desi live stock:

Treatments	Average milk yield/animal (L/day)	Total milk yield per animal (L/60days)	Percent increase	Cost of feeding (Rs/animal)	Gross Returns (Rs/animal)	Net returns (Rs/animal)
Farmers practice	3.47	208.2		1395	6770	5375
FPF+ urea molasses	4.01	240.6	14.2	1965	9990	8025

From the table it was clear that by feeding urea molasis there is 14.2 per cent increase in milk yield with net returns of Rs 8025 for sixty days of lactation period, which is having 33 per cent economical advantage. It is concluded that with inclusion of urea molasis farmers can earn higher income with minimum investment.

e. Low cost hydroponic fodder production:

Particulars	Demonstration	Farmers practice
Milk Yield (for 30 days) cows	259.8	240.3
% increase in milk yield	20.58%	-
Gross income	7794.00	7209.00
Cost of concentrates	1430.00	1802.00
Additional net income per day	32.00	-
B:C ratio	5.45	4.0

From the table it was observed that the milk yield of animal was increased by 7.4 per cent with addition net income of Rs 32/ day. The cost of concentrates was reduced by 31.7 per cent. It can be concluded that the concentrates feed was reduced while feeding hydroponic fodder. With minimum space and investment farmers can take up green fodder at their door step through hydroponic fodder production.

f. Silage feeding to milch buffaloes:

Particulars	Milk yield in 60 days
Farmers practice (Jowar straw + Feed)	374.0
Silage + Jowar straw + Feed	432.0
% increase	15.5
Additional Income	2368.00
B:C ratio	1:3.0/1:4.67

From the table it was evident that feeding of silage along with jowar straw and feed there was increase of milk percentage by 15.5 with additional income of Rs 2368/ for 60 days. It can be concluded that the usage of silage is beneficial to the animal and the farmer. As it is beneficial government also recognized and providing to farmers in a big way through subsidies by department of animal husbandry.

g. Demonstration of short duration drought tolerant varieties

i. Red gram (PRG-176):

Comparison of Treatments	Seed yield (kg/ha)	Percentage increse	Gross cost (Rs./ha)	Gross returns (Rs./ha)	Net returns (Rs./ha)	Percentage increase	BC ratio
Treatment / Demo PRG-176	926	7.17	23655	50004	26349	19	1:2.11
Farmers practice – Asha	864	-	24530	46656	22126	-	1:1.90

From the table it was recorded that the variety PRG-176 gave high returns compared to Asha by seven percent. The gross cost of cultivation was higher in farmers practice. The net returns and yield was high in demonstration plot. The net returns in demonstration plots was by 19 per cent higher than the farmers practice.

It can be concluded that the variety PRG176 is well suited to scarce rainfall area of Kurnool district. Due to it shorter duration than Asha variety the crop escaped moisture stress and cost on plant protection measures were minimized.

ii. Bengal gram (NBeG-1):

Treatments	Seed yield (kg/ha)	% Increase	Cost of cultivation (Rs/ha)	Gross income (Rs/ha)	Net income (Rs/ha)	% Increase	B:C ratio
Farmers practice JG-11	1035	-	30150	39330	9180	21.9	1:1.3
Improved varieties (NBeG-1)	1262	22.0	27954	47956	20002		1:1.7

From the table it was recorded that the variety NBeG-1 performed well with 22 per cent enhanced yield over the farmers practice.In terms of the income the variety gave 21.9 per cent more than the farmers variety.

It can be concluded that the varierty NBeG-1suited well to scarce rainfall zone . The additional yield obtained by this variety is due to its heavy rooting traits and tolerance to heat.

3.5 Expectations of farmers from NICRA project:

From the table it was evident that the farmers preferred drough tolerant varieties of seeds with high yields are to be made available for them at all times. Availability of the Implements for operations in time was given second priority. Farmers also felt that new commercial crops which suits to their ecosystem are needed. Farmers also felt that they should be exposed to different places for cross learning on new methods of farming systems. They also felt that subsidies for livestock is necessary as the income from livestock is considerable**.**

Table 3.5: Expectations of farmers from NICRA project:

S.No.	Expectations of farmers	Frequency	Rank
1	New drought tolerant varieties	**58**	**1**
2	Provision of implements for performing operations timely	**45**	**2**
3	Introduction of new and high valued crops	**42**	**3**
4	Exposure visits	**30**	**4**
5	Improved breeds like Rajashree	**28**	**5**
6	Subsidies for livestock	**21**	**6**
7	Short duration varieties	**20**	**7**

II. Evaluation of training programmes conducted by KVK

Objectives:

1. To study the post training knowledge level of the trainees
2. To analyze the adoption level of learnt technologies in their farm

Methodology:

The study was conducted in Kurnool district of Andhra Pradesh state during 2018-19 using ex-post facto research design. Three training programmes which were conducted for a period of more than 3 days during 2017-18 were taken into consideration.

1. Basic and advanced tailoring, fabric painting

2.High value floriculture

3. Organic farming

Results and Discussion:

Training Programme1: Basic and advanced tailoring, fabric painting

Table1: Adoption of training programme **(N=28)**

S. No.	Title of the Programme	No. of trainees attended	No. of trainees adopted	Percentage of adoption
1	Basic and Advanced tailoring, fabric painting	28	28	100.00

The results obtained from Table 1 shows that there is full adoption (100%) of Basic and advanced tailoring, fabric painting.

Table 2: Employment generation: **(N=28)**

S. No.	Title of the Programme	No. of Unemployed before training	No. of employed after training	Percentage
1	Basic and Advanced tailoring, fabric painting	28	15	53.57

From Table 2 it was observed that more than 50.00 percent of the respondents were employed after the training followed by almost 46.00 percent of them were doing for their home purpose.

Table 3: Income generation

S. No.	Title of the Programme	Before training (per month)	After training (per month)
1	Basic and Advanced tailoring, fabric painting	Rs. 0/-	Rs. 2800/-

From Table 3 it was observed that on an average the respondents are getting an amount of Rs.2800/- per month. While before training they don't have any income generation.

Training Programme 2: High Value Floriculture

Table 4: Distribution of respondents according to their Knowledge (n=15)

S. No.	Category	Frequency	Percentage
1	Low	6	40.00
2	Medium	7	46.66
3	High	2	13.33

Table 4 represents the distribution of respondents according to their knowledge. Majority of the respondents (46.66%) had medium knowledge on High value floriculture followed by 40.00 per cent of the respondents had low knowledge. Only 13.33 per cent of the respondents had high knowledge on High Value Floriculture.

Table 5: Distribution of respondents according to their Adoption (n=15)

S. No.	Category	Frequency	Percentage
1	No adoption	11	73.33
2	Partial adoption	3	20.00
3	Full adoption	1	6.66

Table 5 shows the distribution of respondents according to their adoption. Almost 75.00 per cent of the respondents didn't adopted high value floriculture followed by 20.00 per cent of the respondents adopted partially. Only 6.66 per cent of the respondents adopted high value floriculture.

Training Programme 3: Organic Farming

Table 6: Distribution of respondents according to their Knowledge (n=20)

S. No.	Category	Frequency	Percentage
1	Low	5	25.00
2	Medium	7	35.00
3	High	9	45.00

Table 6 represents the distribution of respondents according to their knowledge. Majority of the respondents (45.00%) had high knowledge on Organic farming followed by 35.00 per cent of the respondents had medium knowledge. Only 25.00 per cent of the respondents had low knowledge on Organic farming

Table 7: Distribution of respondents according to their Adoption (n=20)

S. No.	Category	Frequency	Percentage
1	Non adoption	7	35.00
2	Partial adoption	8	40.00
3	Full adoption	5	25.00

Table 7 shows the distribution of respondents according to their adoption. Forty per cent of the respondents didn't adopted high value floriculture followed by 20.00 per cent of the respondents adopted partially. Only 6.66 per cent of the respondents adopted high value floriculture.

Reasons for Non-adoption:

Table 8: High Value floriculture: **(n=15)**

S. No.	Reasons for Non-adoption	Frequency	Percentage
1	Climate	13	86.66
2	Small holding	10	66.66
3	Financial Problem	8	53.33
4	Marketing Problem	7	46.66

Table 8 depicts the reasons for non-adoption of High value floriculture. Almost 87.00 percent of the respondents expressed that climate is the major factor for non-adoption of High value floriculture followed by 66.66 per cent of them expressed small land holding is the reason for non-adoption and 53.33 per cent expressed that financial problem was the reason for non-adoption. While 46.66 per cent of them expressed that due to problem of marketing they have not adopted high value floriculture.

Table 9: Organic farming: **(n=20)**

S. No.	Reasons for Non-adoption	Frequency	Percentage
1	Low yields	11	55.00
2	Small land holding	9	45.00

Table 9 represents the reasons for non-adoption of Organic farming. Majority (55.00%) of the respondents expressed that due to the perception of low yields after following organic farming they have not adopted organic farming. While 45.00 per cent of the respondents expressed that due to small land holding they don't want to go for organic farming and obtain low returns.

III. Impact of CFLDs in Oilseeds

Objectives:

1. To study the impact of FLDs on knowledge and adoption of oilseed crops.

Methodology:

The study was conducted in Kurnool district of Andhra Pradesh state during 2018-19 using ex-post facto research design. Under CFLD in Oilseeds conducted during the year 2017-18 Groundnut, Castor, Sunflower and Safflower crops were taken.

Results and Discussion:

Table 1. Distribution of respondents according to their Knowledge **(n=60)**

S. No.	Category	Frequency	Percentage
1	Low	18	30.00
2	Medium	27	45.00
3	High	15	25.00

Table 1 represents the distribution of respondents according to their knowledge. Majority of the respondents (45.00%) had medium knowledge followed by 30.00 per cent of the respondents had low knowledge. Only 25.00 per cent of the respondents had high knowledge towards recommended package of practices for cultivation of Oilseeds

Table 2. Distribution of respondents according to their Adoption (n=60)

S. No.	Category	Frequency	Percentage
1	Low	33	55.00
2	Medium	18	30.00
3	High	9	15.00

Table 2 represents the distribution of respondents according to their adoption. Majority of the respondents (55.00%) belongs to low category in adopting the recommended package of practices followed by 30.00 per cent of the respondents belongs to medium category. Only 15.00 per cent of the respondents belongs to high category in adopting recommended package of practices for cultivation of Oilseeds.

Table 3. Reasons for Non-adoption (n=60)

S. No.	Reason for Non-adoption	Frequency	Percentage
1	Low rainfall	48	80.00
2	Low market rate	35	58.33
3	Low yield during previous season	27	45.00
4	Birds effect	15	25.00

Table 3 depicts the reasons for non-adoption of recommended package of practices. Eighty percent of the respondents expressed that low rainfall is the major factor for non-adoption of recommended package of practices followed by 58.33 per cent of them expressed low market rate, 45.00 per cent expressed low yield during previous season and 25.00 per cent of them felt that effect of birds in crops like sunflower were the reasons for non-adoption of recommended package of practices in Oilseed crops.

17. LINKAGES

17.A. Functional linkage with different organizations

Name of organization	Nature of linkage
Acharya N.G. Ranga Agricultural University, Guntur	• Technical backstopping for KVK activities • Supply of Breeder seed–Paddy 5204, NDLR-7, NBeG-3 and NBeG-47 • Seed production programme of varieties in farmers field. • Capacity building of KVK scientists • As member in regional council
Regional Agriculture Research Station (RARS)	• Seasonal work shops • T&V meetings • Procurement of foundation seed • Updation of technical know how
Agriculture Research Station, Anantapur	• Implementation of All India Coordinated Research Project on Agro meteorology (ACRPAM) in Kurnool district
Central Research Institute for Dry Land Agriculture, Hyderabad	• Capacity building of scientists • Implementation of NICRA Project(National Innovations on Climate Resilient Agriculture) • Implementation of Conservation Agriculture project.
National Institute for Agriculture Extension Management, Hyderabad	• Capacity building of **Scientists** on innovations in extension and marketing
Agriculture Technology Management Agency	• Assessment and refinement of the technologies • Demonstration of the latest technologies • Capacity building of farmers, and farm women • Organization of exposure visits and interstate training programs to farmers for getting firsthand experience in latest technologies being available with progressive farmers and institutes. • Project on **Comprehensive Revival of millets in households of Andhra Pradesh.**

17.B. List special programmes undertaken by the KVK and operational now, which have been financed by State Govt./Other Agencies

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
NICRA	2011-12	CRIDA	10,25,000.00
CONSERVATION AGRICULTURE	2016-17	CRIDA	75,000.00
APRIGP	2017-18	ANGRAU-SERP	90,000.00
APDMP	2018-19	State Government	2,34,300.00
ATMA		State Government	1,92,679.00

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