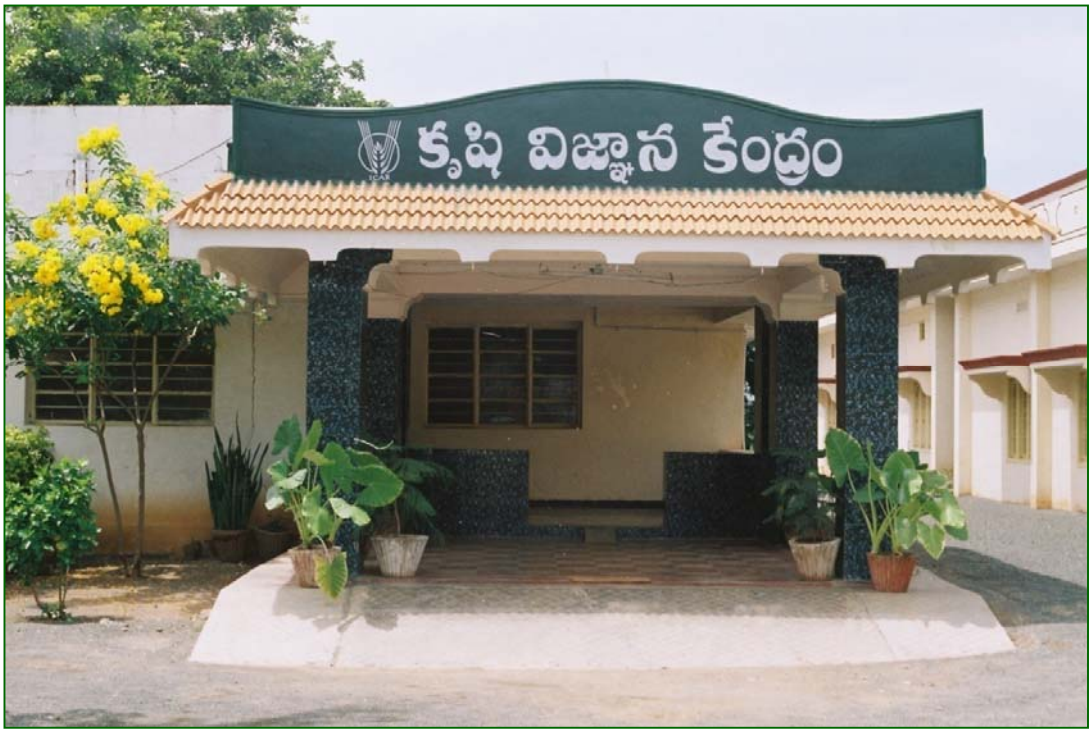
Annual Report 2012-13

(01-04-2012 to 31.03.2013)



Shri Hanumantharaya Educational and Charitable Society

KRISHI VIGYAN KENDRA

Yagantipalle – 518124, Kurnool Dt., A.P.

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ANNUAL REPORT - 2012 -13

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.	9394444439 08515200340	----	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.	9394444439	----	pb1961@rediffmail.com

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Smt.G.Dhanalakshmi	08142117677	9440607424	dhana66@rediffmail.com

1.4. Year of sanction: 1989

1.5. Staff Position (as on 31st March-2013)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale	Present basic (Rs)	Date of joining	Permanent /Temporary	Category (SC/ST/ OBC/ Others)
1	Programme Coordinator	G.Dhanalakshmi	Programme Coordinator	Home Science	27,490-00	34,490-00	3-4-2003	Permanent	OC
2	Subject Matter Specialist	K.Venkata Ramanaiah	SMS (Soil Science)	Soil Science	25,240-00	30,640-00	10-7-1996	Permanent	BC
3	Subject Matter Specialist	M.Sudhakar	SMS (Agronomy)	Agronomy	25,240-00	30,640-00	23-9-1996	Permanent	OC
4	Subject Matter Specialist	D.Balaraju	SMS (Plant Protection)	Plant Protection	21,470-00	26,870-00	4-4-2003	Permanent	OC
5	Subject Matter Specialist	K.Rajeswar Reddy	SMS Horticulture	Horticulture	16,880-00	22280-00	1-10-2008	Permanent	OC
6	Subject Matter Specialist	A.Krishna Murthy	SMS (Animal Husbandry)	Animal Husbandry	16,880-00	22280-00	20-6-2010	Permanent	OC
7	Programme Assistant	K.Lakshmi Priya	Programme Asst. (Home Science)	Home Science	17,180-00	21,380-00	18-6-1996	Permanent	BC
8	Programme Assistant	B. Koteswar rao	Programme Asst. (Agronomy)	Agronomy		20,000-00	01.2-2013	temporary	
9	Accountant / Superintendent	Y.V.Rama Subbaiah	Accountant Supt.	Accountant Supt.	17,580-00	21,780-00	1-1-1996	Permanent	OC
10	Jr.Asst. cum Typist (SK)	B.V.M.V.Prasad Rao	Jr. Asst. cum Typist	Jr. Asst. cum Typist	11,900-00	14,200-00	21-3-1990	Permanent	BC
11	Driver	Iqbal Basha	Driver cum Mechanic	Driver cum Mechanic	9,180-00	11,180-00	20-9-1995	Permanent	OC
12	Driver	D.Obulesu	Driver cum Mechanic	Driver cum Mechanic	8,840-00	10,840-00	1-8-1996	Permanent	SC
13	Attender	P.Raghava Reddy	Attender	Attender	7,910-00	9,710-00	2-11-1990	Permanent	OC
14	Watchman	T.P.Gurappa	Watchman	Watchman	7,670--00	9470-00	30-12-94	Permanent	BC
15	Cook	T.Rajeswari	Cook	Cook	7,670--00	9470-00	20-9-1995	Permanent	BC
16	Farm Attendent	A.Rama Subbaiah	Farm Attendent	Farm Attendent	7,670--00	9470-00	1-10-1996	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:

A) Buildings

S. No.	Name of building	Source of funding	Completion Date	Stage				
				Complete			Incomplete	
				Plinth area (Sq.m)	Expenditure (Rs.)	Starting Date	Plinth area (Sq.m)	Status of construction
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	Soil Testing Laboratory	ICAR	2004-05	112.5	8.59	2004-05		

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total km. Run	Present status
TATA Sumo	2009	6,00,000-00	65,300 KM	OK
Mahindra & Mahindra Tractor	2005	3,54,522-00	24,798 (hrs)	OK
Motorcycle (Sujiki)	1996	33,090-00	5,25,695 KM	Condemned
Motorcycle (Honda)	2002	45,576-00	20,805 KM	OK
Motorcycle (Suzuki MAX-100)	2002	34,100-00	75,324 KM	OK
TVS XL-Super	2002	17,900-00	40,186 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
Digital Camera Kodak	2005	19,800-00	Condemned
Digital Camera Nikon	2005	15,100-00	Condemned
L.C.D	2005	1,00,000-00	OK

1.8. A) Details of SAC meeting held For Kharif,2013

Sl. No.	Date	Name and Designation of Participants	Salient Recommendations	Action taken
1.	02.03.2013	Dr.Y.Padmalatha, ADR, RARS, Nandyal.	• Production values may be given in acres instead of Hectors . • NBeG-1 Seed may be in large Quantities and purity of seed may be maintained, Sprinkler irrigation in Bengal Gram may be tested in more locations. • Blackgram variety MASH 308 may be tested at field level. • Demonstration on Direct seeding in Rice may be conducted at KVK. • STCR in Bengalgram may be demonstrated as per Bhuchetana Programme. • Micronutrient application in Jasmine to be demonstrated for specific nutrient.	
		Dr.K.Anand Singh, Principal Agricultural Information Officer, ANGRAU, Hyderabad.	• Pointed out the absence of representation from Zonal Coordination unit for SAC meeting. • Other extension activities may be improved apart from OFTS and FLDs. • Dial your KVK may be planned and organized. • KVK news letter may be brought out. • Impact reports of OFTs and FLDs may be developed and printed.	

		• Document on “A decade of Home Science” may • be brought out in printed form.
	1. Dr. M.R.Sreenivasulu, Retd. ADR & Special Officer, SHE&CS. 2. Dr. S.Saralamma, Coordinator, DAATTC, Kurnool. 3. Dr. Y. Narasimhulu, Programme Coordinator, KVK, Banavasi. 4. Dr. Venkata Seshaiah, Scientist & Head, Livestock Research Station, Mahanandi. 5. Sri. S. Venugopal Rao, Project Director ATMA, Kurnool. 6. Sri. G. Sathish, Asst. Director, Dept. of Horticulture, Kurnool. 7. Dr. C. Venkata Ramana Verma, Asst. Director, Veterinary Hospital, Banaganapalle. 8. Sri.Ch. V. Samba Siva Rao, Asst. Project Director, DWMA, Kurnool. 9. Sri. E. Prasad Rao, Agricultural Officer, FTC, Nandyal. 10. Sri. C. Subba Reddy, MAO, Banaganapalle. 11. Sri. M. Srinivasa Reddy, BTC, ATMA, Nandyal. 12. Sri. N. Sudhakar Reddy, Jr.	

Executive(F&H), AIR, Kurnool.

13. Smt. M. Nagamani, CDPO, ICDS, Banaganapalle.
14. Sri. M. Madhan Mohan Goud, Horticulture Officer, Banaganapalle.
15. Sri. J. Parameswara Reddy, Course Director, CLRC, Banaganapalle.

List of farmers

1. S.Vijaya Bhaskar Reddy, Yagantipalle (V), Banaganapalle (M)
2. M.Krishnudu, Yagantipalle (V), Banaganapalle (M)
3. D. Siva Shanker Reddy,Yagantipalle(V), Banaganapalle (M).
4. D.Chinnapa Reddy, Banaganapalle.
5. M.V.Krishna Reddy, N.R.S, President, Kalugotla(V), Koilakuntla(M).
6. D. Sreenivas Yadav, Dornipadu.
7. Y. Nagesh.
8. K. Maheswaramma, Yagantipalle(V), Banaganapalle (M).
9. B. Rajeswaramma, Yagantipalle(V), Banaganapalle (M).

2. DETAILS OF DISTRICT (2012-13)

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 yields unexpectable and dry land agriculture is predominant with a variety of rainfed crops in the zone.

Agro-ecological situations :

S. No	Agro ecological situation	Characteristics
1	K.C canal irrigated red soils	Paddy-Paddy, Greengram-Paddy Paddy-Groundnut, Vegetables Paddy-Fallow
2	T.B.Low level canal irrigation Red soils	Paddy-Paddy, Paddy-Groundnut Greengram-Paddy, Vegetables Groundnut/Fallow
3	T.B. High level canal irrigation Red soils	Greengram-Paddy, Paddy/Groundnut/ Vegetables-Fallow
4	K.C.Canal irrigation Black soils	Paddy-Greengram-Paddy Paddy/Groundnut-Vegetables Sunflower/Groundnut-Fallow Groundnut/Cotton-Fallow
5	T.B.Low level canal irrigation-Black soils	Greengram/Paddy-Paddy Paddy-Groundnut/Vegetables Sunflower-Groundnut Groundnut-Sunflower Cotton-Fallow
6	T.B.High level canal irrigation Black soils	Paddy-Fallow, Sunflower/Groundnut-Fallow
7	Problem soils	Greengram-Paddy, Fallow-Paddy Fallow- Paddy
8	Tank irrigation Red soils	Paddy-Sunflower/Fallow Paddy/Sunflower-Fallow
9	Tank irrigation Black soils	Paddy-Paddy/Groundnut Sunflower-Fallow, Fallow-Paddy/Groundnut/Sunflower
10	Well irrigation Red soils	Paddy-Paddy/Sunflower/Groundnut Sunflower-Groundnut/Greengram Groundnut – Groundnut/Sunflower Cotton/Onion-Fallow
11	Well irrigation Black soils	Paddy-Paddy/Sunflower/Groundnut Sunflower/Vegetables Cotton/Onion/Chillies-Fallow

12	Rainfed Red soils	Sunflower, Groundnut+Redgram Groundnut+Jowar, Cotton Cotton+Redgra, Jowar, Korra, Redgram- Fallow
13	Rainfed-Black soils	Paddy-Fallow Sunflower/Bengalgram/Coriander fallow Jowar/Bengalgram/Tabacco Jowar/Groundnut/Cotton-Fallow
14	SRBC – Redsoils	B.t. Cotton, Jowar, Redgram, Groundnut,Korra
15	SRBC – Black soils	Rice, Jowar, Maize
16	TGP – Red soils	G.nut, Vegetables,Sunflower, Chillis, Cotton
17	TGP –Black soils	Rice, B.t. Cotton, Chillis

2.3 Soil type/s

S. No	Soil type	Characteristics	Area in lakh 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

Kharif -2012

S. No	Crop	Normal areas	Area sown (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	Rice	88159	76637	3019948	3687
2	Jowar	6938	6363	261057	2129
3	Bajra	7947	5269	-	-
4	Maize	14598	14705	631364	5833
5	Ragi	-	-	-	-
6	Minor Millets (Korra)	7866	9815	5000	-
7	Redgram	39171	41027	193736	631
8	Greengram	4372	900	11954	680
9	Blackgram	4653	2688	18147	585
10	Horsegram	-	-	-	-
11	Other Pulses	-	-	-	-
12	Groundnut	187510	86618	2093013	573
13	Sesamum	118	26	-	-
14	Castor	29391	100183	263602	728
15	Sunflower	54436	11339	302671	612
16	Soybean	183	149		
17	Cotton	31874	79718	74140 (bales)	340
18	Mesta	130	70	-	-
19	Chillies	12087	13381	359662	3215
20	Sugarcane	1584	3248	-	-
21	Onion	14313	23342	2512188	18115
22	Turmeric	1239	4474	-	-
23	Others (Tobacco)	1835	104	-	-

Rabi -2012

S. No	Crop	Normal areas	Area sown (ha)	Production (Qtl)	Productivity (Qtl /ha)
1	Paddy	27245	9851	1092656	2775
2	Wheat	622	224	-	-
3	Jowar	60162	68863	1252679	2134
4	Bajra	465	610	-	-
5	Maize	3396	6507	416055	7784
6	Minor Millets	154	77	-	-
7	Redgram	1187	837	47678	1145
8	Greengram	519	1052	-	-
9	Blackgram	4603	8584	17630	480
10	Horsegram	1247	1119	6202	495
11	Bengalgram	226826	205499	4271722	1751
12	Other pulses	120	-	-	-
13	Groundnut	25286	17882	576581	2415
14	Sunflower	84485	28378	983236	1974
15	Safflower	624	697	-	-
16	Sesamum	487	283	-	-
17	Rape seed mustard	4125	1689		
18	Chillies	602	1210	22863	2725
19	Coriander	5788	3217	51688	595
20	Tobacco	11134	8777	178694	1135
21	Cotton	-	76	-	-
22	Onion	1816	3067	426170	23174
23	Others	519	12589	-	-

AREA, PRODUCTION AND PRODUCTIVITY OF DIFFERENT HORTICULTURE CROPS GROWN IN THE DISTRICT

Sl.No	Name of the crop	Area (Ha)	Production in Tones	Productivity in Tons/Ha
1	Mango	7209	108135	15
2	Sapota	432	6480	15
3	Sweet Orange	2888	72200	25
4	Guava	210	3150	15
5	Ber	66	990	15
6	Pomogranate	57	570	10
7	Lime	205	2563	12.5
8	Banana	3373	168650	50
9	Coconut	120	45000	375 Nuts / Tree
10	Papaya	300	2400	8
11	Other fruits	202	-	-
	Total	15062	410138	
	Vegetables			
12	Tomato	5042	75630	15
13	Brinjal	2856	22848	8
14	Drumstic	150	-	-
15	Gourds	412	4120	10
16	Beans	2650	13250	5
17	Leafy Vegetables	422	-	-
18	Bhendi	1495	8970	6
19	Carrot	292	5840	20
20	Cucumber	150	1500	10
	Total	13469	132158	
	Spices			
21	Chillies	13719	96033	7
22	Onion	16970	254550	15
23	Turmeric	3436	15462	4.5
24	Coriander	2000	10000	5
25	Ajwan	4833	4833	1
26	Curry Leafies	181	-	
	Total	41139	380878	
	Flowers			
27	Jasmine	520	2080	4
28	Marrygold	452	2260	5
29	Crossandra	498	996	2
30	Rose	35	70	2
31	Lilly	10	20	2
32	Chrysanthemam	202	1616	8
	Total	1717	7042	
	Grand Total	71387	930216	

2.5. Weather data 2012-13

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
Apr -12	29.0			
May-12	29.4			
Jun -12	39.8			
Jul -12	146.4			
Aug -12	142.5			
Sep -12	95.7			
Oct -12	62.2			
Nov-12	43.1			
Dec -12	1.3			
Jan -13	0.0			
Feb -13	19.9			
Mar -13	3.5			
Total	**473.2**			

2.6. Production and productivity of livestock, Poultry, Fisheries etc. in the district (2012)

Category	Population	Production	Productivity
Cattle			
Crossbred	6452	3.98 lakh	6-8 lt
Indigenous	514259	metric	1.5-2.5
Buffalo	409741	tonnes of milk	2-3
Sheep			
Crossbred	-	19,087 metric	
Indigenous	1488939	tonnes of	12.5 kg
Goats	500518	meat	
Pigs	16949		
Crossbred			
Indigenous			
Rabbits			
Poultry			
Hens	2,74,957	857 lakh No.s	
Desi	6,41,218	eggs	60-70 eggs
Improved	3,35,127		245-260 eggs
Ducks	942		
Turkey and others			

2.6 Details of Operational area / Villages (2012-13)

S. No.	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1	Banaganapalle	Nandyal	Bhanumukkala	B.t.Cotton Brinjal	Indiscriminate use of pesticides	IPM for sucking pests in Cotton IPM for Shoot & Fruit borer
2	Bethamcherla	Nandyal	Embai	Onion	Indiscriminate use of Pesticides	IPM in Onion
			H.Kottala	Groundnut	Indiscriminate use of Pesticides	IDM for Stem rot
			Bethamcherla	Bengalgram	Excess application of chemical fertilizers	Soil test based nutrient management
3	Owk	Nandyal	K.Sunkesula	Chillies	High cost of plant protection	IDM in chillis
			Annavaram	Paddy	Indiscriminate and excess application of fertilisers	STCR in rice
4	Banaganapalle	Nandyal	I.K.Peta	Bengalgram	Ineffective seed treatment for soilborne diseases	Biopriming for wilt and dry root rot
				Sunflower	Imbalanced nutrient management	Soil test based nutrient management
			Amadala	Redgram	Indiscriminate use of Pesticides	Realtime contingent mgmt, of pests & diseases
			Yagantipalle Meerapuram	Castor	Indiscriminate use of pesticides	Realtime contingent mgmt. of pests & diseases
			Bhanumukkala	Blackgram	Indiscriminate use of Pesticides	Realtime contingent mgmt. of pests & diseases

5	Banaganapalle	Nandyal	Pathapadu Yagantipalle Applapuram Nandavaram Banumukkala	Groundnut	Low productivity in groundnut	Introduction of drought tolerant varieties. Demonstration on improved varieties of groundnut.
				Redgram	Low productivity in redgram	Integrated crop management in redgram
				Rice	Low productivity in rice –rice system	Introduction of rice based cropping systems (rice-Maize and rice-sunflower)
				Rice	Low yields n paddy due to Zinc deficiency	Foliar application of zinc
				Mango		

2.7 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.
Sunflower, Groundnut & Bengal gram	Promotion of SulphurNutrition in Oil seed crops like Sunflower, Groundnut and pulse crops like Bengalgram. The data collected in the district reveal that most of the oil seed farmers are applying DAP both as basal and as top dress, which supplies only N and P. Farmers are not aware of the use of Sulphur, which improves oil content in the seeds, which is the basis for price of the produce in the market. Sulphur usage can be promoted by use of SSP in place of DAP, to supply Sulphur to the soil in addition to Phosphorus in economical way. Gypsum is promoted as a cheap source of sulphur in Bengal gram
Sunflower	Improving productivity of sunflower: Sunflower is grown in an area of 64489 ha in Kharif and 94928lakh ha in rabi in normal conditions in the district The major gap identified in sunflower cultivation is non adoption of optimum spacing (60 x 30 cm). The other critical gap is the application of boron at ray floret stage. Farmers are used to a spacing of 30 x solid row, resulting in moisture stress to crop, ultimately suffering in yield losses. Hence awareness should be created among the farming community about the cultivation of sunflower with optimum spacing and thinning and application of Boron at ray floret stage. This can be taken up on a wider scale through mass campaigns, TV programmes, Radio programmes and print media. The problem is being addressed by Krishi Vigyan Kendra through demonstrations and FLDs in adopted villages.

Cotton, Bengalgram & Vegetables	Promotion of IPM with a stress on biological control in Cotton, Bengalgram and Vegetables: Due to indiscriminate and heavy use of chemical pesticides, the *Helicoverpa* on Cotton and Bengalgram has developed resistance and no more chemical sprays could manage the pest. The problem of insecticide residues in vegetables is causing panic and has become a threat to human health. Hence, it demands alternate ways of controlling the pest. And use of bio pesticides such as *Bacillus thurungiensis* and Ha NPV could solve the problem. Awareness regarding biological control among farmers is very poor. Hence, we considered it as a major thrust area and we are putting our efforts in promoting biological control through trainings and demonstrations in preparation as well as its usages.
Bengalgram	**Improving productivity in Bengalgram:** a. Management of Soil borne diseases: The data collected in the district revealed that in about 2.1 lakh hectares Bengalgram is grown every year. The farmers are adopting monocropping, because there is no alternative, which is as remunerative as bengalgram. Due to monocropping, soil borne diseases like wilt and dry root rot have become major problem. And they are not manageable by chemicals. Hence, the farmers have to depend on alternate ways for its management. Use of *Trichoderma* for seed treatment and soil application, was found effective in managing the soil borne diseases. But, the farmers are not aware of its use and performance in the field. So the farmers need to be trained in application and usage of *Trichoderma* for controlling the wilt and dry root rot in Bengalgram. In the same manner, soil borne diseases have become a common problem in many crops of the district like Cotton, Redgram, Chillies and sweet orange. The same *Trichoderma* can be effectively used for the management of these diseases. Farmers are not aware of its use and hence they need training in its application and usage.
Paddy	Integrated Nutrient Management in Paddy: The paddy farmers are using higher doses of chemical fertilizers (B.C. Ratio: 1:1.5 to 1:1.75) and are going for top dressing with complex fertilizers even after 60 days, which is paving the way for incidence of pests and diseases. It was also observed that the poor soil health is due to low organic matter content and inert /filled material of the chemical fertilizers, which leads to low fertilizer use efficiency. Farmers are not going for soil test based recommendations. There is a dire need for the farmers to go for soil test based fertilizer recommendations with inorganic and organic manures in the ratio of 3:2 so as to reduce the cost and improve the soil health.

Problematic soils	Reclamation of alkaline soils : Out of total area, alkaline soils represent 10.2%, which are poor to very poor in productivity. To improve the physical properties of these soils, it requires some of the amendments like gypsum application, sulphur and organic manures addition. It is also necessary to follow special package of production to extract better yields from these soils. Training and demos in this regard will help the farmers to overcome this problem.
Dryland Horticulture	Focus on dry land Horticulture Of the total area of Kurnool district, 0.81 lakh ha is under cultivable waste. All this area can be converted in to dry land horticulture by making some amendments. The crops that are suitable under dry land horticulture are Mango, Ber, Sapota, Pomogranate and Aonla. So there is every need to focus on increase of area and productivities of these crops, which indirectly improve the standard of living and income of the farm families.
Milch Animals	Care and management of milch animals: The data reveal that the management of milch animals is not to the standards. The data also tells us that the young calves are not taken care,due to which mortality rate is significantly high. The nutrient management is very low which resulted in poor milk yields. The irrigated track farmers are also not going for green fodder cultivation. As the diary is an important component in the farming systems, farmers should be educated about scientific rearing of the animals
Income Generating	Income generating activities for rural women and adolescent girls. Survey reveals that income-generating activities can be taken up in off-season for rural women and also for school dropouts depending upon the local resources and market demand.

3. TECHNICAL ACHIEVEMENTS

3.A. Details of target and achievements of mandatory activities by KVK during 2012-13

OFT (Technology Assessment and Refinement)				FLD (Oilseeds, Pulses, Cotton, Other Crops/Enterprises)			
1				2			
Number of OFTs		Number of Farmers		Number of FLDs		Number of Farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
16	16	80	80	30	30	300	300

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	T	A	T	A
Farmers	68	68	2200	2202	7	7	350	380
Rural youth	13	13	450	440				
Extn. Functio.	8	8	350	340				

Seed Production (Qtl.)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
NDLR-7 45.0	65.00		
BPT-5204-400.0	383.00		
Redgram -6.0	5.00		
Castor -9.0	10.00		
Seteria – 5.0	4.50		

3.B. Abstract of interventions undertaken

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions					
				Title of OFT if any	Title of FLD if any	Title of Training if any	Title of training for extension personnel if any	Extension activities	Supply of seeds, planting materials etc.
1	Promotion of IPM with Stress on Bio control	Rice Vegetables Mango Maize	Increasing cost of plant protection and pesticide residues in output	Bio-intensive Integrated Pest Management		BIPM, IPM & sustainable pest management methods	-	-	
		Groundnut	Stemroot, LLS, Helicoverpa,RHC	Management of stemrot	IPM in Groundnut	IPM in Groundnut	-	-	-
		Bengalgram	Soil borne diseases, Helicoverpa & S.exigua	Management of S.exigua with newer chemicals.	Management of soil borne diseases in bengalgram	IPM in bengalgram	-	-	-
		Redgram	Helicoverpa, Maruca and wilt	-	Realtime Contingent mgmt. of pests & diseases	IPM and sustainable methods of plant protection	-	-	-
		Castor	Jassids, Capsule borer, Botrytis		Realtime contingent mgmt. of pests & diseases				
		Blackgram	Maruca, YMV, Powdery mildew		Realtime contingent mgmt.of pests & diseases				

		Chillies	Thrips, Fruit rot and Powdery Mildew	IDM for fruit rot & PM	IPM in chillies	BIPM in chillies	-	-	-
		Brinjal	Shoot & Fruit borer		IPM for shoot & Fruit borer				
		Onion	Thrips, Blight		IPM in Onion				
		B.t.Cotton	Jassids, Aphids, Whiteflies & Mealybugs	Mgmt. of sucking pests		IPM in B.t. cotton			
2	INM	Sunflower	Low productivity due to poor seed set and test weight.	-	Nutrient Management .	Integrated nutrient management	-	Field day	Supply of sulphur and borax.
		Rice	Increased cost of production due to indiscriminate and imbalance use of chemical fertilizers .		Nutrient Management based on Soil Test Crop Response formula	Soil sampling and soil test based nutrient management	-	Field day	Supply of Vermi compost ..
		Chilli	Increased cost of production due to indiscriminate and imbalance use of chemical fertilizers	Nutrient Management based on Soil Test Crop Response formula	Soil sampling and soil test based nutrient management	-	Field day	Supply of Vermi compost ..	Nutrient Management based on Soil Test Crop Response formula

		Bengal gram	Imbalanced nutrient management	Nutrient Management based on Soil Test Crop Response formula	Soil sampling and soil test based nutrient management	Field day	Supply of Vermi compost..	Nutrient Management based on Soil Test Crop Response formula	Field day
3	Reclamation Problematic soils		Poor physico - chemical properties and Low productivity.	-	-	Reclamation of sodic soils with gypsum under irrigated condition.	-	-	Supply of gypsum
4	Improving the productivity	Bengal gram	Low yields with local varieties Balanced nutrient management	-	Varietal demo Nutrient Management based on Soil Test Crop Response formula	Production technology Soil sampling and soil test based nutrient management	-	Field day Literature on production technology	Supply of improved variety JG-11 seed
		Redgram	Low yields with local varieties	-	Varietal demo	Production technology	-		Supply of improved variety PRG-158
		Groundnut	Low yields with local varieties	-	Varietal demo	Production technology		-do-	Supply of seed of K-6, TPT-25.
5	Non-usage of Sulphur	Bengal gram	Low yields due to non-application of sulphur	-	Sulphur nutrition	-do-	-	Field day	Sulphur @ 25kg/ha

6	Improving productivity under rainfed situation	Seteria Bengal gram	Low productivity with monocropping	-	Double cropping	Cropping systems	-	-	Supply of korra seed
7	Improving productivity of rainfed Cotton	Arboreum Cotton	Low yields due to use of local varieties	-	Varietal demonstration	Production technology	-	-	Supply of seed & PP chemicals

3.1 Achievements on technologies assessed and refined

A.1 Abstract of the number of technologies assessed* in respect of crops/enterprises Kharif-2012,Rabi & Summer 2012-13)

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Varietal Evaluation Seed / Plant production		1	2							3
Cropping systems	1			1						2
Integrated Crop Management					1	1	1			3
Integrated Nutrient Management										
Crop Geometry	2									2
Mushroom cultivation										
Drudgery reduction	1									1
Farm machineries										
Value addition										
Integrated Pest Management				1						1
Integrated Disease Management										
Resource conservation technology	1									1
Small										

Scale income generating enterprises								
TOTAL	5	1	2	2	1	1	1	13

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

A.2. Abstract of the number of technologies refined* in respect of crops/enterprises (Kharif-2012,Rabi & Summer 2012-13)

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

Resource conservation technology								
Small Scale income generating enterprises								

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

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

Thematic areas	Cattle	Poultry	Sheep	Goat	Piggery	Rabbitary	Fisheries	TOTAL
Evaluation of Breeds								
Nutrition Management								
Disease of Management								
Value Addition								
Production and Management								
Feed and Fodder	2	1						3
Small Scale income generating enterprises								
TOTAL	2	1						3

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

Thematic areas	Cattle	Poultry	Sheep	Goat	Piggery	Rabbitry	Fisheries	TOTAL
Evaluation of Breeds								
Nutrition Management								
Disease of Management								
Value Addition								

Production and Management
Feed and Fodder
Small Scale income generating enterprises
TOTAL

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

A. Technology Assessment:

OFT-1

S.No	Item		Particulars
1	Title	:	**Bengalgram based cropping systems in rainfed black soils**
2	Problem diagnosed/refinement	:	On black soils of Kurnool district generally one crop Bengalgram/fallow-Jowar is being taken during rabi (September - January) in an area of 3.02 laksh ha. Farmers are getting low net returns/ha due to changes in price of the marketable produce and the incidence of pest and diseases also increasing year by year due to monocropping .
3	Details of technologies selected for assessment/refinement	:	T1: Foxtail millet - Bengalgram T2: Greengram – Bengalgram T3: Fallow – Bengalgram
4	Source of technology	:	ANGRAU
5	Production system	:	Rainfed black soils
6	Thematic Area	:	Cropping systems
7	Performance of the Technology with performance indicators	:	Yield and net returns of the cropping systems
8	Final recommendation for micro level situation	:	The result indicated that highest net returns were obtained with Korra- Bengalgram sequence followed by Greengram – Bengalgram as compared to Fallow-bengalgram hence it is recommended for adoption.
9	Constraints identified and feedback for research	:	-
10	Process of farmers participation and their reaction	:	-

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed/ refined	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Cropping system	Rainfed	On black soils of Kurnool district generally one crop Bengalgram/fallow-Jowar is being taken during rabi September - January) in an area of 3.02 laksh ha. Farmers are getting low net returns/ha due to Monocropping	Bengalgram based cropping systems in rainfed black soils	5	Korra-bengalgram	Net returnsRs/ha	39,389-00	The result indicated that highest net returns was obtained with Korra-Bengalgram sequence followed by Greengram – Bengalgram as compared to Fallow-bengalgram hence it is recommended for adoption	.
						Additional income Rs/ha	4,365-00		
					Greengram-bengalgram	Net returnsRs/ha	32,268-00		
						Additional income Rs/ha	1,244-00		
					Fallow-bengalgram	Net returnsRs/ha	35,024-00		
						Additional income Rs/ha			

Technology Assessed	Production per unit	Net Return (Profit) in Rs./unit	BC Ratio
11	12	13	14
Korra- bengalgram	1910 -1358 kg/ha	39,389-00	**1:2.2**

Greengram- bengalgram	385 -1437 kg/ha	36,268-00	**1:1.8**
Fallow- bengalgram	1556 kg/ha	35,024-00	**1:2.0**

OFT 2:

S.No	Item		Particulars
1	Title	:	Assessment of plant densities i.e paired row Vs ridge planting (60x20 cm) in under I.D situation.
2	Problem diagnosed/refinement	:	Low yields in Maize due to High population densities
3	Details of technologies selected for assessment/refinement	:	T1 – Paired row (Farmers Practice) T2 – Recommended spacing(60X20 cm)
4	Source of technology	:	ZREAC Proceeding, RARS, Nandyal.
5	Production system	:	Sandy clay loam, Irrigated
6	Thematic Area	:	Crop geometry
7	Performance of the Technology with performance indicators	:	✓ Plant population ✓ Yield / ha ✓ Economics
8	Final recommendation for micro level situation	:	The data on grain yield revealed that grain yield was affected by population densities.The maximum grain yield (6842 kg/ha) was recorded in ridge planting(60x20 cm) as compared to paired rows. The higher grain yield in ridge planting(60x20 cm) mainly due to higher number of grain rows/ cob and test weight, hence it is recommended for adoption.
9	Constraints identified and feedback for research	:	-
10	Process of farmers participation and their reaction	:	➢ Farmers were participated in planning, execution, monitoring . ➢ Convinced with optimum population than that of high density.

crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed/ refined	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Maize	Irrigated	Low productivity in Maize due to high population densities.	Assessment of plant densities i.e paired row Vs ridge planting (60x20 cm) in under I.D situation	5	T1 – Paired row (Farmers Practice) T2 – Recommended spacing(60X20 cm)	Plant population/ha Yield kg/ha Plantpopulation/ha Yield kg/ha	138888 6315 83333 6842	The maximum grain yield (6842 kg/ha) was recorded in ridge planting(60x20 cm) as compared to paired rows. The higher grain yield in ridge planting(60x20 cm) mainly due to higher number of grain rows/ cob and test weight, hence it is recommended for adoption.	.

Technology Assessed 11	Production per unit 12	Net Return (Profit) in Rs./unit 13	BC Ratio 14
T1 – Paired row (Farmers Practice)	6315kg/ha	52815-00	**1:.2.6**
T2 – Recommended spacing(60X20 cm)	6842kg/ha	60617-00	**1:2.9**

OFT 3:

S.No	Item		Particulars
1	Title	:	Evaluation of new bengalgram varieties suitable for Kurnool district
2	Problem diagnosed/refinement	:	In bengalgram JG 11 variety being cultivated over larger area year after year which is leading to incidence of soil borne diseases, resulting in loss in yield. Hence, to promote other high yielding varieties of bengalgram with tolerance or disease resistance, the present trial is proposed.
3	Details of technologies selected for assessment/refinement	:	T1 – Farmers Practice (JG 11) T2 – JG – 130 T3 – Nandyalasanaga-1
4	Source of technology	:	Groundnut varieties developed by ANGRAU and ICRISAT
5	Production system	:	Rainfed, Black soils
6	Thematic Area	:	Varietal evaluation
7	Performance of the Technology with performance indicators	:	Results showed that the maximum grain yield (1432 kg/ha) was recorded Nandyalasanaga-1 followed by JG-130(1336 kg/ha) and JG-11 1284 (Kg/ha).The higher grain yield in Nandyalasanaga- 1 mainly due to higher number Pods/plant and test weight, hence it is recommended for adoption.
8	Final recommendation for micro level situation	:	-
9	Constraints identified and feedback for research	:	-
10	Process of farmers participation and their reaction	:	Farmers were participated in planning execution, monitoring, evaluation of Varieties and their reaction towards the performance and, adoptability etc. of the improved varieties were assessed.

crop/ enterprise 1	Farming situation 2	Problem Diagnosed 3	Title of OFT 4	No. of trials* 5	Technology Assessed/ refined 6	Parameters of assessment 7	Data on the parameter 8	Results of assessment 9	Feedback from the farmer 10
Bengalgram	Rainfed	Low productivity of local varieties	Varietal evaluation	5	1. Nandyala sanaga-1	No. of pods/plant, Yield Kg/ha Test weight(gm)	43.6 1432 29.27	Results showed that the maximum grain yield (1432 kg/ha) was recorded Nandyalasanaga-1 followed by JG-130(1336 kg/ha) and JG-11 1284 (Kg/ha).	
					2. JG-130	No. of pods/plant, Yield Kg/ha Test weight(gm)	39.6 1336 24.83		
					3. JG-11	No. of pods/plant, Yield Kg/ha Test weight(gm)	40.3 1284 27.51		

Technology Assessed 11	Production per unit 12	Net Return (Profit) in Rs. / unit 13	BC Ratio 14
1.Nandyal Sanaga – 1	1432		
2. JG-130	1336		
3. JG-11	1284		

OFT 4:

S.No	Item		Particulars
1	Title	:	**Performance of blackgram Varieties under rainfed black soils (Scrace rainfall zone)**
2	Problem diagnosed/refinement	:	In Kurnool district bengalgram being cultivated in black soils in an area of 2.5 lakhs ha under rainfed situation. Due to stagnation in market price for the last three years net returns are reduced. So farmers are searching for a remunarative crop. Hence there is need to suggest better alternate crop to Bengalgram
3	Details of technologies selected for assessment/refinement	:	T1 –LBG-645 T2 – LBG-752 T3 – PU-31
4	Source of technology	:	Varieties developed by ANGRAU
5	Production system	:	Rainfed, Black soils
6	Thematic Area	:	Varietal evaluation
7	Performance of the Technology with performance indicators	:	The results indicated that the among the Varieties PU-31has recorded highest Yield (1642Kg/ha) followed by LBG-752(1535 Kg/ha).
8	Final recommendation for micro level situation	:	-
9	Constraints identified and feedback for research	:	-
10	Process of farmers participation and their reaction	:	Farmers were participated in planning execution, monitoring, evaluation of Varieties and their reaction towards the performance and, adoptability etc. of the improved varieties were assessed.

crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed/ refined	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Blackgram	Rain fed	Low productivity of local varieties	Varietal evaluation	5	LBG-645 LBG-752 PU-31	Yield Kg/ha Yield Kg/ha Yield Kg/	1456 1535 1642	The results indicated that the among the Varieties PU-31has recorded highest Yield (1642Kg/ha) followed by LBG-752(1535 Kg/ha).	The incidence of YMV is less in PU-31 compared to LBG-752.

Technology Assessed	Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
1. LBG-752	1456	28548-00	1:2.0
2. PU-31	1535	31550-00	1:2.1
3. LBG-645	1642	35616-00	1:23

OFT. 5:

S.No	Item	Particulars

1	Title	:	**Management of stem rot in Groundnut**
2	Problem diagnosed/refinement	:	Stem rot is causing considerable loss to groundnut yields every year in Kurnool district, especially in alfisols. The disease is endemic and effective management of the disease is the need of the hour.
3	Details of technologies selected for assessment/refinement	:	ANGRAU has recommended the strategy to combat stem rot disease of groundnut. But it has not been practiced in farmers fields due to lack of awareness on cause and intensity of the problem and the management strategy. Hence, the present trial is conducted to assess the recommendation in the farmers field. T1 – Farmers practice – Spraying Carbendazim @ 1g/lt or Hexaconazole @ 2 ml/lt after noticing the disease. T2 – Recommended Practice- • Application of T.viride @ 5 kg/ha impregnated and incubated with FYM, before sowing • Spraying Hexaconazole @ 2 ml/lt @ 70 DAS.
4	Source of technology	:	ANGRAU
5	Production system	:	Rainfed - redsoils
6	Thematic Area	:	Integrated Disease Management
7	Performance of the Technology with performance indicators	:	1. Stem rot (%) 2. Cost of treatment 3. Yield (q/ha) 4. C: B Ratio
8	Final recommendation for micro level situation	:	-
9	Constraints identified and feedback for research	:	-
10	Process of farmers participation and their reaction	:	Active participation of farmers in diagnosis of the disease and spraying fungicide and application of T.viride impregnated FYM.

crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed/ refined	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Groundnut	Rainfed red soils	Low yields due to regular incidence of stem rot	Management of stemrot in groundnut	5	T1 – Farmers practice – Spraying Carbendazim @ 1g/lt or Hexaconazole @ 2 ml/lt T2 – Recommended Practice- • Application of T.viride @ 5kg/ha impregnated and incubated with FYM. • Spraying Hexaconazole @ 2 ml/lt for management of LLS @ 70 DAS.	* Stem rot % *Cost of PP * yield /ha. * Stem rot % *Cost of PP * yield /ha.	7.75 1825-00 910 kg/ha 4.25 2370-00 1030 kg/ha	The result indicated that recommended practice gives better yield (1030 kg/ha) compared to farmers practice (910 kg/ha). The stem rot disease was at its minimal in the OFT.	.

Technology Assessed 11	Production per unit 12	Net Return (Profit) in Rs. / unit **13**	BC Ratio **14**
T1: Farmers practice – spray carbendazim @ 1g/lt or Hexaconazole @ 2 ml/lt	910 kg/ha	14,645-00	1:1.62
T2: Recommended practice – T.v@ 5kg/ha + spray Hexaconazole @ 2 ml/lt on incidence of LLS.	1030 kg/ha	19,140-00	1:1.79

OFT 6:

S. No.	Item		Particulars
1	Title	:	**Management of sucking pests in B.t. cotton**
2	Problem diagnosed/refinement	:	Due to shift in pest scenario on B.t. cotton, for the past two years sucking pest incidence is assuming importance in Kurnool district and it has become cause of concern in bt. Cotton production.
3	Details of technologies selected for assessment/refinement	:	**Assessment:** Recommended module of sucking pest management in B.t. cotton will be assessed against indiscriminate use of pesticides followed by farmers. T1 – Farmers practice – Indiscriminate use of pesticides. T2 – Recommended – • Seed treatment with Imidacloprid 70 WS @ 5g/kg • Maize/Sorghum as barrier crop. • Yellow sticky traps 10/ac. • Stem application with Mono (1:4) or Imidacloprid (1:20) at 20,40 & 60 DAS. • Need based pesticide spraying – Imidacloprid @0.4 ml/lt or Acetamaprid @ 0.2 g/lt or Thiomethoxam @ 0.2 g/lt or Fipronil @ 2 ml/lt
4	Source of technology	:	ANGRAU
5	Production system	:	ID – Black soils
6	Thematic Area	:	Integrated Pest Management
7	Performance of the Technology with performance indicators	:	1. Incidence of Jassids, Aphids, Whiteflies. 2. Cost of treatments (Rs./ha) 3. Yield (q/ha). 4. C: B Ratio
8	Final recommendation for micro level situation	:	-
9	Constraints identified and feedback for research	:	Stem applicators not available locally.
10	Process of farmers participation and their reaction	:	Farmers participated in diagnosis of the pest and pest stages, convinced by the efficiency of stem application with monocrotophos.

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed/ refined	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Bt.Cotton	Rainfed Black Soil	Incidence of sucking pests in Bt.cotton result in considerable loss of the crop.	Management of sucking pests in B.t. cotton	5	T1 – Farmer practice – Indiscriminate use of insecticides	*Cost of Plant protection (Rs./ha) *Incidence of Jassids/Aphids • Yield kg/ha	2240 4.12/pt 8.24% 2120	There was a saving of Rs.1800/- ha in cost of plant protection, with 9.06% increase in cotton yield.	Effective control of sucking pests is seen with stem application compared to sprayed fields.
					T2 – Technology assessed – ANGRAU recommended practice	* Cost of Plant protection (Rs./ha) *Incidence of Jassids/Aphids • Yield kg/ha	1450 1.58/pt. 2.25% 2237		

Production per unit (Kg/ha)	Net Return (Profit) in Rs. / ha	BC Ratio
13	14	15
2120	40,400-00	1:2.20
2237	45,285-00	1:2.37

OFT 7:

S. No.	Item		Particulars
1	Title	:	**Performance of IDM module for management of Fruit rot and Powdery mildew in Chillis.**
2	Problem diagnosed/refinement	:	In Kurnool district, the major the major diseases of chilli occurring regularly are fruit rot, powdery mildew and leaf spots. Powdery mildew can cause damage upto 40% in severe cases.
3	Details of technologies selected for assessment/refinement	:	**Assessment** of Integrated Disease Management package. T1 – Farmer practice – Indiscriminate use of fungicides. T2 – Technology assessed – IDM o Seedling dip treatment with *Pseudomonas fluorescens* @ 10 g/lt. water. o Prophylactic spray of *Pseudomonas fluorescens* @ 5 g/lt at flowering. o Spray of P.f.@5g/lt + Azoxystrobin @ 0.5 ml/lt on observing initials of fruit rot/powdery mildew.
4	Source of technology	:	NARS
5	Production system	:	Irrigated Dry
6	Thematic Area	:	Integrated Disease Management
7	Performance of the Technology with performance indicators	:	1. Fruit rot and Powdery mildew PDI using standard scales. 2. Cost of Plant protection. 3. Yield (Q/ha). 4. C:B Ratio
8	Final recommendation for micro level situation	:	During first year it is observed that with *Pseudomonas fluorescens* root dip and prophylactic spray at flowering, the incidence of powdery mildew was lower in treatment plot compared to farmers field.
9	Constraints identified and feedback for research	:	The methods are tedious to practice and slow in action.
10	Process of farmers participation and their reaction	:	Farmers actively involved in observing disease symptoms, taking up root dipping and spraying. They observed that the treated field showed low incidence of powdery mildew compared to conventional farmers practice.

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed/ refined	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Chillis	Irrigated Dry	Incidence of fruit rot and powdery mildew causing upto 40 % loss in severe cases.	Evaluation of Integrated Disease Management module for Fruit rot and Powdery mildew	5	T1 – Farmer practice – Indiscriminate use of fungicides. T2 – Technology assessed – IDM	*Cost of Plant protection *Fruit rot *Powdery mildew *Cost of Plant protection *Fruit rot *Powdery mildew	15,500/ha 7.74% 8.94% 12,800/ha 2.88% 4.22%	With IDM, fruit rot and powdery mildew dieases could be effectively managed at lower cost compared to farmers practice	The method involves tedious process of root dipping, but gives better control of diseases as the methods are prophylactically taken up.

Production per unit (Kg/ha) 13	Net Return (Profit) in Rs. / ha 14	BC Ratio 15
5,327	2,03,320-00	1:2.75
5,548	2,19,280-00	1:2.93

OFT 8: (2nd Year)

S.No	Item		Particulars
1	Title	:	Nutrient management in Sunflower based on STCR equation under rainfed situation
2	Problem diagnosed/refinement	:	Sunflower yields are declining due to blanket and imbalanced used of chemical fertilizers. Soil test based nutrient application helps to realize higher response ratio and benefit cost ratio as the nutrients are applied in proportion to the magnitude of the deficiency of a particular nutrient and the correction of the nutrient imbalances in soil helps to harness the synergistic effects of balanced fertilization.
3	Details of technologies selected for assessment/refinement	:	T1 (Farmer's practice) T2 (STCR for 15q/ha)
4	Source of technology	:	All India Coordinated project on Soil Test crop response. STCR formula developed for scarce rainfall zone, RARS Nandyal.
5	Production system	:	Rainfed black soils (Clay loams)
6	Thematic Area	:	Soil testing
7	Performance of the Technology with performance indicators	:	Yield (q/ha)
8	Final recommendation for micro level situation	:	The result indicated that highest yield (1178kg/ha) was recorded in T_{-2} (NPK:71-70-16kg/ha) when compared with T_1 (NPK:35-60-0kg/ha) hence it is recommended for adoption.
9	Constraints identified and feedback for research	:	
10	Process of farmers participation and their reaction	:	Pre seasonal training on soil sampling and testing, fertilizer application and mid seasonal field visits finally field days were organized at initial stages, but balanced fertilizer usage is more effective with low cost.

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed/ refined	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Sunflower	Rainfed black soil	Sunflower yields are declining due to blanket and imbalanced use of chemical fertilizers	Nutrient management in Sunflower based on STCR equation under rainfed situation	5	Farmers' Practice NPK:35-60-0kg/ha T_2 NPK:71-70-16kg/ha	* Yield Kg/ha * Yield Kg/ha	994 1178	The result indicated that highest yield was recorded in T2 over T1	STCR based nutrient application is more effective to get higher yields .

Technology Assessed	Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
T_1 -Farmers' practice	994 Kg/ha	17741	2.47
T_2 -STCR	1178kg/ha	21835	2.62

OFT-9(2nd year)

S.No.	Item		Particulars
1	Title	:	**Nutrient management in chilli based on STCR equation under irrigated situation**
2	Problem diagnosed/refinement	:	Chilli is one of the major vegetable crop being cultivated in Kurnool district under both rainfed and ID condition. Its yields are declining due to indiscriminate and imbalanced usage of chemical fertilizers. Soil test based nutrient application helps to realize higher response ratio and benefit: cost ratio as the nutrients are applied in proportion to the magnitude of the deficiency of a particular nutrient and the correction of the nutrient imbalances in soil helps to harness the synergistic effects of balanced fertilization Fertilizer application based on quantitative approaches such as Soil test crop response (STCR) can assist in improving yields, nutrient use efficiency and reducing the cost of production.
3	Details of technologies selected for assessment/refinement	:	T_1 - $N_1P_1K_1$(Farmers Practice) T_2- $N_2P_2K_2$ (STCR for 50q/ha)
4	Source of technology	:	All India Coordinated project on Soil Test Crop Response. STCR formula developed for Guntur, Ongole and Vijayawada and Khammam districts. Now it is taken up for assessment in scarce rainfall zone,Nandyal.
5	Production system	:	Irrigated black soils (Clay loams)
6	Thematic Area	:	Soil testing
7	Performance of the Technology with performance indicators	:	Yield (q/ha) Production cost(Rs./ha)
8	Final recommendation for micro level situation	:	The result indicated that highest yield (5246kg/ha) was recorded in T_{-2} (NPK:390-65-85 kg/ha) when compared with T_1 (5168kg/ha) (NPK:500-450-75Kg/ ha) hence it may be continued for one more year.
9	Constraints identified and feedback for research	:	
10	Process of farmers participation and their reaction	:	Pre seasonal training on soil sampling and testing, fertilizer application and mid seasonal field visits finally field days were organized at initial stages, but balanced fertilizer usage is more effective with low cost.

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed/ refined	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Chilli	Irrigated black soil	Increased cost of production due to excess and imbalanced use of chemical fertilizers	Nutrient management in chilli based on STCR equation under irrigated situation	5	T_1Farmers' practice NPK: 55-450-75 Kg/ ha T_{2-} NPK:400-50-80 kg/ha	* Yield Kg/ha *Production cost(Rs./ha) * yield Kg/ha *Production cost(Rs./ha)	5168 123247 5246 102475	The result indicated that product cost is less in T2 over T1	STCR based nutrient application is more effective to reduce production costs towards fertilizers.

Technology Assessed	Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
T_1 -Farmers' practice	5168 Kg/ha	1,09,322	1.89
T_2 -STCR	5246 kg/ha	1,33,604	2.30

OFT 10:

S.No	Item		Particulars
1	Title of on-farm trials	:	**High density planting in tissue culture Banana.**
2	Problem diagnosed /identified	:	Low plant density due to adoption of wider spacing which ultimately results in low yield.
3	Details of technologies selected for assessment/refinement	:	T1 – Farmers Practice -Spacing (1.8 m. x1.8 m.) T2 – Spacing -1.8mt.x1.5m
4	Source of technology	:	IIHR
5	Production system and thematic area	:	Irrigated sandy loams
6	Thematic area	:	High density planting
7	Performance of the Technology with performance indicators	:	✓ Bunch weight (Kg) ✓ No. of days for bunch initiation ✓ Yield / ha
8	Final recommendation for micro level situation	:	By adopting the 1.8mt x1.5 mt. spacing farmer can get higher number of bunches per unit area
9	Constraints identified and feedback for research	:	Inter culture operations are difficult
10	Process of farmers participation and their reaction	:	While planting it is difficult to follow two different spacing

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed/ refined	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Tissue Culture Banana	Irrigated	Low plant density due to adoption of wider spacing which ultimately results in low yield.	High density planting, in tissue culture Banana.	5	T1 Farmers practice 1.8 X 1.8m T2. 1.8 X 1.5m	* Yield /ha. * Yield /ha.	72.24 ton/ha 80.86 ton/ha	Due to high density planting, 11.93% increased yield over farmers practice was recorded.	Due to high density planting, Rs.66,184/ha more income was obtained over farmers practice.

Production per unit (t/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15
72.24	404868.00	3.16:1
80.86	471052.00	3.45:1

OFT: 11

S.No	Item		Particulars
1	Title	:	**Introduction of Carrot crop as alternative to traditional rabi vegetables.**
2	Problem diagnosed/refinement	:	Continuous cultivation of traditional crops like Tomato is creating glut in the market by which its production is becoming uneconomical. Hence, carrot as an alternate crop to tomato may be introduced.
3	Details of technologies selected for assessment/refinement	:	T1: Farmers practice (Tomato) T2: Alternate crop - Carrot
4	Source of technology	:	APHU
5	Production system	:	Irrigated Sandy loam
6	Thematic Area	:	Introduction of high value crop
7	Performance of the Technology with performance indicators	:	✓ Duration of the crop ✓ Yield (kg/ha) ✓ Net returns (Rs./ha)
8	Final recommendation for micro level situation	:	Results indicates that net returns are more in carrot and it was observed that the duration of the crop and incidence of pest and diseases is less in comparison with tomato.
9	Constraints identified and feedback for research	:	-
10	Process of farmers participation and their reaction	:	-

crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed/ refined	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Carrot	Irrigated	Less profits from the traditional vegetables in local market due to frequent glut	Introduction of carrot as alternate crop	5	T1 : Farmers practice (Tomato)	* Yield /ha. * Net returns (Rs./ha)	61350 kg/ha	Net returns are high with carrot and its duration is also less.	Incidence of pests and diseases is less compared to tomato.
					T2. : Carrot	* Yield /ha. * Net returns (Rs./ha)	24300 kg/ha.		

Technology Assessed 11	Production per unit 12	Net Return (Profit) in Rs. / unit 13	BC Ratio 14
T1: Tomato	61350 kg/ha	147790/-	1:3.43
T2: Carrot	28530 kg/ha	194103/-	1:4.46

OFT-12

S.No	Item		Particulars
1	Title	:	**Effect of feeding of Sunflower heads supplemented ration on milk production in milch buffaloes.**
2	Problem diagnosed/refinement	:	The milk production of milch animals is less due to a. Poor feeding b. Lack of concentrates in the feed.
3	Details of technologies selected for assessment/refinement	:	T1: Farmers practice (feeding of Rice bran) T2: Feeding of SF heads supplemented ration
4	Source of technology	:	S.V. Veterinary University
5	Production system	:	Milch Buffaloes
6	Thematic Area	:	Utilization of Agricultural By products
7	Performance of the Technology with performance indicators	:	✓ Milk yield ✓ Net returns
8	Final recommendation for micro level situation	:	The results indicated that 8.62% increased milk production by feeding SF heads supplemented ration over farmers method of rice bran feeding. Difference of Rs.4445/- on net profit was observed in T2 over T1.
9	Constraints identified and feedback for research	:	Technology to be developed to ground the SF heads at low cost.
10	Process of farmers participation and their reaction	:	Farmers showed very much interest towards this technology and the SF heads have been stored to feed their milch animals.

crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed/ refined	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Dairy	Mixed farming	The milk production of milch buffaloes is low due to imbalance feeding, low proteins in the diet.	Effect of SF heads supplemented ration on milk production of milch buffaloes.	5	T1: Farmers practice (feeding of Rice bran) T2: Feeding of SF heads supplemented ration (30%SF + 70 concentrates of 18% CP)	Milk production (120 days) Fat%	675.76 lt. (T1) 734.17 lt.(T2) 6.22 (T1) 7.17 (T2)	The results indicated that 8.36% increased milk production and 15.3% increase in fat by feeding SF heads supplemented ration over farmers method Difference of Rs.4445/- on net profit was observed in T2 over T1.	.

Technology Assessed 11	Production per unit 12	Net Return (Profit) in Rs. / unit 13	BC Ratio 14
T1: Farmers practice (feeding of Rice bran)	675.76 lt	9106.00	1:2.58
T2: Feeding of SF heads supplemented ration	734.04 lt	13551.00	1:3.82

OFT-13

S.No	Item		Particulars
1	Title	:	**Effect of regional specific mineral mixture on reproduction and production performance in milch buffaloes.**
2	Problem diagnosed/refinement	:	The reproduction problems like post partum anoestrus condition is high due to mineral deficiency in the feed. (Except reproduction disorders)
3	Details of technologies selected for assessment/refinement	:	T_1 –Farmers practice (no feeding of mineral mixture) T_2 – Feeding of Regional specific mineral mixture @ 80gm/day
4	Source of technology	:	S.V. Veterinary University
5	Production system	:	Dairy
6	Thematic Area	:	Mineral supplementation to milch animals
7	Performance of the Technology with performance indicators	:	✓ No. of animals came to heat ✓ Milk production
8	Final recommendation for micro level situation	:	The results indicated that 43% animals exhibited heat symptoms and 8.57% increased milk production was recorded through supplementation of RSMM in the feed.
9	Constraints identified and feedback for research	:	-
10	Process of farmers participation and their reaction	:	-

crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed/ refined	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Dairy	Mixed farming	Post partum anoestrus condition is high in milch buffaloes due to mineral deficiency (Except reproduction disorders)	Effect of RSMM on reproduction and production performance in milch buffaloes.	40 animals	T1: Farmers practice (No feeding of mineral mixture) T2: Feeding of regional specific mineral mixture @ 8gm/day)	No. of animals responded Milk production (90 days)	17(43%) 447.8 (T1) 486.2 (T2)	The results indicated that 43% animals exhibited heat symptoms and 8.57% increased milk production was recorded through supplementation of RSMM in the feed.	.

Technology Assessed	Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
T_1 – Farmers practice	447.8 l	8826.00	1:3.22
T_2 –Farmers practice + RSMM @ 80g/day	486.2 l	9798.00	1:3.47

Treatment period	1-10 days	11-20 days	21-30days	1-2 months	2 -3 months
Animals responded	0	5 (29%)	4 (23.5%)	5 (29%)	3 (17.7%)

OFT-14

S.No	Item		Particulars
1	Title	:	**Effect of azolla supplementation on growth rate in Rajasri birds at backyards.**
2	Problem diagnosed/refinement	:	The growth rate in backyard poultry is low due to un availability of sufficient proteins in scavenging system.
3	Details of technologies selected for assessment/refinement	:	T_1 – Scavenging + Grains (Farmers practice) T_2 – Scavenging + Grains + Azolla @ 50g/day
4	Source of technology	:	S.V. Veterinary University
5	Production system	:	Backyard poultry
6	Thematic Area	:	Azolla supplementation
7	Performance of the Technology with performance indicators	:	✓ Body weight gain ✓ Growth rate
8	Final recommendation for micro level situation	:	The results indicated that 22.9% increased body weight gain and 12.04% increased egg weight was recorded in Rajasri birds through supplementation of Azolla over farmers practice.
9	Constraints identified and feedback for research	:	-
10	Process of farmers participation and their reaction	:	-

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed/ refined	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Poultry	Mixed farming	The growth rate in low due to non availability of sufficient protein food in scavenging system of backyard poultry	Effect of azolla on growth rate in Backyard poultry	50 birds	T_1 – Scavenging + grain feeding T_2 – Scavenging +Grain feeding + 50grams azolla/day	Initial body weight Final body weight (6 months) Body weight gain (in 150 days) Egg weight	431.72 gm 399.48 gm 1562.7 gm 1789.2 gm 1130.9gm 1389.7gm 38.2gm 42.8gm	The results indicated that 22.9% increased body weight gain in Rajasri birds by supplementation of azolla in the feed and 12.04% increased egg weight recorded.	.

Technology Assessed	Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
T_1 – Scavenging + Grains	1130.9gm	150.33	1:1.48
T_2 –Scavenging + Grains + Azolla @50g/day	1389.7gm	189.05	1:1.93

OFT-15

S.No	Item		Particulars
1	Title	:	**Assessment of performance of Improved sickles with Local sickles**
2	Problem diagnosed/refinement	:	Farm women face drudgery in harvesting operations by using local sickles with heavy weight.
3	Details of technologies selected for assessment/refinement	:	✓ T1-Local Sickles (350-380 gms) ✓ T2-Improved Sickles (175 gms)
4	Source of technology	:	-
5	Production system	:	-
6	Thematic Area	:	Drudgery of farm women
7	Performance of the Technology with performance indicators	:	✓ Area Covered/day ✓ Time required/day ✓ Feed back on work related stress factors
8	Final recommendation for micro level situation	:	The results indicated that, with the use of improved sickles area covered is 1.4ac in 3 hours per day than their regular practice of using local sickles i.e, 1.0 ac in 3.30 hours per day. Women also felt that with the use of improved sickles body strain, drudgery at harvest and stress was ranged from less to normal than their regular practice which ranged from moderate to severe.
9	Constraints identified and feedback for research	:	-
10	Process of farmers participation and their reaction	:	-

crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed/ refined	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Farm Implements to reduce drudgery	-	Farm women face drudgery in harvesting operations by using local sickles with heavy weight.	**Assessment of performance of Improved sickles with Local sickles**	10	T1 – Local sickles (350-380) T2 –Improved Sickles(175 gms) T1- Local Sickles (350-380) T2 –Improved Sickles(175 gms) T1- Local Sickles (350-380) T2-Improved Sickles(175 gms)	Area covered/day Time taken for harvest/ac/day ❖ Feed back on work related stress factors	1.0ac 3.30hrs Presented in a separate table	1.4ac 3.0hrs	Farm felt that with the use of improved sickles body strain,drudgery at harvest ranged from less to normal

Technology Assessed	Production /unit	Net return (profit) in Rs./unit	BC Ratio
11	12	13	14
T1 – Local Sickles	-	-	-
T2 –Improved Sickles	-		

Feed back on work related stress factors was recorded with the score card developed by AICRP, H.Sc, FRM and presented in the following table.

Matrix ranking of Drudgery for Farm women in Agriculture Operations:

Indices for drudgery: Severe-5, Moderate-4, Normal-3, Less-2, No drudgery-1

Type of drudgery	Indices	
	Local sickles	Improved Sickles
Drudgery estimation at harvest	4	2
Stress Estimation	5	3
Body Strain while in operation	4	2
Estimation of feel while carrying weights	5	2
Estimation of operational difficulty	4	2
Psychological Stress due to work	5	2

Inferences: It was clearly indicated that, with the use of improved sickles the body strain while in operation, estimation of operational difficulty, drudgery estimation at harvest, psychological stress due to work, estimation of feel while carrying weights and stress estimation was ranged from less to normal than their regular practice which was recorded from moderate to severe.

User Acceptance of Matrix Index on Improved Implement:

Indices For Acceptance: Highly satisfied-5, Moderately Satisfied-4, Satisfied-3, Unsatisfied-2, Not Accettable-1

Name of the Implement	User	Feel of Activity		
		Time Taken for the Activity	Area Covered	Energy Spent for work
Modified Sickles	Farmwomen	4	3	4

Inferences: It was opinioned that, with the use of improved sickles time taken for the activity, area covered and energy spent for the work ranged from satisfied to highly satisfied. They also expressed that with the use of improved sickles the strain while work and fatigue was reduced and felt easy in harvest operation.

OFT-16

S.No	Item		Particulars
1	Title	:	**Assessment of Performance of Improved weeder**
2	Problem diagnosed/refinement	:	Farm women face drudgery in weeding operations due to lack of knowledge on improved weeding implements
3	Details of technologies selected for assessment/refinement	:	T1 – Manual weeding T2 – Weeding with Improved weeder
4	Source of technology	:	CIAU, Bhopal.
5	Production system	:	-
6	Thematic Area	:	Drudgery of farm women
7	Performance of the Technology with performance indicators	:	✓ Labour required/day ✓ Cost on weeding/ac ✓ Feed Back on work related stress factors
8	Final recommendation for micro level situation	:	The results indicated that, with the use of improved weeders ,weeding was done with 3 labour per acre per day than their regular practice i.e, 8 labour per day per acre and cost on weeding was saved by 62.5% per acre. Women also felt that with the use of improved weeders body strain, drudgery at weeding, Estimation of feel and stress was ranged from less to moderate than their regular practice which ranged from moderate to severe.
9	Constraints identified and feedback for research	:	-
10	Process of farmers participation and their reaction	:	-

crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed/ refined	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Farm Implements to reduce drudgery	-	Farm women face drudgery in weeding operations due to lack of knowledge on improved weeding	Assessment of Performance of Improved weeder	5	T1 – Manual weeding T2 –Improved weeder T1- Manual weeding T2 –Improved weeder T1- Manual weeding T2-Improved weeder	Labour required/day/ac Cost on weeding/day/ac Feed back on work related stress factors	8 Rs 640/- Rs 240/- Presented in a separate table	3	Farm women felt thatbody strain, drudgery,stress was reduced from less to moderate.

Technology Assessed		Production /unit	Net return (profit) in Rs./unit	BC Ratio
11		12	13	14
T1 – Manual weeding T2 –Improved weeder	-	-	-	

Feed back on work related stress factors was recorded with the score card developed by AICRP, H.Sc, FRM and presented in the following table.

Matrix ranking of Drudgery for Farm women in Agriculture Operations:

Indices for drudgery: Severe-5, Moderate-4, Normal-3, Less-2, No drudgery-1

Type of drudgery	Indices	
	Local sickles	Improved Sickles
Drudgery estimation at harvest	5	4
Stress Estimation	5	4
Body Strain while in operation	5	3
Estimation of feel while carrying weights	4	3
Estimation of operational difficulty	4	2
Psychological Stress due to work	4	2

Inferences: It was clearly indicated that with the use of improved weeders, the body strain while in operation, estimation of operational difficulty, drudgery estimation at harvest, psychological stress due to work, estimation of feel while carrying weights and stress estimation was ranged from less to moderate than their regular practice which was recorded from moderate to severe.

User Acceptance of Matrix Index on Improved Implement:

Indices For Acceptance: Highly satisfied-5, Moderately Satisfied-4, Satisfied-3, Unsatisfied-2, Not Accettable-1

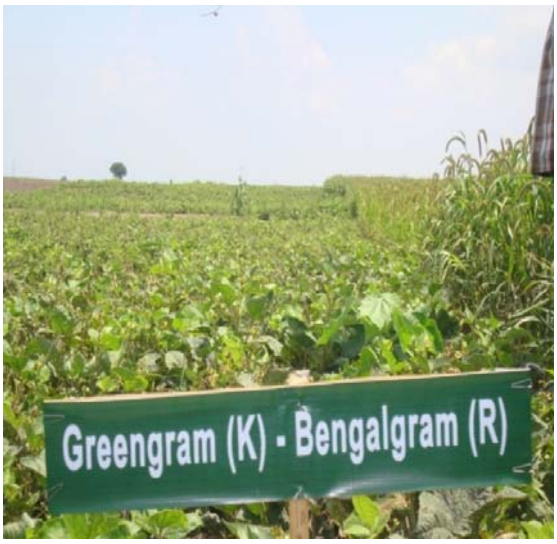
Name of the Implement	User	Feel of Activity		
		Time Taken for the Activity	Area Covered	Energy Spent for work
Improved weeders	Farmwomen	4	3	4

Inferences: It was opinioned that, with the use of improved weeders time taken for the activity, area covered and energy spent for the work ranges from satisfied to moderately satisfied. They also expressed that with the use of improved weeders the strain while weeding and fatigue was reduced but they need practice for easy operation of the implement.

- **Feed Back:** Farm women expressed that, though weeding was done with the implement, the length of the implement is 5ft and the total weight of the implement (5.010 gms) which needs to be refined i.e, length to 4ft, and accordingly weight of the implement needs to be reduced (up to 3 kg) in order to reduce drudgery for farm women and to be taken up for next year Testing (2013-2014).

OFT - 1

Korra before Bengalgram

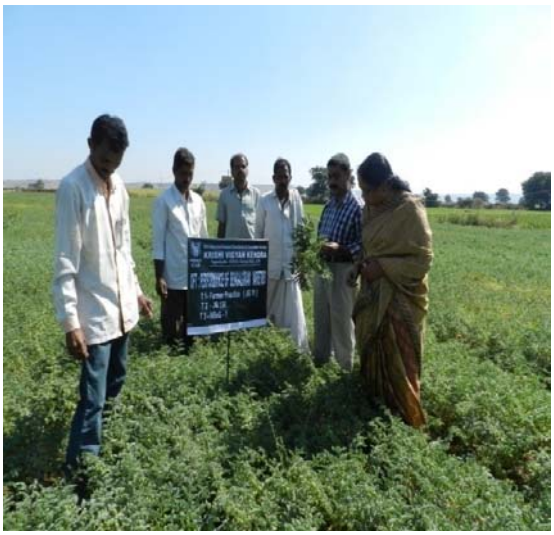


Greengram before Bengalgram

OFT - 2

Field visit to OFT on Plant Densities in Maize

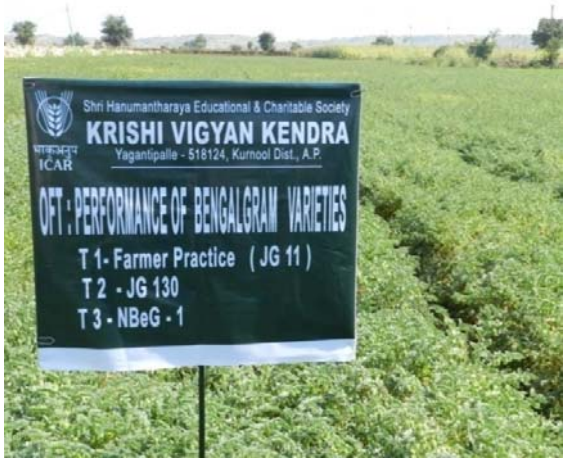
OFT – 3



OFT on Bengalgram varieties

OFT – 4

Performance of Blackgram varities in rainfed situation



Performance of Bengalgram varities in rainfed situation

OFT -5

Visit to OFT on Management of stem rot in G.nut

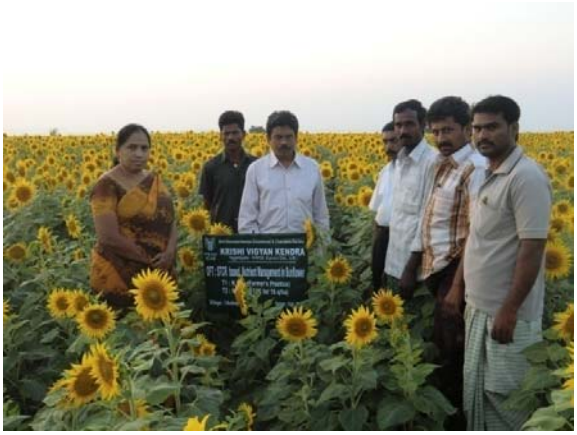
OFT - 6

Visit to OFT on Management sucking pests in B.t. cotton

OFT - 7

OFT on IDM for fruit rot and powdery mildew in Chillis

OFT - 8



OFT on Nutrient management in Sunflower based on STCR

OFT-9

OFT on Nutrient management in Chillis based on STCR

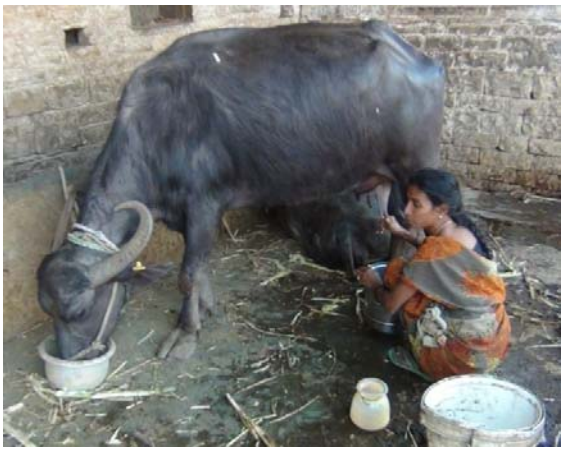
OFT-10

OFT on spacing in Banana

OFT - 11

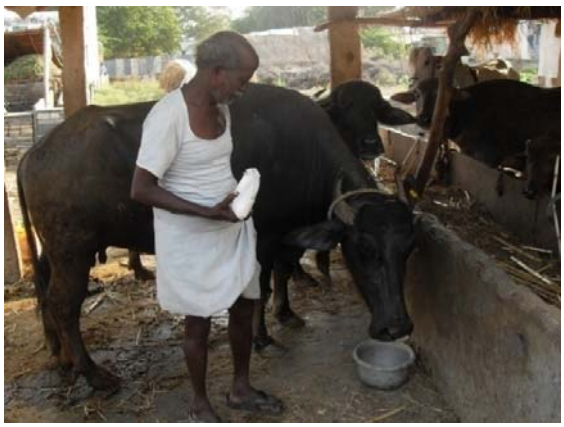
OFT on Introduction of Carrot as alternate crop

OFT – 12



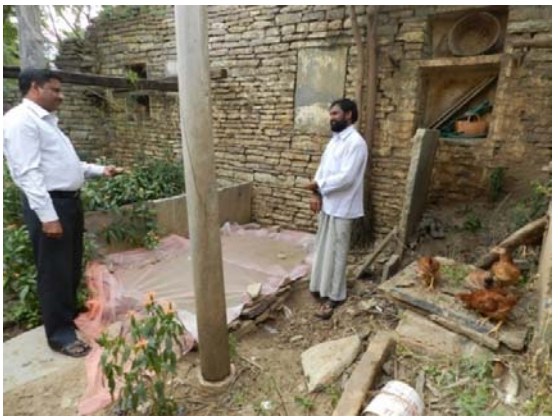
Feeding o SF heads supplemented ration to milch buffalo

OFT - 13



Effect of RSMM on reproduction and production performance in milch buffaloes

OFT - 14



Effect of azolla on growth rate in Rajasri birds

OFT - 15


OFT on Assessment of improved sickles

OFT - 16


OFT on Assessment of improved weeder

3.2 Achievements of Frontline Demonstrations

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

List of technologies demonstrated during previous year and popularized during 2011-12 and recommended for large scale adoption in the district

S. No	Crop/ Enterprise	Thematic Area*	Technology demonstrated	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
					No. of villages	No. of farmers	Area in ha
1	Bengalgram	Varietal Evaluation	Varietal Demonstration in Bengalgram with Jaki-9218	Demonstrations, Exposure visits, Field Days Seed village Concept	25	3000	23000
2	Cotton	IntegratedCrop management	Arboreum Cotton (whole package) Varieties i.e, Srinandi	Demonstrations, Exposure visits, Field Days, Seed village Concept	5	300	550
3	Paddy	Resource conservation	Direct Seeding	Demonstrations, Exposure visits, and Field Days	10	550	200
4	Paddy	Resource conservation	Zero tillage	Demonstrations, Exposure visits, and Field Days	5	125	200
6	Paddy	Nutrient management	STCR	Demonstrations, Exposure visits, and Field Days	16	512	1146
8	Bt Cotton	Nutrient management	Foliar nutrition	Demonstrations, Exposure visits, and Field Days	12	900	2000
9	Bt Cotton	ICM	Spacing	Demonstrations, Exposure visits, and Field Days	15	500	2500
1	Redgram	IPM	Realtime contingent mgmt. of pests & diseases	Spray of Chloro + Dichlorvos at flowring, Wilt resistant variety PRG 158	6	140	95
2	Bengalgram	IDM	Biopriming for soil borne disease management	Biopriming with T.viride @ 10g/kg + 30 g Powdered FYM as paste.	15	180	260

3	Castor	IPM	Realtime contingent mgmt. of pests & diseases	Chloro for Capsule borer & Spray of Carbendazim pre & post rain for Botrytis	8	50	80
4	Brinjal	IPM	Mgmt of fruit & shoot borer	Ph.traps, Neem oil, Neem cake.	5	30	25
5	Onion	IPM	Thrips & Leaf blight	Fipronil, Thiophanate methyl	6	50	40
6	Blackgram	IPM	Realtime contingent mgmt. of pests & diseases	Chloro + Dichlorovos, Yellow sticky traps	6	40	60
7	Mango	INM	INM in Mango	• Widespread demonstrations	5	30	40
8	Turmeric	Integrated Disease management	Rhizome rot management in Turmeric	• Farmers field visit to practicing farmers. • Trainings	-	-	-
9	Jasmine	INM	Micronutrient management in Jasmine	• Training and field visit	-	-	-

Details of FLDs implemented during 2012-13 (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 year	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall
					Pro	Actu	SC/S	Other	Total	
1	Redgram	ICM	Varietal	K-2012	12	12	6	24	30	
2	Bengalgram	ICM	Varietal	R-2012	12	12	7	23	30	
	Other Demonstrations									
1	Rice	Weed management	IWM	K-2012	4	4	3	7	10	
2	Rice	Varietal	RP Bio-226	K 2012	25	14.6	16	20	36	
3	Bt.Cotton	Weed management	IWMA	K-2012	4	4	3	7	10	
4	Castor	Hybrids performance	PCH-11	K-2012	3.5	3.5	2	6	8	
5	Bengalgram	Water management	Micro Irrigation	Rabi-2012	2	2	2	3	5	
6	Maize	Resource conservation	Zero tillage	Ri-2012	4	4	3	7	10	
7	Redgram+Seteria	Cropping system	Inter cropping	K-2012	4	4	3	7	10	
8	Seteria – Bengalgrm	Crop intensification	Double cropping	K-2012 & R-12	4	4	3	7	10	
9	Rice	Resource conservation	Direct Seeding	K-12	4	4	3	7	10	
7	Rice	Nutrient Management	STCR	K–2012	4.4	4.4	3	8	11	
8	Castor	Foliar application of Major and micro nutrients	Foliar Nutrition	K-2012	1.6	1.6	1	3	4	
9	Rice	Micronutrient Management	Foliar application of Zinc 0.2%	K-2012	4	4	4	6	10	
10	Rice	Reclamation of sodic soils	Gypsum as per soil	K-2012	4	4	3	7	10	

11	Bengalgram	Nutrient Management	STCR	Rabi-12	4	4	3	7	10
13	Redgram	IPM	Contingent Pest & Dis. Mgmt	K 2012	4	4	3	7	10
14	Castor	IPM	Contingent Pest & Dis. Mgmt	K 2012	4	4	2	8	10
15	Brinjal	IPM	IPM for Shoot & Fruit borer	K 2012	4	4	1	9	10
16	Bengalgram	IDM	Biopriming for wilt & dry root rot	R 2012	4	4	3	7	10
17	Blackgram	IPM	Contingent Pest & Dis. Mgmt	R 2012	4	4	2	8	10
18	Onion	IPM	IPM for Thrips and leaf blight	R 2012	4	4	3	7	10
19	Mango	INM	INM in Mango	K-12	4	4	-	15	15
20	Chillis	INM	Soil test based fertilizer recommendation in Chillis	K-12	4	4	2	8	10
21	Turmeric	Integrated Disease management	Rhizome rot management in Turmeric	K-12	4	4	3	7	10
22	Jasmine	INM	Micronutrient management in Jasmine	K-12	2	2	01	09	10
23	Tomato	Protected Nursery Raising	Raising of vegetable nursery in pro trays	R-12	2	2	01	04	05

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					
Redgram	K-2011	Rainfed	Redsoil	L	Med	High	Jowar	Last week of july	1st Week of January		
Bengal gram	R-2011	Rainfed	Black soil	L	High	High	Jowar	2nd week of October	3rd week of January		
	Other Demonstrations										
Rice	Kharif -12	Irrigated	Black soil	L	H	M to H	Paddy	2nd to 3rd week of August.	Last week of December.		
Rice	Kharif -12	Irrigated	Black soil	L	H	M to H	Paddy	2nd to 3rd week of August.	Last week of December.		
Rice	Kharif -12	Irrigated	Black soil	L	H	M to H	Paddy	2nd to 3rd week of August.	Last week of December.		
Bt.Cotton	Kharif -12	Irrigated	Sandy clay loam	L	M	H	Cotton	2nd Week of July	Last week of December.		
Castor	Kharif – 12	Rainfed	Red soil	L	M	H	Ground nut	3rd Week of July	Last week of Janurary.		
Bengalgram	R– 2012	Rainfed	Black soil	L	Med	High	Jower	2nd FN of October	1st FN of Jan		
Maize	R-2012	Irrigated	Black soil	L	Med	High	Maize	2nd to 3rd week of December.	Last week of March.		
Redgram+Seteria	K-2012	Rainfed	Black soil	L	Med	High	Jowar	3rd week of July.	1st week of January.		
Seteria – Bengalgrm	K – 2011	Rainfed	Black	L	Low	Med	Bengalgram	1st Wk of July	Last week		

			soil						of March.
Paddy	Kharif - 12	Irrigated	Black soil	L	H	M to H	Paddy	2nd to 3rd week of August.	Last week of December.
Castor	Kharif - 12	Rainfed	Black soil	L	M	M to H	Redgram	Last week of July	last week of February.
Paddy	Kharif - 12	Irrigated	Black soil	L	H	M to H	Paddy	2nd to 3rd week of August.	Last week of December.
Paddy	Rabi – 12	Irrigated	Black soil	L	H	M to H	Paddy	2nd to 3rd week of January.	Lastweek of April.
Bengalgram	Rabi12	Rainfed	Black soil	L	H	M to H	Bengalgram	3nd week of Oct.	3rd week of Jan..
Redgram	K 2012	Rainfed	Black soil	L	M	M	Jowar	1st week of August	Last st Week of January
Castor	K 2012	Rainfed	Light Black soils	L	M	M	Cotton	1st week of August	Last st Week of January
Brinjal	K 2012	ID	Redsoil	L	M	M	Cotton	1st week of Sept.	Upto 4th week of Feb.
Bengal gram	R-2012	Rainfed	Black soil	L	H	H	Jowar	2nd week of October	3rd week of January
Blackgram	R 2012	Rainfed	Black soil	L	H	H	Jowar	2nd week of October	3rd week of January
Onion	R 2012	ID	Red soil	L	M	M	G.nut	4th week of Nov.	3rd week of March
Mango	K-12	ID	Red	Low	Low	Medium	-	-	-
Turmeric	K-12	ID	Red/Black	Low	High	High	Turmeric	3rd week of June	4th week of March
Jasmine	K-12	ID	Red	Low	Medium	Medium	-	-	-
Tomato	R-12	ID	Red	Low	Medium	Medium	Jowar		

Performance of FLD

Sl. No.	Crop	Technology Demonstrated	Variety	No. of Farmers	Area (ha.)	Demo. Yield Qtl/ha			Yield of local Check Qtl./ha	Increase in yield (%)	Data on parameter in relation to technology demonstrated	
						H	L	A			Demo	Local
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Redgram	Component technologies	PRG-158/-ICPL-87119	10	4.0	950	715	841	719	16.9		
			PRG 158/-ICPL-87119	5	2.0	1612	1465	1528	1367	11.8		
			LRG-41-ICPL-85063	15	6.0	1037	830	946	786	20.3		
2	Bengalgram	Component	Digvijay/JG-11	30	12.0	1500	1062	1351	1189	13.6	48.6 pods/plant	35.8 pods/plant
Other demonstrations												
1.	Rice	Weedmanagent	BPT-5204	10	4	7125	6525	6787	6772	-	85.9(WCE) 3250(Cost on weeding)	54.36 Weeds/m2 4200-00
2	Rice	Varietal	RP Bio-226	36	14.4	7325	6976	7110	7848	-9.4	Paniclielength-20.0Cm No of grains-209	Paniclelength-22.2Cm No of grains-239.6
3	Bt. Cotton	Weed management	Mallika	10	4	2550	2430	2465	2436	-	84.17 (WCE) 5390 (Cost on weeding)	71.60 Weeds/m2 6300.00
4	Castor	Hybrid evaluation	PCH 111	10	4	1187	955	1092	896	21.8	4.66 Spikes 46.9 Capsules	2.56 38.8
5	Bengalgram	Water management	JG-11	5	2.5	1582	1536	1555	1236	25.8	No of pods/plant 56.6	No of pods/plant 43.2

6	Redgram+Seteria	Cropping System	PRG-158 SIA-3085	10	4	602	2067	-	2412			
7	Seteria-Bengalgram	Crop intensification	SIA-3085 JG-11	10	4	2156	1127	-	1365			
8	Rice	Resource conservation	Direct seeding	10	4	7217	6612	6816	6563	3.85		
9	Maize	Resource conservation	Zero tillage	10	4	7000	6125	6590	6424	2.5		
10	Paddy	STCR	BPT-5204	11	4.4	73.13	65.63	69.54	68.32	1.78	The cost on chemical fertilizers and yield	The cost on chemical fertilizers and yield
11	Castor	Foliar Nutrition	PCH-111	4	1.6	14	13	13.56	11.31	19.89	C.P and yield	C.P and yield
12	Paddy	Zinc management	BPT-5204	10	4	69.75	65.25	67.80	60.62	11.85	C.P and yield	C.P and yield
13	Bengalgram	STCR	JG-11	10	4	15.45	10.63	13.34	12.39	7.69	The cost on chemical fertilizers and yield	The cost on chemical fertilizers and yield
14	Redgram	Contingent Pest & Dis. Mgmt.	PRG-158	10	4.0	12.00	8.75	10.18	9.13	11.5	2.11% Maruca 2.45% Pod borer	6.79% Maruca 7.81% Pod borer
15	Castor	Contingent Pest & Dis. Mgmt.	PCH 111	10	4.0	11.50	9.50	10.25	9.75	5.13	2.6% Borer 1.8% Botrytis	5.7% Borer 4.6% Botrytis
16	Brinjal	IPM for Shoot & Fruit borer	Poluru	10	4.0	259.0	225.0	245.5	236.5	3.8	6.85% BSFB	15.3% BSFB
17	Bengalgram	IDM	JG 11	10	4.0	12.0	10.0	10.80	9.93	8.8	2.8% wilt 3.4% Dry root rot	6.6% wilt 8.7% dry root rot
18	Blackgram	Contingent Pest & Dis. Mgmt.	LBG 752	10	4.0	20.0	15.0	16.3	14.9	9.39	1.9% Maruca 0.9% YMV	6.7% Maruca 4.6% YMV
19	Onion	IPM for Thrips & Leaf Blight	ALR	10	4.0	305.0	252.5	271.4	255.2	6.4	3.1 Thrips/leaf 4.2 % Purple	5.2 thrips/leaf 5.6 % Purple

											Blotch	blotch
20	Mango	Micronutrient management	Baneshan	10	4	The crop is at fruiting stage.						
21	Turmeric	Rhizome rot management in Turmeric	Mydukur	10	4	75.46	68.64	72.05	63.48	13.50	Rhizome rot incidence was low.	-
22	Jasmine	Micronutrient management in Jasmine		10	4	4326.2	4124.4	4225.3	4049.6	4.34	-	-
23	Tomato	Raising of vegetable nursery in pro trays	Siri 9005	10	4	53846	50834	52340	41360	26.54	Mortality after transplanting/ha	
											2327 (Demo)	6124 (Control)
24	Ram Lambs	Feeding of concrete feed	Nellore brown	10	100 lambs	24.8	21.12	22.96	21.01	38.93	Body weight gain Demo.- 8.85	6.37
25	Calves	Feeding of calf starter	Graded murrah	10	20	71.5	56.1	63.8	54.5	34.61	28.43	21.12
26	Pre-weaned lambs	Supplementation of minerals through salt licks	Nellore Brown	10	100 lambs	14.8	12.32	13.56	12.48	22.8	7.7	6.27
27	Fodder	Haylage making with jowar straw and feeding to buffaloes	Graded murrah	10	10	364.2	312.6	338.4	314.5	6.9	Fodder wastage	
		Milk production (90 days)									Demo: 12%	Control:42%
28	Poultry	Rearing of Rajasri birds as backyard poultry	Rajasri	80	800	1896.8	1371.1	1633.9	1262.8	29.38	-	-

Economic Impact (continuation of previous table)

S.No.	Average Cost of cultivation (Rs./ha)		Average Gross Return (Rs./ha)		Average Net Return (Profit) (Rs./ha)		Benefit-Cost Ratio (Gross Return / Gross Cost)
	Demonstration	Local Check	Demonstration	Local Check	Demonstration	Local Check	
	14	15	16	17	18	19	20
1	**17,500-00**	19125-00	30276-00	25884-00	12776-00	6759-00	1:1.7/1.3
	18,000-00	19625-00	55008-00	49212-00	37008-00	29587-00	1:3.0/2.5
	17,960-00	18526-00	34056-00	28296-00	16096-00	9770-00	1:1.89/1.5
2	23102-00	23605-00	52689-00	46371-00	29587-00	22766-00	1:2.2/1.96
	Other Demonstrations						
1	51200-00	52150-00	1,35,740-00	1,35,440-00	84540-00	83290-00	1:2.6/2.5
2	51400-00	52150-00	142200-00	156960-00	90800-00	1,40,810-00	1:2.76/3.0
3	44237-00	52150-00	136320-00	131260-00	92083-00	79110-00	1:3.0/2.5
4	28500-00	23000-00	60645-00	48204-00	32145-00	25204-00	1:2.12/2.0
5	23440-00	19042-00	52075-00	36180-00	28635-00	17138-00	1:2.2/1.9
6	43417-00	23375-00	76293-00	53235-00	32876-00	28860-00	1:1.75/2.2
7	20181-00	20581-00	32760-00	26880-00	12579-00	6299-00	1;1.62/1.30
8	31125-00	32035-00	86275-00	85260-00	55150-00	53225-00	1:1.77/1.66
9	48944-00	61381-00	139060-00	136636-00	90116-00	75255-00	2.84/2.23
10	19161-00	18083-00	40009-00	33372-00	20848-00	15289-00	2.10/1.85
11	57174-00	58598-00	135600-00	121238-00	78427-00	62640-00	2.37/2.07

12	16017-00	20023-00	46701-00	43365-00	30654-00	23343-00	2.92/2.17
13	20630-00	21813-00	35613-00	31938-00	14983-00	10125-00	1.76/1.46
14	24113-00	25763-00	35875-00	34125-00	11762-00	8362-00	1.49/1.32
15	89800-00	96700-00	196400-00	189200-00	106600-00	92500-00	2.19/1.96
16	22475-00	23075-00	43200-00	39720-00	20725-00	16645-00	1.92/1.72
17	19630-00	21320-00	65200-00	59600-00	45570-00	38280-00	2.80/3.32
18	88750-00	90625-00	276859-00	260284-00	188109-00	169659-00	2.12/1.87
19	19325-00	19075-00	51385-00	48308-00	32060-00	29233-00	1:2.66/1:2.53
20	-	-	-	-	-	-	-
21	212842-00	205342-00	259380-0	28528-00	46538-00	23186-00	1:1.21/1:1.11
22	132436-00	138723-00	422534-00	404958-00	280295-00	266235-00	1:3.20/1:2.91
23	64254-00	61320-00	209360-00	165440-00	145106-00	104120-00	1:3.25/1:2.69
24	315-00	270-00	1770-00	1274-00	1455-00	1004-00	1:4.62/1:3.72
25	784-00	450-00	4264-00	3168-00	3480-50	2328-00	1:5.44/1:3.77
26	270-00	225-00	1496-00	900-00	1226-00	675-00	1:5.54/1:4.0
27	369-00	-	717-00	-	348-00	-	1:1.94
28	143-00	108-00	495.10	249.45	135.10	149.90	1:3.46/1:2.31

Analytical Review of component demonstrations (details of each component for rain fed / irrigated situations to be given separately for each season)

Crop	Season	Component	Farming situation	Average yield (q/ha)	Local check (q/ha)	Percentage increase in productivity over local check
Redgram	Kharif-2012	ICM on PRG-158	Rainfed	841	719	16.9
		PRG-158	Irrigated	1528	1367	11.8
		LRG-41	Rainfed	946	786	20.3
Bengalgram	Rabi 12	ICM on Digvijay/JG-11	Rianfed	1351	1189	13.6
Other demonstrations						
Rice	K-2012	Weed management	Irrigated	6787	6772	-
Rice	K – 2012	Varietal	Irrigated	7110	7848	-9.4
B.t. Cotton	K-2012	Weed Management	Irrigated	2465	2436	-
Castor	K-2012	Hybrid Evaluation	Rainfed	1092	896	21.8
Bengalgram	R-2012	Water management	Irrigated	1555	1236	25.8
Redgram+Seteria	K-2012	Cropping system	Rainfed	602+2067	2412	-
Seteria-Bengalgram	K & R-2012	Crop intensification	Rainfed	2156+1127	1365	-
Rice	K-2012	Direct seeding	Irrigated	6590	6424	2.5
Maize	R-2012	Resource conservation	-	-	-	-
Paddy	Kharif-12	Nutrient Management based on STCR	Irrigated	69.54	68.32	Cost of production reduced towards chemical fertilizers is Rs. 11092/ha,
Paddy	Kharif-12	Zinc management	Irrigated	67.80	60.62	11.85
Bengalgram	Rabi-12	Nutrient Management based on STCR	Rainfed	13.34	12.39	Cost of production reduced towards chemical fertilizers is Rs. 4006/ha,
Castor	K-12	Foliar Nutrient Management	Rainfed	13.56	11.31	19.89

Redgram	K 2012	Contingent Pest & Dis. Mgmt.	Rainfed	10.18	9.13	11.5
Castor	K 2012	Contingent Pest & Dis. Mgmt.	Rainfed	11.25	9.75	15.38
Brinjal	K 2012	IPM for Shoot & Fruit borer	ID	245.5	216.5	13.4
Bengalgram	R 2012	IDM	Rainfed	11.20	9.93	12.8
Blackgram	R 2012	Contingent Pest & Dis. Mgmt.	Rainfed	16.3	14.4	13.19
Onion	R 2012	IPM for Thrips & Leaf Blight	ID	271.4	255.2	6.4
Mango	K-11	INM in Mango	ID	61.7	48.6	26.9% increased yield due to INM
Chilli	K-11	STBFR in Chillis	ID	49.25	42.5	15.9% increased yield with a saving of Rs. 8750/- ha on cost of fertilizers.
Turmeric	K-11	Rhizome rot management	ID	67.05	61.32	9.32% increased yield obtained in demo.
Jasmine	K-11	Micronutrient management	ID	42.20	39.87	5.84% increased yield obtained in demo.
Tomato	K-11	Rising tomato seedlings in pro trays	ID	523.0	413.0	26.2% increased yield obtained in demo.
				Body weight gain (Kg)		
Ram Lambs		Feeding of concrete feed		8.85	6.37	38.93
Calves		Feeding of calf starter		28.43	21.12	34.61
Pre- weaned lambs		Supplementation of minerals through salt licks		7.70	6.27	22.8
Fodder		Haylage making with jowar straw and feeding to buffaloes		338.4	314.5	7.6
		Milk production (90 days)				

REDGRAM:

Redgram variety PRG-158 with Improved production technologies (Improved variety,seed treatment, pre-emergence application of pendimethalin against weeds, Soil test based fertilizer application, Sulphur @20 kg/ha and IPM measures against Helicoverpa and S.exigua) gave higher grain yield(841 Kg/ha), which was 16.9 and 11.8 per cent than that of obtained with farmers practice in red soils under rainfed situation and with protective irrigation respectively.

The variety LRG-41 has recorded 20.6 % increased yield over farmers practice in medium black soils under rainfed situation.

The Economic Viability of improved technology over farmers practice was calculated depending on prevailing prices of input and output costs. The improved technologies resulted increased income with cost benefit ratio of 1:1.7/1.3 and1:3.0/2.5 in red soils under rainfed situation and with protective irrigation respectively

BENGALGRAM:

In Bengalgram variety Digvijay with Improved production technologies (Improved variety,seed treatment, pre-emergence application of pendimethalin against weeds, Soil test based fertilizer application, Sulphur @20 kg/ha and IPM measures against Helicoverpa and S.exigua) gave higher grain yield(1351), which was 13.6 per cent than that obtained with farmers practice yields of 1189 kg/ha in medium black soils under rainfed situation.

The increased grain yield with Improved production technologies was mainly because of more no of pods/plant and higher 100 grain weight. Economics of demonstration and local check plots indicated that the with cultivation of Digvijay with improved technologies, additional returns of Rs 4695/- /ha were obtained with BC ratio of 1:2.2/1.96

FLDs OTHER THAN OILSEEDS AND PULSES:

1. Weed Management in Paddy:

FLDs on Weed management were taken up in an area of 4ha at Yagantipalli Village with post–emergence application Bispyribac sodium80 ml /acre + one hand weeding at 40 DAT. The results indicated that 85.9 per cent weed control efficiency, saving of Rs 950/- ha on manual weeding and additional returns of Rs 1250-/- per ha was obtained

2. **Weedmanagement in Bt cotton:**

During khairf-12 FLDs were taken up at Jalakanur village of Midthur mandal. Post emergence application of Pyrithiobac sodium + Quizalofop ethyl at 20-25 DAS. The results indicated that 84.17 per cent weed control efficiency, saving of Rs 910/- ha on manual weeding and additional returns of Rs 2041-/- per ha was obtained

3. Demonstration on Rice Variety RP Bio-226 (Improved Samba Mashuri): During Kharif-2012 FLDs were organized with BLB resistant Variety RP Bio-226 (Improved Samba mashuri) at different

locations in Dornipadu mandal. Out of 100 FLDs, 36 were organized due to late release of water in canals.

The data grain yield and Yield attributes indicated that there is considerable reduction in Yield in RP Bio-226 was observed , which was (-) 9.4 less than BPT-5204.The Improved samba Mashuri may be performed well under conditions of BLB infestation, but this Year the incidence of BLB was not observed

4. Demonstration on Spinkler irrigation in Bengalgram at 30-35 DAS

During Rabi-2012 five FLDs were organized on Spinkler irrigation in Bengalgram at 30-35 DAS at Amadala Village of Koilakuntla mandal. The results indicated that Spinkler irrigation at 30-35 DAS recrded highest grain yield 1555 kg/ha i.e 25.8 per cent increases in comparison with rainfed condition. Among yield components, the number of pod per plant and 100 grains weight had the most effect on increasing the grain yield

5. Inter Cropping of Korra with Redgram

- Results of demonstrations on intercropping of Redgram + seteria in row ratio of 1:6 indicated that the gross income was higher (52075/-) than sole crop of seteria(36180/-).
- The results on cropping system oriented demonstrations against drought mitigation clearly indicated that above inter cropping systems are economically advantageous than sole crops under rainfed situations.

6. Demonstration crop intensification Growing of Korra before Bengalgram

The results indicated that highest net returns was obtained with Korra-Bengalgram sequence (Rs 32876/ha) than fallow – bengalgram.

The net income of the farmers was also increased in Korra- Bengalgram sequence which is calculated as Rs. 32876/- per ha which is Rs. 4016/- more than the Fallow- Bengalgram. This shows the increased profitability through Korra- Bengalgram sequence.

7. Demonstration on Castor Hybrid PCH-111

During kharif-12 eight demonstrations were organized with Castor Hybrid PCH-111 as alternate crop to Groundnut in red soils at Yerragudi, Krishnagiri and H. kottala. The results indicated that the PCH-111 hybrid has recorded 21.8 per cent increased yield over private hybrid under rainfed situation. The superior performance of PCH-111 can be attributed to lengthy spike, more no.of capsules per spike and higher test of seed.

8. Promotion of SRI-Cultivation/ Drum Seeder Methods of Paddy

- The data clearly indicated that direct seeding of pre- germinated paddy seeds with drum seeder on puddle field recorded higher grain yield over transplanting. The mean yield of direct seeding was 6816Kg/ha as compared to 6563 kg/ha in case transplanting. The increased grain yield in

direct seeding might be due to avoidance of root injury, transplanting shock and quicker tiller initiation leading to longer tillering period.

- The economic feasibility of direct seeding with drum seeder revealed that higher gross returns of Rs 1,36,320/- than transplanting Rs 1,31,260/- . Further the cost of cultivation was also lower in case of direct seeding mainly due to absence operations like nursery raising and transplanting. Based results of demonstrations it was clearly indicated that direct seeding of paddy with drum seeder recorded higher grain yield, better yield parameters, lower cost of cultivation and resulted higher net returns than transplanting. The direct seeding technique can provide definitely more sustainable production in those areas where labour is costly and availability is less which affects timely planting of rice by transplanting method.

9. Demonstration Zero tillage Maize cultivation:

During Rabi-12 Five FLDs were taken up on Zero tillage maize cultivation at Banumukkala village of Banaganapalli mandal. The crop is at Kneehigh stage.

10. Nutrient management in rice based on STCR equation:

The results indicated that the average grain yield of paddy under STCR was higher (6954Kg/ha) than the grain yield produced under controlled practice (6832Kg/ha).Gross and net income were high in demonstration plots (Rs.139060 ha^{-1} and Rs. 90116ha^{-1}, respectively) as compared to controlled practice (Rs.136636 ha^{-1} and Rs.75255 ha^{-1}, respectively). It was also observed that an amount of Rs.14862/ha was realized as additional income due to low production costsand yield increments in demonstrations. Benefit-cost ratio was also high in demonstrations (1:2.84) as compared to check (1:2.23) due to low cost production.

11. Zinc Management in rice: Ten Demonstrations were organized on Zinc management in rice at Yagantipalle village of Banaganapalle mandal.The average yield of rice under Zinc foliar application was high (6749Kg/ha) as compared to farmer's practice (6270Kg/ha). An amount of Rs. 4918/ha was realized as additional income due to low production costs and yield increments in demonstrations. Benefit-cost ratio was high in demonstrations (1:1.98) as compared to farmers practice (1:1.87) due to low cost of Production and higher gross income.

12. Foliar nutrition in Castor: Four demonstrations were organized on Folar nutrition in castor at Yerragudi village of Banaganapalle mandal . The average yield of Castor under foliar nutrietion was higher (1356Kg/ha) than yield produced under farmer's practice(1131Kg/ha). It was also observed that an amount of Rs.5559/ha was realized as additional income due to yield increments in demonstrations. Benefit-cost ratio was high in demonstrations(1:2.10) as compared to farmers practice (1:1.85) due to low cost of production and higher gross income.

13.Nutrient management in Bengalgram based on STCR equation : Ten Demonstrations were organized on nutrient management in bengalgram at I.Kothapet village of Banaganapalle

mandal.The average yield of bengalgram under STCR based application was high (1334Kg/ha) as compared to farmer's practice (1239 Kg/ha) . An amount of Rs. 7341/ha was realized as additional income due to low production costs and yield increments in demonstrations. Benefit-cost ratio was high in demonstrations (1:2.92) as compared to farmers practice (1:2.17) due to low cost of Production and higher gross income.

REDGRAM:

The results indicated that Redgram variety PRG-158 with IPM measures against Helicoverpa & Maruca has recorded 11.5% increased yield over local check under rainfed situation with additional net returns of Rs.4858-00 /ha

CASTOR:

The results indicated that Castor hybrid PCH 111 with Management measures against Borer & Botrytis has recorded 5.13% increased yield over local check under rainfed situation with additional net returns of Rs.3400-00 /ha

BRINJAL:

The results indicated that Brinjal with IPM for Shoot and Fruit borer has recorded 3.8% increased yield over local check with additional net returns of Rs.14100-00 /ha, that includes saving of Rs. 6900-00 per ha on cost of plant protection.

BENGALGRAM:

The results indicated the Bengalgram variety JG 11 with Biopriming for Management of Wilt and Dry root rot has recorded 8.8% increased yield over local check under rainfed situation with additional net returns of Rs.4080-00 /ha

BLACKGRAM:

The results indicated the Blackgram variety LBG 752 with Management for Maruca and YMV has recorded 9.39% increased yield over local check with additional net returns of Rs.7290-00 /ha, due to better management of YMV and Maruca in demo.

ONION:

The demo was conducted at Emboi village of Bethamcherla mandal. The results indicated that in demo there is 6.37 % increased yield with a saving of Rs.1875/- per ha on cost of Plant Protection giving net benefit of Rs. 18450/- per ha.

Technical Feedback on the demonstrated technologies:

S. No	Feed Back
1	**Redgram:** • The redgram variety PRG-158 being its short duration, it is suitable for red soil situations. • It is suitable for intercrop in groundnut • The incidence of wilt is significantly less in PRG-158 compared to local check. • The redgram variety LRG-41 being its Long duration, it is suitable for Medium black under rainfed situations. • Moderately tolerant to Helicoverpa pod borer. • Pods are brick red in colour. Seeds dark red and bold.
2	**Bengalgram:** • Plant height, no. of branches/plant, No. of pods/plant were more in Digvijay • It matures 5-7 days earlier than Annegiri • The incidence of wilt is comparatively less than local check.. • Plant was bushy with basal branching habit. • Research on development of desi varieties with short duration has to be strengthened • Development of varieties tolerant to pod borer complex. • Development of transgenics particularly for resistance to pod borer.
3	**STCR based nutrient management in rice:** • The status of phosphorus was more than 100 kg./ha in all demonstration fields. Hence Phosphorus was not applied in demonstrations. • Cost on chemical fertilizers was less (Rs 11092/- per ha) than farmer practice • Nutrient use efficiency (kg grain- /kg^{-1} nutrient) was high in STCR (27.30) as compared to farmers practice (12.51). • **Soil test based nutrient management helped in fertilizer cost reduction** • **(Rs.11092 ha^{-1}) in demonstrations.**
4	**Zinc Management in Rice** • Foliar application of chelated zinc performed equally as basal application. • Zinc deficiency correction gave higher yield than control
5	**Nutrient Management in Bengalgram based on STCR** • Application of phosphorus is reduced • Potassium is required as per STCR • Cost on chemical fertilizers was reduced (Rs 4006/- per ha)

Farmers reaction on Specific technologies

S. No	Feed Back
1	**Castor:** • The Castor hybrid PCH-111 gave significant yield increase (26.1%) over non descriptive Private hybrids under rainfed situation. • The percentage of male flowers was less in PCH-111 • No of Spikes, capsules per plant were more.
2	**Integrated weed management in Rice:** • Cost on manual weeding was reduced (Rs 950/- per ha) • Weed control efficiency was 85.9% • Weed density was less in demo plot up to 40DAT
3	**Cropping systems:** • Redgram and seteria intercropping system found to be remunerative than sole crop of seteria/ redgram even under drought conditions. • Meet the fodder needs of cattle and milch animals. • While maintaining the yield levels of the sole crop, additional yields with the intercropping component have been realized. • 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.
4	**Zero tillage in Maize & Sunflower:** • Cost on preparatory cultivation was reduced to Rs 2500-3000/ha • Timely sowing is possible • Additional returns of Rs 5202/-ha was obtained • Rice-Maize, Rice- sunflower system under zero tillage was profitable where water is not sufficient to take up rice-rice under well /canal irrigation.
5	**STCR in Rice and Bengalgram** • Farmers were satisfied with crop performances and expressed that Soil test based nutrient management is a viable technology in Rice and Bengalgram, because of low cost of chemical fertilizers, without reduction in yield. • Pest incidence was less in demonstration plots than farmers practice fields. • 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.
6	**Zinc management in Rice** • Foliar application of zinc is more economic than basal.
8	**Management of Maruca in Redgram** • Spraying Chloro + Dichlorovos at flowering or observing initials of leaf webbing, offered good control of the pest.

9. **Management of Botrytis and Capsule Borer in Castor**

- Spraying Carbendazim before and after rainfall, will considerably reduce the incidence of botrytis and thus loss.

10. **IPM for Shoot & Fruit borer in Brinjal**

- With Pheromone traps the pest activity can be assessed and even it offers good trapping of male moths, offering some control in populations.
- With Azadirachtin 1500 PPM spray, the gap between two chemical sprays can be increased, thus less number of sprays are needed.

11 **Management of Wilt and Dry root rot in Bengalgram**

- Seed treatment with T.viride @ 10g/kg along with FYM powder offer the food source for germinating T.viride and ensure its better establishment in the soil.

12 **Management of Maruca and YMV in Blackgram**

- Yellow sticky traps offer good catch of whiteflies in the field.

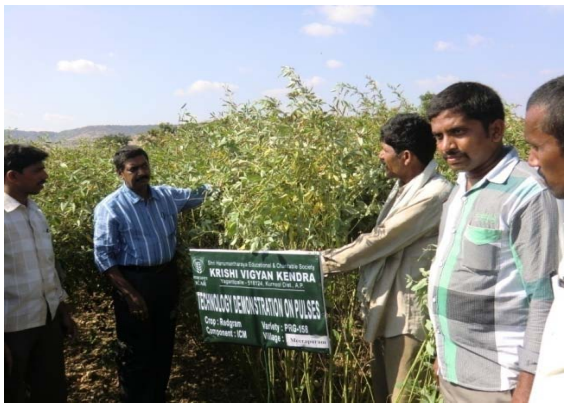
13 **IPM in onion**

- Use of Yellow/Blue sticky traps in Onion attract good number of Thrips.
- Use of sticker like Sandovit alongwith spray solution will increase the efficacy of chemical sprayed.

Extension and Training activities under FLD

S. No.	Activity	No. of activities organized	Date	Number of participants	Remarks
1	Field days	2	18-1-2013 23-1-2013	86 93	
2	Farmers Training	5	16-6-2012 18-7-2012 20-9-2012 15-10-2012 20-12-2012.	30 25 30 25 27	
3	Media coverage	1			
4	Training for extension functionaries	1	21-12-2012	40	

Front Line Demonstrations



Field visit to Demo On ICM in Redgram

Field visit to Demo on ICM on JAKI 9218 Bengalgram

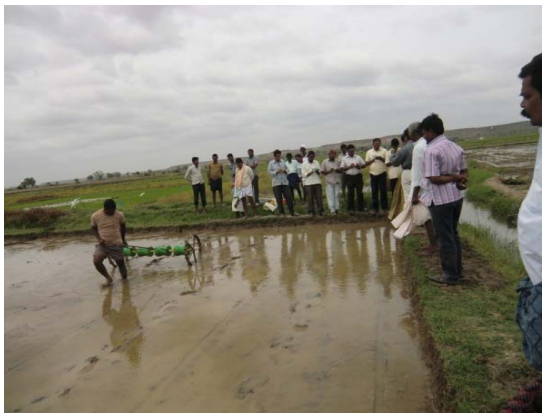
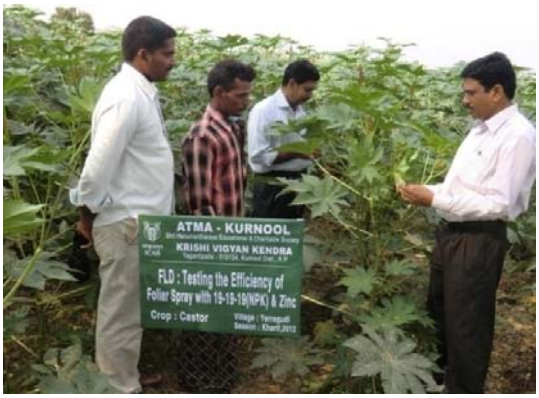
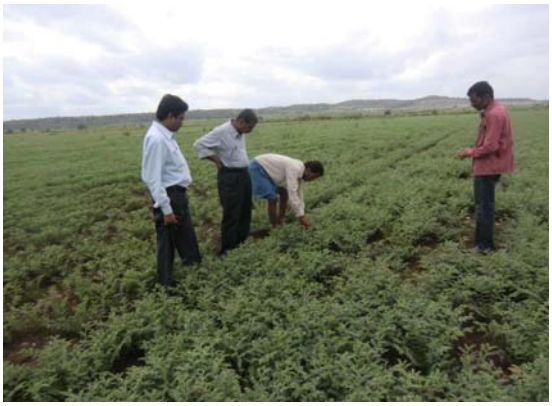
Demonstrations other than Oilseeds & Pulses

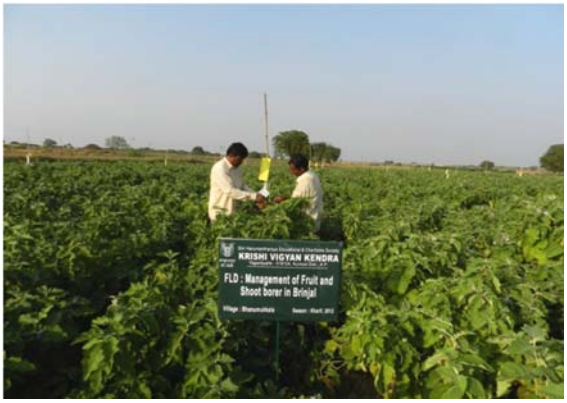
Demo on Weed management in Bt. cotton

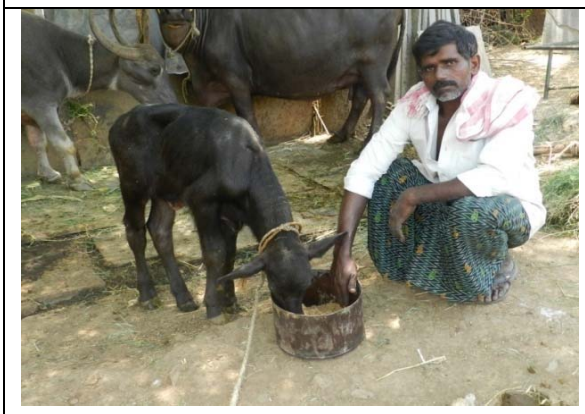
Demo on Zero tillage Maize

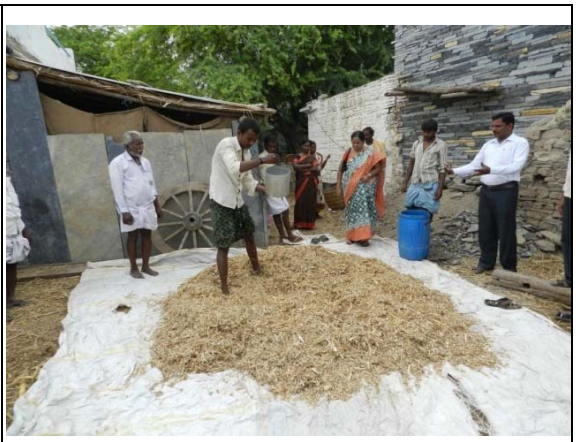
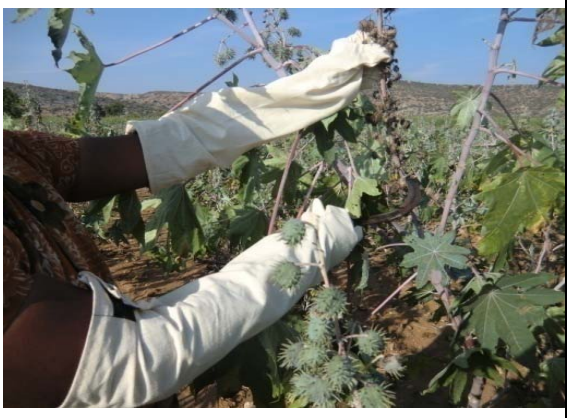
Demo on performance of Rice variety R.P.Bio-226

Demo on evaluation of Castor hybrid PCH 111

	
Demo on Intercropping Redgram with Seterai	**Demo on direct seeding in paddy with drumseeder**
	
Demo on STCR based fertilizer mgmt. in Rice	**Demo on folia application of NPK and Zinc in castor**
	
Demo on Zinc management in rice	**Demo on STCR based fertilizer mgmt. in Bengalgram**

	
Demo On Contingent Management of Pests & diseases in Redgram	**Demo on contingent management of Pests and Diseases in Castor**
	
Demo on IPM in Brinjal	**Demo on IDM for wilt and dry root rot in Bengalgram**
	
Demo On Contingent management of Pests and diseases in Blackgram	**Demo on IPM in Onion**

	
Rhizome rot management in Turmeric	
	
Micronutrient management in Jasmine	**Demo on micronutrient management in mango**
	
Feeding of calf starter to buffalo calves	**Supplementation of minerals to lambs through salt licks**

	
Feeding of concentrates to Ram lambs	Demo on Haylage making with maize straw
	
introduction of Bendi Cutter for reducing drudgery for farm women	FLD on introduction of Bendi Cutter for reducing drudgery for farm women
	
FLD on introduction of cotton hand gloves for harvesting of castor	FLD on introduction of cotton hand gloves for harvesting of castor

(i) Farm Implements:

Name of the implement	Crop	No. of farmers	Area (ha)	Performance parameters / indicators	* Data on parameter in relation to technology demonstrated		% change in the parameter	Remarks
					Demo	Local check		
Cotton Hand Gloves	Castor	10	0.4	Labour required/ picking/acre/ day	4	6	33.3	With the intorduction of cotton hand gloves the labour required and csot on harvesting saved by 33.3% and the drudgery was reduced from less to normal than teir regular practice recorded from moderate to severe
				Cost on Harvesting/picking saved/ acre/day (Rs.) Feed back on work related stress factors presented in a separate table	400	600		
Bhendi Cutter	Bhendi	10	0.4	Qty. harvested in kgs/day/person	72.5	57.5	26.08	With the introduction of .Bendi cutter the harvesting rate increased by 26.08% and labour cost saved by 40% and the drudgery was reduced from normal to moderate than their regular practice i.e, from moderate to severe
				Cost on Labour Saved /day Feed back on work related stress factors presented in a separate table	360	600	40	

**** Field efficiency, labour saving etc.***

I.Introduction of Bhendi Cutter for reducing drudgery:

Feed back on work related stress factors was recorded with the score card developed by AICRP, H.Sc, FRM, Hyd and presented in the following table.

Matrix ranking of Drudgery for Farm women in Agriculture Operations:

Indices for drudgery: Severe-5, Moderate-4, Normal-3, Less-2, No drudgery-1

Type of drudgery	Indices	
	Picking with bear hands	Picking with Gloves
Drudgery estimation at harvest	5	4
Stress Estimation	5	3
Body Strain while in operation	5	3
Estimation of feel while carrying weights	5	3
Estimation of operational difficulty	5	4
Psychological Stress due to work	5	3

Inferences: Farm women felt that, with the use of Bendi Cutter, the body strain while in operation, estimation of operational difficulty, drudgery estimation at harvest, psychological stress due to work, estimation of feel while carrying weights and stress estimation was ranged from normal to moderate than their regular practice which was recorded severe.

User Acceptance of Matrix Index on Improved Implement:

Indices For Acceptance: Highly satisfied-5, Moderately Satisfied-4, Satisfied-3, Unsatisfied-2, Not Accettable-1

Name of the Implement	User	Feel of Activity		
		Time Taken for the Activity	Area Covered	Energy Spent for work
Bendi Cutter	Farmwomen	3	4	4

Inferences: It was opinioned that, with the use of Bendi Cutter, time taken for the activity, area covered and energy spent for the work ranges from satisfied to moderately satisfied. They also expressed that with the use of Bendi cutter, the strain while harvesting, scratches, injuries and fatigue was reduced and this helped them for increasing harvest rate with less time and less labour.

II. Introduction of Cotton hand gloves for harvesting of castor:

Feed back on work related stress factors was recorded with the score card given by AICRP, H.Sc, FRM, Hyd and presented in the following table.

Matrix ranking of Drudgery for Farm women in Agriculture Operations:

Indices for drudgery: Severe-5, Moderate-4, Normal-3, Less-2, No drudgery-1

Type of drudgery	Indices	
	Picking with bear hands	Picking with Gloves
Drudgery estimation at harvest	5	2
Stress Estimation	5	2
Body Strain while in operation	5	2
Estimation of feel while carrying weights	5	3
Estimation of operational difficulty	4	2
Psychological Stress due to work	5	2

Inferences: Farm women felt that, with the use of cotton hand gloves the body strain while in operation, estimation of operational difficulty, drudgery estimation at harvest, psychological stress due to work, estimation of feel while carrying weights and stress estimation was ranged from less to normal than their regular practice which was recorded from moderate to severe.

User Acceptance of Matrix Index on Improved Implement:

Indices For Acceptance: Highly satisfied-5, Moderately Satisfied-4, Satisfied-3, Unsatisfied-2, Not Accettable-1

Name of the Implement	User	Feel of Activity		
		Time Taken for the Activity	Area Covered	Energy Spent for work
Cotton Hand Gloves	Farmwomen	3	4	3

Inferences: It was opinioned that, with the use of Cotton hand gloves time taken for the activity, area covered and energy spent for the work ranges from satisfied to moderately satisfied. They also expressed that with the use of cotton hand gloves the strain while harvesting, scratches, injuries and fatigue was reduced and this helped them for harvesting more area with less time and less labour.

(ii) Livestock Enterprises

Enterprise	Breed	No. of farmers	No. of animals, poultry birds etc.	Performance parameters / indicators	* Data on parameter in relation to technology demonstrated		% change in the parameter	Remarks
					Demon.	Local check		
Calves	Graded murrah	10	20	Body weight gainkg/90days	8.85	6.37	38.93	
Lambs	Nellore Brown	10	100	Body weight gain/90days	28.43	21.12	34.61	
Ram lambs	Nellore Brown	10	100	Body weight gain/90days	7.70	6.27	22.8	
Fodder	Haylage making	10	10	Milk yield/90days	338.4	314.5	7.6	

* Milk production, meat production, egg production, reduction in disease incidence etc.

(iii) Other Enterprises

Enterprise	Variety/ breed/Species / others	No. of farmers	No. of Units	Performance parameters / indicators	Data on parameter in relation to technology demonstrated		% change in the parameter	Remarks
					Demo	Local check		

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

A) ON Campus

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
(A) Farmers & Farm Women										
I Crop Production										
Weed Management	1	19	-	19	6	-	6	25	-	25
Cropping Systems	1	14	-	14	6	5	11	20	5	25
Seed production	1	30	-	30	10	-	10	40	-	40
Integrated Crop Management	6	122	30	152	68	10	78	194	30	224
II Horticulture										
a) Vegetable Crops										
Production of low volume and high value crops	1	22	-	22	5	-	5	27	-	27
Nursery raising	1	19	-	19	8	-	8	27	-	27
b) Fruits										
Micro irrigation systems of orchards	1	63	8	71	12	3	15	75	11	86
g) Medicinal and Aromatic Plants										
Production and management technology	2	64	-	64	12	-	12	76	-	76

III Soil Health and Fertility Management										
Integrated Nutrient Management	1	27	-	27	8	-	8	35	-	35
Management of Problematic soils	1	19	-	19	4	-	4	23	-	23
Nutrient Use Efficiency	1	20	-	20	4	-	4	24	-	24
Soil and Water Testing	1	29	-	29	11	-	11	40	-	40
Soil Fertility Management	1	20	-	20	5	-	5	25	-	25
Production and use of Organic inputs	1	30	-	30	5	-	5	35	-	35
IV Livestock Production and Management										
Poultry Management	2	-	-	-	-	106	106	-	106	106
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	1	-	19	19	-	11	11	-	30	30
Value addition	4	-	104	104	-	56	56	-	160	160
Location specific drudgery reduction technologies	1		17	17		13	13		30	30
Income generation activities for empowerment of rural women	2	-	33	33	-	27	27	-	60	60
Vermi compost preparation for SHGs as IG Activity	1	-	19	19	-	6	6	-	25	25
VII Plant Protection										

Integrated Pest Management	4	96	8	104	29	-	29	125	8	133
Bio-control of pests and diseases	3	79	3	82	19	-	19	98	3	101
TOTAL	**38**	**673**	**241**	**914**	**212**	**237**	**449**	**889**	**468**	**1357**
(B) RURAL YOUTH										
Biopesticides production	1	26	-	26	4	-	4	30	-	30
Production of organic inputs	2	76	-	76	16	-	16	92	-	92
Microirrigation	1	18	-	18	8	-	8	26	-	26
Poultry Management	1	12	-	12	4	-	4	16	-	16
Feed preparation with agricultural waste	1	14	-	14	6	-	6	20	-	20
Hand made paperbag making	1	8	17	25	6	8	14	14	25	39
TOTAL	**7**	**154**	**17**	**171**	**44**	**8**	**52**	**198**	**25**	**223**
(C) Extension Personnel										
Soil and Water testing	1	19	-	19	6	-	6	25	-	25
Women and Child care and Adolescent girl chid education , health&hygiene, lifeskills development etc.	1	-	31	31	-	19	19	-	50	50
Production and use of organic inputs	2	55	-	55	6	-	6	61	-	61
Sri Cultivation	1	40	-	40	10	-	10	50	-	50
TOTAL	**5**	**114**	**31**	**145**	**22**	**19**	**41**	**136**	**50**	**186**
Grand Total	**50**	**941**	**289**	**1230**	**278**	**264**	**542**	**1223**	**543**	**1766**

B) OFF Campus

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
(A) Farmers & Farm Women										
I Crop Production										
Weed Management										
Resource Conservation Technologies	1	35	6	41	9	-	9	50	-	50
Integrated Crop Management	8	190	25	215	92	12	104	282	147	329
II Horticulture										
a) Vegetable Crops										
INM in chillies	1	17	-	17	8	-	8	25	-	25
b) Fruits										
Training and Pruning	3	79	-	79	21	-	21	100	-	100
Cultivation of Fruits	2	30	-	30	8	-	8	38	-	38
Micronutrient management	1	16	-	16	2	-	2	18	-	18
Flowers										
Micronutrient management	1	15	-	15	4	-	4	19	-	19
III Soil Health and Fertility Management										
Soil and Water Testing	2	64	-	64	26	-	26	90	-	90
IV Livestock Production and Management										
Dairy Management	2	32	-	32	8	-	8	40	-	40
Disease Management	2	33	-	33	9	-	9	42	-	42
Feed management	3	48	-	48	17	-	17	65	-	65
Sheep management	1	16	-	16	-	-	-	16	-	16

V Home Science/Women empowerment										
Design and development of low/minimum cost diet	1	-	23	23	-	9	9	-	32	32
Value addition	2	-	34	34	-	20	20	-	54	54
Income generation activities for empowerment of rural Women	1		13	13		9	9		22	22
Household food security by kitchen gardening and nutrition gardening	1	-	8	8	-	12	12	-	20	20
VII Plant Protection										
Integrated Pest Management	5	132	-	132	46	-	46	178	-	178
Bio-control of pests and diseases	1	35	-	35	5	-	5	40	-	40
TOTAL	**38**	**742**	**109**	**851**	**255**	**62**	**317**	**903**	**275**	**1178**
(B) RURAL YOUTH										
Tailoring and Stitching	1	-	18	18	-	12	12	-	30	30
Fabric paining	2	-	37	37	-	20	20	-	57	57
Nutrition education to combat malnutrition among rural youth	1	-	128	128	-	97	97		225	225
Design and development of low and minimum cost diet	1	-	15	15		45	45		60	60
Importance of green leafy and other vegetables in daily menu	1	-	32	32		16	16		48	48

and life skills development										
TOTAL	**6**	**-**	**230**	**230**	**-**	**190**	**190**	**-**	**420**	**420**
(C) Extension Personnel										
Productivity enhancement in field crops	1	35	-	35	8	-	8	43	-	43
Integrated Pest Management	1	38	13	51	10	4	14	48	17	65
Women and Child care and Adolescent girl chid education on health&hygiene, lifeskills development, girl child education	1	-	33	33	-	17	17	-	50	50
TOTAL	**3**	**73**	**46**	**119**	**18**	**21**	**39**	**91**	**67**	**158**
Grand Total	**47**	**815**	**385**	**1200**	**69**	**273**	**546**	**994**	**762**	**1756**

C) Consolidated table (ON and OFF Campus)

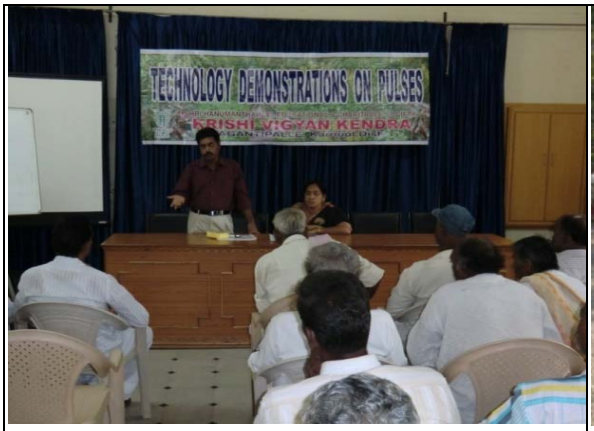
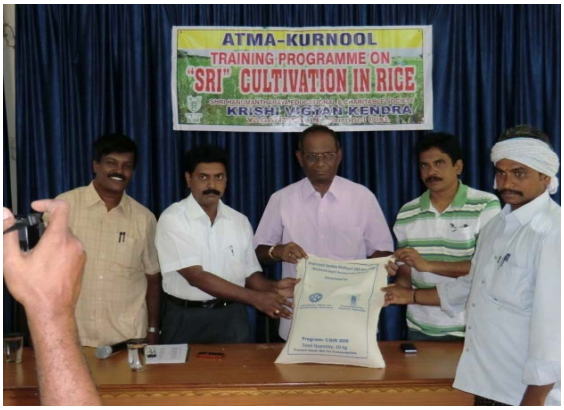
Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
(A) Farmers & Farm Women										
I Crop Production										
Weed Management	1	19	-	19	6	-	6	25	-	25
Resource Conservation Technologies	1	35	6	41	9	-	9	50	-	50
Cropping Systems	1	14	-	14	6	5	11	20	5	25
Seed production	1	30	-	30	10	-	10	40	-	40
Integrated Crop Management	14	312	55	367	160	22	182	476	77	553
II Horticulture										
a) Vegetable Crops										
Nursery raising	1	6	-	6	6	-	6	12	-	12
INM in chillies	1	18	-	18	3	-	3	21	-	21
b) Fruits										
Training and Pruning	1	25	-	25	-	-	-	25	-	25
Rejuvenation of old orchards	1	18	-	18	1	-	1	19	-	19
Flowers										
Nutrient management in jasmine	1	13	2	15	1	-	1	16	-	16
Production technology of hybrid mary gold	1	4	-	4	11	-	11	15	-	15
III Soil Health and Fertility Management										
Integrated Nutrient Management	1	27	-	27	8	-	8	35	-	35
Management of Problematic soils	1	19	-	19	4	-	4	23	-	23
Nutrient Use Efficiency	1	20	-	20	4	-	4	24	-	24
Soil and Water Testing	3	93	-	93	37	-	37	130	-	130

Soil Fertility Management	1	20	-	20	5	-	5	25	-	25
Production and use of organic inputs	1	30	-	30	5	-	5	35	-	35
IV Livestock Production and Management										
Dairy Management	2	32	-	32	8	-	8	40	-	40
Disease Management	2	33	-	33	9	-	9	42	-	42
Feed management	3	48	-	48	17	-	17	65	-	65
Sheep management	1	16	-	16	-	-	-	16	-	16
Poultry Management	2	-	-	-	-	106	106	-	106	106
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	2	-	27	27	-	23	23	-	50	50
Design and development of low/minimum cost diet	1	-	23	23	-	9	9	-	32	32
Value addition	6	-	138	138	-	76	76	-	214	214
Location specific drudgery reduction technologies	1	-	17	17	-	13	13	-	30	30
Income generation activities for empowerment of rural women	3	-	46	46	-	36	36	-	82	82
VII Plant Protection										
Integrated Pest Management	9	228	8	236	75	-	75	303	8	311
Bio-control of pests and diseases	4	114	3	117	24	-	24	138	3	141
TOTAL	**68**	**1174**	**325**	**1499**	**463**	**290**	**753**	**1600**	**607**	**2202**

(B) RURAL YOUTH										
Bio-pesticides production	1	26	-	26	4	-	4	30	-	30
Production of organic inputs	2	76	-	76	16	-	16	92	-	92
Poultry Management	1	12	-	12	4	-	4	16	-	16
Feed preparation with agricultural waste	1	14	-	14	6	-	6	20	-	20
Tailoring and Stitching	1	-	18	18	-	12	12	-	30	30
Nutrition education to combat malnutrition among rural youth	3	-	55	55	-	32	32	-	87	87
Fabric painting	2	-	37	37	-	20	20	-	57	57
Design and development of low and minimum cost diet	1	-	15	15	-	45	45	-	60	60
Importance of green leafy and other vegetables in daily menu an life skills development	1	-	32	32	-	16	16	-	48	48
TOTAL	**13**	**128**	**157**	**285**	**30**	**125**	**155**	**158**	**282**	**440**

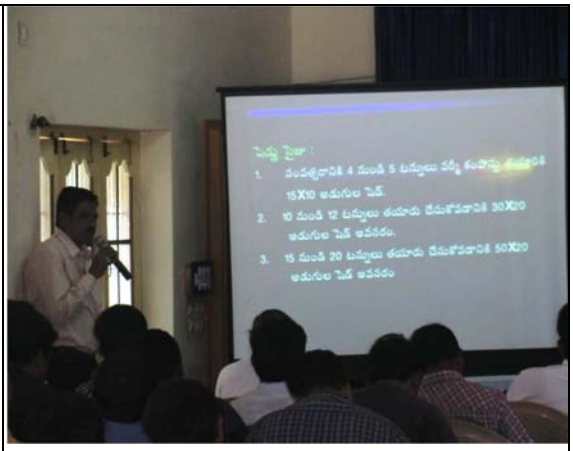
(C) Extension Personnel										
Productivity enhancement in field crops	2	56	8	64	25		25	81	8	89
Integrated Pest Management	1	38	13	51	10	4	14	48	17	65
Soil and Water testing	1	19	-	19	6		6	25		25
Women and Child care and Adolescent girl chid education , health&hygiene, lifeskills development etc.	2		64	64		36	36		100	100
Production and use of organic inputs	2	55		55	6		6	61		61
TOTAL	8	168	85	253	47	40	87	215	125	340
Grand total	**89**	**1470**	**567**	**2037**	**540**	**455**	**995**	**1973**	**1014**	**2982**

Training Programmes

	
Training on productivity enhancement in Pulses	Training on Drum seeder in Rice
	
Training on weed management in field crops	Training on "SRI" Cultivation in Rice

Training Programmes

Training on Vermicomposting



Training on organic inputs production

Training on NADEP Composting to PF

Training on Soil Testing

Training Programmes

Training on IPM in Onion

Training on Biopriming in Bengalgram

Training on IPM in B.t. cotton

Training on Seed treatment

Training Programmes

Training on pruning techniques in Mango

Training on vegetable cultivation

Training on Papaya cultivation

Training on nursery raising in protrays

Training Programmes

Training on care and management of milch animals

Training on azolla cultivation

Training on Fodder production

Training on backyard poultry management

Training Programmes

Training to mothers on Adolescent and child nutrition

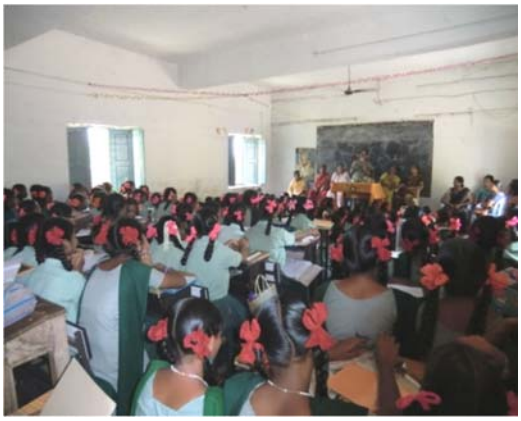
Training farm women on preparation of value added products with millets

Training on pickle making as income generating activity for SHG women

Vermicompost Preparation for SHG women as IG Activity

Training Adolescent girls on tailoring

Vocational skill training to adolescent girls on fabric painting



Training adolescent girls on nutritional deficiency disorders

Training adolescent girls on balanced diets

Annexures

A. KVK funded:

Agronomy

Date	Clientele	Title of the training programme	Discipline	Thematic area	Duration in days	Venue (Off / On Campus)	Number of other participants			Number of SC/ST			Total number of participants		
							M	F	T	M	F	T	M	F	T
12-5-12	PFM	Crops and cropping system for dry land black soils/red soils	Agronomy	Crop & cropping system	1	On	14	-	14	6	5 -	11	20	5	25
16 .7.12	PFM	Production technologies in rice with special reference to direct seeding with drum seeder	-do-	ICM	1	On	25	-	25	15	-	15	40	-	40
19.7.2012	PFM	Low cost production technologies in rainfed oil seeds.	-do-	ICM	1	OFF	35	-	35	8	-	8	43	-	43
7.8-2012	PFM	Integrated weed management in practices in rainfed crops	-do-	Weed management	1	On	19	-	19	6	-	6	25	-	25
24-10-2012	PFM	Critical technologies for enhancing yield in rabi pulses	-do-	Integrated crop management	1	On	18	-	18	3	-	3	21	-	21
4.10-2012	PFM	Production technologies in Redgram and Bengalgram	-do-	Weed management	1	Off	16	-	16	9	-	9	25	-	25
17.12.12	PFM	Seed production technology and importance of seed village concepts	-do-	Seed production	1	On	30	-	30	10	-	10	40	-	40
20-12-2012	PFM	Rice based cropping systems with reference to Zero tillage concept.	do	Resource conservation	1	Off	35	6	41	9	-	9	50	-	50
		Total:			8	On/ off	192	6	198	66	10	76	268	5	273

Plant Protection

S. No	Date	Client (PF/ RY/ EF)	Title	Discipline	Thematic area	Duration (days)	Venue (Off/ On campus)	No. of Participants									Sponsoring Agency
								Others			SC/ST			Total			
								M	F	T	M	F	T	M	F	T	
Practicing Farmers																	
1	18.5.12	PF	IPM in G.nut, Castor and Redgram	Plant Protection	IPM	1	Off	23	-	23	9	-	9	32	-	32	KVK
2	23.7.12	PF	Use of non chemical methods of pest & diseases management in rainfed crops		Biocontrol	1	On	25	-	25	3	-	3	28	-	28	KVK
3	7.9.12	PF	Management of pests and diseases in Bt cotton under stress conditions		IPM	1	Off	25	-	25	5	-	5	30	-	30	KVK
4	8.10.12	PF	Management of pests and diseases in Groundnut & Castor		IPM	1	On	20	-	20	7	-	7	27	-	27	KVK
5	13.10.12	PF	Management of pests & diseases in Bengalgram and Importance of Bio pesticides		Bio control	1	Off	35	-	35	5	-	5	40	-	40	KVK
6	15.11.12	PF	Management of shoot & Fruit borer in Brinjal		IPM	1	On	14	-	14	2	-	2	16	-	16	KVK
7	5.12.12	PF	Diagnosis of pests and diseases in Chillis and its management		IPM	1	Off	15	-	15	6	-	6	21	-	21	KVK
Sub Total								**157**	**-**	**157**	**37**	**-**	**37**	**194**	**-**	**194**	
Rural Youth																	
8	5.11.12	RY	Pest and disease management in chillis, bengalgram and paddy		IPM	1	On	26	-	26	4	-	4	30	-	30	KVK
Sub Total								**26**		**26**	**4**		**4**	**30**		**30**	
Extension functionaries																	
Sub Total																	
Total								**183**		**183**	**41**		**41**	**224**		**224**	

Soil Science

List of training programmes conducted during 2012-13

Sl. no	Date	Clientele	Title of the training programme	Thematic area	Discipline	Duration (days)	Venue	Number of other participants			Number of SC/ST			Total number of participants		
								M	F	T	M	F	T	M	F	T
1	22.5.12	PF	Reclamation of problematic soils	Management of problematic soils	Soil science	3	on	19	-	19	4	-	4	23		23
2	4.6.2012	PF	Soil test based nutrient management in major crops.	Soil and water testing	Soil science	2	on	29	-	29	11	-	11	40	-	40
3	18-06-12	PF	Methods to improve fertilizers use efficiency	Nutrient use efficicency	Soil science	2	on	20	-	20	4	-	4	24		24
4	18.7.12	PF	Calculation of fertilizers based on nutrient recommendations	Soil fertility and Nutrient management	Soil science	1	on	20	-	20	5	-	5	25		25
5	07-08-12	PF	Integrated Nutrient Management in rice and Cotton	INM	Soil science	2	on	27	0	27	8		8	35		35
6	24.11.12	PF	Soil Test based fertilizers usage in major crops	Soil and water testing	Soil science	1	off	28	-	28	12		12	40	-	40
7	26.11.12	PF	Vermicompost production and its application	Organic inputs	Soil science	2	on	30	-	30	5	-	5	35		35
8	22.1.13	PF	Soil Sampling procedure and importance of soil testing	Soil and water testing	Soil science	1	off	36		36	14	-	14	50	-	50
Sub Total						**14**		**209**	**0**	**209**	**63**	**-**	**63**	**272**	**-**	**272**

9	13.9.12	RY	Preparation of organic inputs viz. CPP compost, Bio dynamic compost, vermicompost,etc.	Organic inputs	Soil science	3	on	40	-	40	10	-	10	50	-	50
10	15.9.12	RY	Preparation of organic inputs viz. CPP compost, Bio dynamic compost, vermicompost,etc.	Organic inputs	Soil science	3	on	36	-	36	6	-	6	42	-	42
Sub Total								76		76	16	-	16	92	-	92
11	10.10.2012	EF	Soil Test based fertilizers usage in major crops	Soil and water testing	Soil science	3	on	19	-	19	6		6	25		25
12	12-12-12	EF	Preparation of organic inputs viz. vermicompost and NADEP compost production	Organic inputs	Soil science	3	on	25		25				25		25
Sub Total						**12**		**44**	**0**	**44**	**6**	**0**	**6**	**50**	**0**	**50**
Grand total						**26**		**329**	**0**	**329**	**81**	**4**	**85**	**410**	**4**	**414**

Horticulture

S. No	Date	Title	Discipline	Thematic area	Duration (days)	Client (PF/RY/EF)	No.of courses	No. of Participants									Sponsoring Agency	Amount of fund received (Rs.)
								Others			SC/ST			Total				
								M	F	T	M	F	T	M	F	T		
1	21.06.12	Turmaric Cultivation	Horticulture	ICM	1	PF	1	-	-	-	18	-	18	18	-	18	KVK	-
2	14.07.12	Canopy management in Mango	-do-	Training & Pruning	1	PF	1	22	-	22	4	-	4	26	-	26	Dept. of Horticulture	-
3	22.08.12	Canopy management in Mango	-do-	Training & Pruning	1	PF	1	18	-	18	-	-	-	18	-	18	KVK	-
4	23.10.12	Cultivation of Hybrid Marigold	-do-	ICM	1	PF	1	14	-	14	2	-	2	16	-	16	KVK	
5	21.11.12	Tissue culture Banana Cultivation	-do-	ICM	1	PF	1	12	-	12	4	-	4	16	-	16	KVK	
6	18.12.12	Rabi Vegetable Cultivation	-do-	ICM	1	PF	1	19	-	19	6	-	6	25	-	25	KVK	
7	22.01.13	Micro Irrigation in Horticulture Crops	-do-	ICM	1	PF	1	17	-	17	4	-	4	21	-	21	Dept. of Horticulture	
8	28.01.13	Management of Young fruit orchards	-do-	ICM	1	PF	1	30	-	30	8	-	8	38	-	38	DWMA	
9	12.02.13	Flower and fruit drop management in Mango	-do-	ICM	1	PF	1	29	-	29	7	-	7	36	-	36	KVK	
		Total			9		9	**172**	**8**	**180**	**37**	**3**	**40**	**209**	**11**	**220**		

Animal Husbandry

Date	Clientele	Title of the training programme	Discipline	Thematic area	Duration in days	Venue (Off / On Campus)	No. of other participants			Number of SC/ST			Total number of participants		
							M	F	T	M	F	T	M	F	T
04.04.12	PFF	Backyard poultry Management	Animal Husbandry	Poultry management	1	On	-	-	-	-	80	80	-	80	80
14.04.12	PFF	Rearing of Rajasri birds at backyards and its management	-do-	Poultry management	1	On	-	-	-	-	26	26	-	26	26
09.05.12	PFM	Preventive measures against contagious diseases	-do-	Disease management	1	Off	16	-	16	4	-	4	20	-	20
16.07.12 to 18.07.12	RY	Preparation of balanced ration with agricultural waste		Feed management	3	On	14	-	14	6	-	6	20	-	20
22.08.12	PFM	Utilization of dry fodder and agricultural by products for livestock	-do-	Feed management	1	Off	15	-	15	5	-	5	20	-	20
26.09.12	PFM	Management of crossbred cows	-do-	Dairy management	1	On	18	-	18	7	-	7	25	-	25
16.010.12 to 20.10.12	RY	Backyard poultry and Ram lamb production	-do-	Poultry management	5	On	12	-	12	4	-	4	16	-	16
20.11.12	PFM	Azolla cultivation and its utilization as animal feed	-do-	Feed management	1	Off	16	-	16	4	-	4	20	-	20
18.12.12	PFM	Management of sheep under semi intensive system	-do-	Sheep management	1	Off	16	-	16	-	-	-	16	-	16
03.01.13	PFM	Cultivation of different fodder varieties and fodder conservation technologies	-do-	Feed management	1	Off	17	-	17	8	-	8	25	-	25
19.01.13	PFM	Scientific method of calf rearing	-do-	Dairy management	1	Off	14	-	14	1	-	1	15	-	15
Sub Total					**13**		**149**	**1**	**150**	**46**	**44**	**90**	**195**	**45**	**240**

Home Science

Date	Clientele	Title of the training programme	Discipline	Thematic area	Duration in days	Venue (Off / On Campus)	Number of other participants			Number of SC/ST			Total number of participants		
							M	F	T	M	F	T	M	F	T
04.05.12	PFF	Awareness programme on farm and nonfarm based income generating activities for SHG farm women of Haryali watersheds	Home Science	IG Activities for empowerment of rural families	1	On	-	17	17	-	18	18	-	35	35
19.06.12	PFF	Awareness on nutritional deficiency disorders among pregnant and lactating mothers.	-do-	Design and development of low cost minimum diet House hold food security	1	Off	-	23	23	-	9	9	-	32	32
29.07.12	PFF	Raising of homestead nutrition gardens	-do-	House hold food security	1	On	-	19	19	-	11	11	-	30	30
22.08.12	PFF	Raising of homestead nutrition gardens	-do-	House hold food security	1	Off	-	12	12	-	8	8	-	20	20
06.10.12	PFF	Value Added Products with Tomato	-do-	Value addition	1	Off	-	21	21	-	11	11	-	32	32
10.10.12	PFF	Preparation of Value added products with minor millets	-do-	Value addition	1	Off	-	13	13	-	9	9	-	22	22
20.11.12 to 27.11.12	PFF	Awareness training programme on value addition to jowar and korra for farm women	-do-	Value addition	1	On	-	51	51	-	29	29	-	80	80

		(2 Courses)													
23.11.12 to 24.11.12	PFF	Pickle making as generating activity for SHGs.	-do-	Value addition	1	On	-	16	16	-	9	9	-	25	25
26.11.12	PFF	Preparation of Vermicompost as IG Activity for SHGs	-do-	IG Activities for empowerment of rural families	1	On	-	19	19	-	6	6		25	25
6.12.12 to 15.12.12	PFF	Awareness training programme on value addition to jower and korra for farm women (2 Course)	-do-	Value addition	3	On	-	53	53	-	27	27	-	80	80
18.12.12	PFF	Awareness training programme on drudgery reducing implements for farm women	-do-	Drudgery reducing implements for farm women	1	On	-	17	17	-	13	13	-	30	30
03.01.13	PFF	Training programme on preservation of fruits i.e. jams and squashes preparation for SHG women as IG activity	-do-	Value addition	1	OFF	-	13	13	-	9	9	-	22	22
08.08.12	RYF	Awareness training programme on Nutrition education to combat malnutrition among school going children.	-do-	Nutrition Education	1	OFF	-	128	128	-	97	97	-	225	225
21.11.12	RYF	Awareness training programme on Nutritional deficiency disease and importance	-do-	Nutrition Education	1	OFF	-	15	15	-	45	45	-	60	60

		of green leafy and other vegetables in daily menu													
22.11.12	RYF	Importance of green leafy and other vegetables in daily menu and life skills development	-do-	Nutrition Education	1	Off	-	32	32	-	16	16	-	48	48
21.07.12 to 22.07.12	EFF	Capsule Trg.Prog. to Balika mandals as social change agents on health & hygiene, nutrition education, life skills development, girl children development etc.	-do-	Women empowerment, Nutrition education	2	ON	-	34	34	-	19	19	-	50	50
15.10.12 to 16.10.12	EFF	Capsule Trg. Prog. to Balika mandals as social change agents on health & hygiene, nutrition education, life skills development, girl children development etc.	-do-	Women empowerment, Nutrition education	2	OFF	-	33	33	-	17	17	-	50	50
		TOTAL			**21**			**200**	**200**		**99**	**99**		**299**	**299**

D) Vocational training programmes for Rural Youth

Discipline :Home Science

Crop / Enterprise	Date	Training title*	Identified Thrust Area	Duration (days)	No. of Participants			Self employed after training			Number of persons employed else where
					Male	Female	Total	Type of units	Number of units	Number of persons employed	
Women Empowerment	03.02.12 to 10.05.12	Longduration vocational skill training programme on Tailoring	I.G Activity	90	-	30	30	Individual	26	26	-
	16.07.12 to 15.08.12	Skill training programme on Fabric Painting	I.G Activity	30	-	32	32	Individual	17	17	2
		Total			**14**	**105**	**119**		**33**	**33**	**5**

E. Sponsored Training Programmes :

Agronomy

S. No	Date	Title	Discipline	Thematic area	Duration (days)	Client (PF/RY/EF)	No.of courses	No. of Participants Others			SC/ST			Total			Sponsoring Agency	Amount of fund received (Rs.)
								M	F	T	M	F	T	M	F	T		
1-8	3.6-12 28-7.12 28-9-12 3.10.12 12.12. 12 14.12.12 17.12.12 27.12.12	SRI:" cultivation in rice	Agronomy	ICM	1	PFM	8	158	45	203	95	22	117	253	67	320	ATMA	64,000
9	10-5-2012	Improved production technologies in Rice , Groundnut, Sunflower, Maize and Redgram.	-do-		2	EF	1	35	-	35	8	-	8	43	-	43	CLRCl.	--
10	31-05-2012	Improved production technologies in Groundnut, and Redgram.			1	PFM	1	25	10	35	15	-	15	40	10	50	CLRC	
11	18-1-2013	Seteria production technom			1	PFM	1	35	-	35	15	-	15	50	-	50	Dept Agrl	
		Total:					11	253	55	308	133	22	155	386	77	463		

Plant Protection :

S. No	Date	Title	Discipline	Thematic area	Duration (days)	Client (PF/RY/EF)	No.of courses	No. of Participants									Sponsoring Agency	Amount of fund received (Rs.)
								Others			SC/ST			Total				
								M	F	T	M	F	T	M	F	T		
1	21.6.12	Non chemical methods of pest and disease management in G.nut, Castor & Redgram	Plant Protection	Biocontrol	1	PF	1	27	-	27	8	-	8	35	-	35	CLRC, Ymgr	-
2	22.11.12 (Embai)	Pest and Disease Management in Mango		IPM	1	PF	1	44	-	44	20	-	20	64	-	64	Dept. of Hort,	-
3	18.01.13	Pest & Disease management in Korra – Scope of Biopesticides		IPM	1	PF	1	32	-	32	8	-	8	40	-	40	FTC	-
4	19.01.13	Pest & Disease management in Korra – scope of Biopesticides		IPM	1	EF	1	30	-	30	6	-	6	36	-	36	FTC	-
5	04.03.13 (Maddur)	Pest & Disease management in Chillis and Rice		IPM	1	PF	1	25	-	25	6	-	6	31	-	31	CGG-Hyd.	-
6	08.03.13	Bio Intensive Pest Management in Rice		Biocontrol	1	PF	1	27	3	30	8	-	8	35	3	38	CGG-Hyd	-
7	14.03.13	Climate resilient pest management in Groundnut		IPM	1	PF	1	30	8	38	12	-	12	42	8	50	BIRDS-Nandyal	-
Total							**7**	**215**	**11**	**226**	**68**	**-**	**68**	**283**	**11**	**294**		

Discipline : Soil Science

S. No	Date	Title	Discipline	Thematic area	Duration (days)	Client (PF/RY/EF)	No.of courses	No. of Participants									Sponsoring Agency	Amount of fund received (Rs.)
								Others			SC/ST			Total				
								M	F	T	M	F	T	M	F	T		
1	16.11.12	Judicious use of fertilizers	Soil Science	Soil fatality management	One day	PF	1	28	-	28	12	-	12	40	-	40	ATMA	8,000
2	19.12.12	Soil test based Nutrient management	Soil Science	Soil and water testing	One day	PF	1	32	-	32	8	-	8	40	-	40	ATMA	8,000
		TOTAL					**2**	**60**	**-**	**60**	**20**	**-**	**20**	**80**	**-**	**80**		16,000

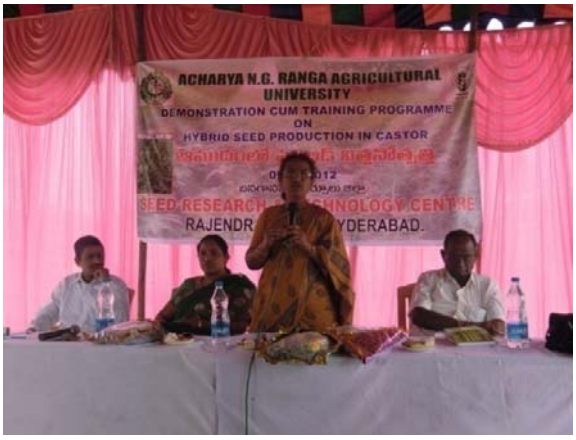
Discipline : Home Science

S. No	Date	Title	Discipline	Thematic area	Client (PF/RY/EF)	No. of Courses	No. of Participants									Sponsoring Agency	Amount of fund received (Rs)
							Other			SC/ST			Total				
							M	F	T	M	F	T	M	F	T		
1-4	20.11.12 , 27.11.12, 06.12.12 & 15.12.12	Value addition to minor millets and entrepreneurial opportunities for farm women	Home Science	House hold food security Value addition	PFF	4	-	104	104	-	56	56	-	160	160	ATMA	32,000/-
5	3.2.12 To 10.5.12	Long duration Vocational skill training programme on Tailoring under Kishora Shakthi Yojana	Home Science	I.G.ACtivity	RYF	1	-	17	17	-	13	13	-	30	30	ICDS,B'Palle	63,000/-
		Total				**5**		**121**	**121**		**69**	**69**		**190**	**190**		

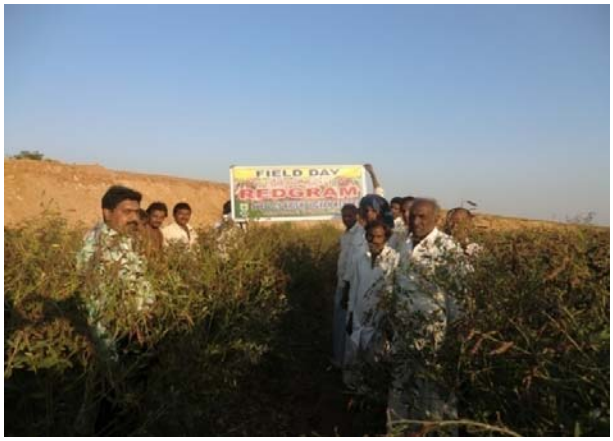
3.4. Extension Activities (including activities of FLD programmes)

S. No.	Nature of Extension Activity	Purpose/ topic and Date	No. of activities	Participants											
				Farmers (Others) (I)			SC/ST (Farmers) (II)			Extension Officials (III)			Grand Total (I+II+III)		
				M	F	Total	M	F	Total	M	F	Total	M	F	Total
1	Field Day	Pulses ,STCR, IPM	12	769	155	924	112	29	141	12	4	16	893	188	1081
3	Kisan Mela														
4	Kisan Ghosthi		16	650	98	748	106	19	125	8	3	11	864	120	984
5	Farmer-scientist interaction meet														
6	Exhibition														
7	Film Show														
8	Method Demonstrations		7	61	-	61	15	-	15	2	-	2	78	-	78
9	Farmers Seminar														
10	Workshop														
11	Group meetings		8	88	2	90	25	3	28	2	-	2	120	5	125
12	Lectures delivered as resource persons	Horticulture crop Cultivation	10	156	3	159	24	-	24	-	-	-	180	3	183
13	Newspaper coverage		8												
14	Radio talks		11												
15	TV talks		2												
16	Popular articles		4												
17	Extension Literature														
18	Advisory Services														
19	Scientific visit to farmers field		42												

S. No.	Nature of Extension Activity	Purpose/ topic and Date	No. of activities	Participants											
				Farmers (Others) (I)			SC/ST (Farmers) (II)			Extension Officials (III)			Grand Total (I+II+III)		
				Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
20	Diagnostic visits														
21	Farmers visit to KVK			685	109		126	24		29	6				
22	Exposure visits														
23	Ex-trainees Sammelan														
24	Soil health Camp														
25	Animal Health Camp		14	3											
26	Agri. mobile SMS		52										35173		35173
27	Soil test campaigns		5	250	66		38	15		4	2				
28	Farm Science Club Conveners meet														
29	Self Help Group Conveners meetings														
30	Mahila Mandals Conveners meetings														
31	Celebration of important days (specify) 1.World Food Day		1	-	35	35	-	15	15	-	20	20	-	70	70
	2.International Womens Day		1	-	114	114	-	74	74	-	10	10	-	198	198
	3.National Nutrition Week		1	-	98	98	-	57	57	-	25	25	-	180	180
32	Homestead nutritional gardens		310	-	157	157	-	98	98	-	55	55	-	310	310

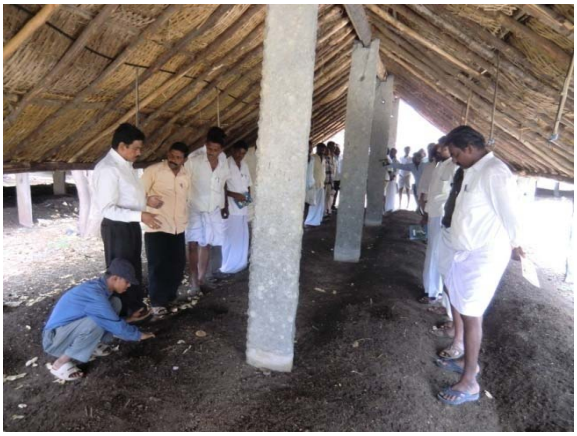


Field day in Castor hybrid PCH-111

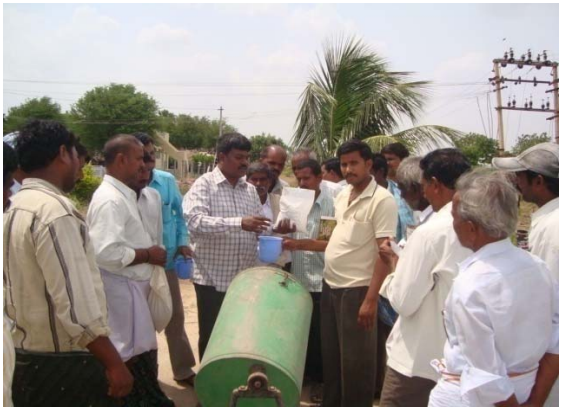


Field day in Redgram

Soil Testing awareness campaign



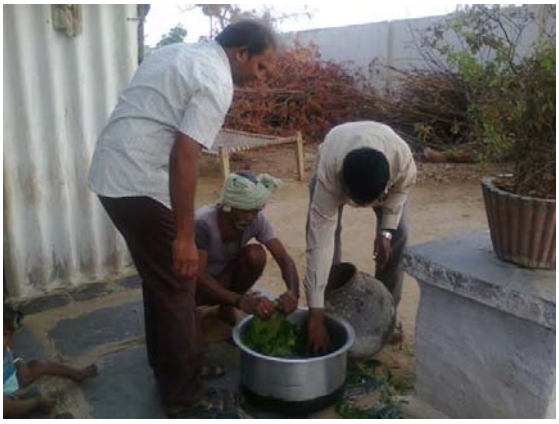
Farmers visit to vermicompost unit



Method demonstration on seed treatment

Method demonstration on stem application in cotton

Method demonstration on pruning in mango



Method demonstration on botanical pesticide preparation

Animal Health camp

Method demonstration on azolla cultivation

National Nutrition Week

International Women's Day

World Food Day

Establishment of Nutrition Gardens at Schools

3.5 Production and supply of Technological products

SEED MATERIALS

Major group/ class	Crop	Variety	Quantity (Qtl.)	Value (Rs)	Provided to No of Farmers
Cereals	Paddy	NDLR-7	65.00	1,95,000-00	105
		BPT-5204	383.00	11,49,000-00	740
Millets	Setaria	SIA 3085	4.50	11,250-00	142
Oilseeds	Castor	PCH 111	10.00	2,25,000-00	266
Pulses	Redgram	LRG 41	5.00	25,000-00	74

Summary

S.No.	Major group/ class	Quantity (qtl.)	Value (Rs)	Provided to No of Farmers
1	Cereals	452.5.00	13,55,250-00	987
2	Oilseeds	10.00	2,25,000-00	266
3	Pulses	5.00	25,000-00	74
	TOTAL	**467.50**	**16,05,250-00**	**1327**

PLANTING MATERIALS

Major group/class	Crop	Variety	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
FRUITS					
SPICES					
VEGETABLES					
	TOMATO	Siri 9005	2,47,600	61900	64
	BRINJAL	Poluru	20,000	5000	6
	CAULIFLOWER		22,000	7700	4
	CAPSICUM	Indra	3000	1500	10
FOREST SPECIES					
Medicinal plants					
PLANTATION CROPS					
Others (specify)					

SUMMARY

Sl. No.	Major group/class	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
1	FRUITS			
2	VEGETABLES	2,92,600	75100	84
3	SPICES			
4	FOREST SPECIES			
5	ORNAMENTAL CROPS			
6	PLANTATION CROPS			
7	OTHERS			
	TOTAL	**2,92,600**	**75100**	**84**

BIO PRODUCTS

Major group/class	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			No	(kg)		
BIOAGENTS						
BIOFERTILIZERS						
	Vermicompost	Eudrilus eugini	-	109000		190
	Earth worms	Eudrilus eugini	-	2,628	6,36,411	
Total				1,11,628	6,36,411	190
BIO PESTICIDES						
1	Pseudomonas	*P.fluorescens*	-	144	20,100-00	45
2	Trichoderma	*T.viride*	-	143	14,300-00	32
3	Neem powder	-	-	1290	21,500-00	14
Total				1,577	55,900-00	91

SUMMARY

Sl. No.	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			Nos	(kg)		
1	BIOAGENTS					
2	BIO FERTILIZERS	-	-	1,11,628	6,36,411	190
3	BIO PESTICIDE	-	-	1,577	55,900-00	71

LIVESTOCK

Sl. No.	Type	Breed	Quantity (Nos	Kgs	Value (Rs.)	Provided to No. of Farmers
Cattle						
SHEEP AND GOAT	Sheep	Nellore brown	26	404	70825.00	14
POULTRY	Backyard poultry	Rajasri	9430	-	5,65,800	765
FISHERIES						
Others (Specify)						

SUMMARY

Sl. No.	Type	Breed	Quantity Nos	Kgs	Value (Rs.)	Provided to No. of Farmers
1	CATTLE					
2	SHEEP	Sheep	Nellore brown	26	70825.00	14
3	POULTRY	Backyard poultry	Rajasri	9430	5,65,800.00	765
4	FISHERIES					
5	OTHERS					
	TOTAL				**6,36,665.00**	**779**

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

(A) KVK News Letter ((Date of start, Periodicity, number of copies distributed etc.)

B) Literature developed/published

1. Brochures & Booklets developed :

2. Articles and Scientific Publications:

- An article on **" *A Study on the impact of site specific nutrient management technologies in rice under irrigated domains of Kurnool district of Andhra pradesh"*** *published* in Asian Journal of Biological and Life sciences Vol. II (3rd Issue), pp.154-158, 2012.
- An article on "***A Study On Site-Specific Nutrient Management For Rice In Kurnool And Cuddapah Canal Command Area Of Kurnool District Of Andhrapradesh*"** is *published* in proceedings of 100 th session of the Indian Science Congress, section of Agriculture and Forestry Sciences,2013 p.265. and presented in 100 th session of the Indian Science Congress from **3rd to 7th January,2013 at Kolkata, West Bengal.**
- An article (abstract no 297) entitled "***Performance and Adoptability of Rajasri birds as backyard poultry in tribal areas of Kurnool district***" was published in the SOUVENIR of IPSACON 2012 pp.188.

3.Popular articles

Management of dairy animal during pregnancy (in Telugu)	A.Krishna Murthy and G.Dhanalakshmi	Annadata Dec'12 35-36
Utilization of agri by products in livestock feed (In Telugu)	A.Krishna Murthy and G.Dhanalakshmi	Annadata Dec'12 36-37
Profitable dairy farming with Crossbred animals (in Telugu)	A.Krishna Murthy and G.Dhanalakshmi	Annadata Dec'12 76-79
Management of crossbred animals	A.Krishna Murthy and G.Dhanalakshmi	Pashunestam Dec'12 30-32

(C) Details of Electronic Media Produced

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

3.7. Success stories/Case studies, if any (two or three pages write-up on each case with suitable action photographs)

1. Soil test based nutrient application in rice for reduced costs of production.

Rice (Oryza sativa L.) is one of the main staple cereal food crops in the world. In 2007 about 650 million metric tones of unmilled rice was produced globally on about 157 million ha (FAO, 2008). 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. In order to get highest yields farmers resorted to excess use of chemical fertilizers which leads to adverse effects on soil and crop with nutrient toxicity and deficiency either by over use or inadequate use, which in turn increases the production costs, subsidies on chemical fertilizers and environmental degradation.

Soil test based nutrient application helps to avoid wasteful expenditure on irrational nutrient application and realize higher benefit: cost ratio as the nutrients applied are in proportion to the magnitude of the deficiency of a particular nutrient and correction of the nutrient imbalances in soil.

One hundred and thirty frontline demonstrations were organized in farmer's fields from the year 2007 to 2009 and soil samples (0~0.15m depth) were collected and analyzed at soil testing laboratory, KVK, Yagantipalle before implementation of demonstrations.

RESULTS:

Soil characteristics:

The soils were neutral to moderate alkali in reaction with pH varying from 7.27 to 8.1 and EC ranged from 0.29 to 0.96 dsm^{-1}. The organic carbon content varied from 0.32 % to 0.98 %. Texture of the surface soil varied from sandy clay loam to clay loam. The soils were low to medium in N (ranging from 38 to 238 kg/ha kg/ha), medium to high in P (ranging from 54 to 469 kg/ha) and medium to high in K (from 152 to 831 kg/ha). Though these soils are considered to be fertile, they are deficient in nitrogen in all mandals but moderately high with available phosphorus and potassium in all mandals.

Nutrient Application:

Based on soil test results the farmers of demonstration plots applied lower doses of N-P-K (230-19-59 Kg./ha, respectively) as compared to farmer's practice (317-190-62 Kg./ha, respectively) which is reflected in cost of production.

Yield and Economics of front line demonstrations:

S.No	Item	Demonstration (STCR)	Farmers practice
1	Mean yield of paddy grain (Kg./ha)	7402	6950
2	Cost of production per hectare (Rs.)	33968	40134
3	Gross returns per hectare (Rs.)	103239	109559
4	Net returns per hectare (Rs.)	75592	63105
5	C:B ratio	1:3.23	1:2.57

IMPACT OF STCR:

Additional income: Farmers of demonstration plots realized additional income of Rs.12487 per hectare over farmer's practice due to low cost of production and yield increments in demonstrations.

Farmer's feed back

Farmers were satisfied with crop performances and expressed that Soil test based nutrient management in rice is a viable technology, because of less cost on chemical fertilizers and without reduction in yield compared to their own practice. They finally realized that they are incurring higher expenditure on fertilizers in the absence of soil testing of their fields. Many farmers have come forward to adopt this methodology in their fields.

Extent of Adoption: So far STCR based nutrient management was by adopted 253 farmers of TBLLC and KC canal command villages covering 500 ha. It was observed that reduction in cost on fertilizers is around Rs.30.0 lakh with an additional income of Rs.60.0 lakh due to adoption of soil test based nutrient management in rice.

2. VERMI COMPOSTING TECHNOLOGY

The long term and increased usage of chemicals without adequate organic manures has not only aggravated multi nutrient deficiencies in soil plant system but also deteriorate soil health and created environmental pollution. Vermitechnology is an eco-friendly, low cost and effective way to recycle any agricultural animal residues. The application of vermi compost not only adds plant nutrients and growth regulators but also improves soil physical properties, microbial population and carbon content of soil. The total farm yard manure requirement is higher than its availability so vermi technology is an alternative method to fulfill the requirement and the whole process ensured part time job to the rural people. Vermi technology is simple low cost, low energy biotechnology of multiplying earthworms and bioconversion of organic waste materials into vermicastings through earthworm consumption by providing them optimum conditions in every household, every village and every town.

As KVK is nodal agency for vermiculture/vermicomposting, trainings were imparted to all beneficiaries of the vermiculture units, Agriculture Extension Officers, Mandal Agriculture Officers and Asst. Directors of Agriculture of the district on preparation of vermicompost and its application. The details of vermicompost units established in Kurnool district are furnished in table-1

Table.1 Status of vermi compost units in Kurnool district from 2005-06 to 2012-13

S. No.	Year	Vermicompost production (Tonnes) at KVK	Earth worms supplied by KVK (Kgs)	No. of units established at village level
1	2005-06	29.73	10404	139
2	2006-07	40.00	13275	177
3	2007-08	30.56	6311	85
4	2008-09	34.96	5635	76
5	2009-10	27.93	5879	78
6	2010-11	47.80	2720	36
7	2011-12	108	1980	25
8	2012-13	109	2628	36
Total		**427.98**	**48832**	**652**

KVK established eight vermicomposting units on the campus since 2003 (Each unit size is 50x24 ft.) and 428 tones of vermicompost was produced and supplied to 726 farmers @ Rs.5-00/per Kg. for various crops. Besides this 48.8 tonnes of earthworms (including filled material) supplied to 616 farmers of the district for establishing 652 vermicompost units (5-10 tones/annum/unit capacity) at farmer level covering all mandals of the district with coordination of Dept. of Agriculture, Dept. of Horticulture, ATMA, NWDPRA and some of the NGO's of the district. Some of the vermiculture /vermicomposting beneficiaries were selling the compost and earth warms to other farmers and getting Rs.20,000/- to 25,000/- annum and some of them are using vermicompost for their crops and reducing cost of production @ Rs.1500-00 to 2,000-00/ha.

3. LRG-41 A promising Helicoverpa tolerant variety

Red gram is one of the major legume crops in Kurnool District grown in 33,000 ha under rainfed conditions during khairif. The crop is also grown during September–October with supplemental irrigations. Previously farmers used to cultivate LRG-30 variety which was affected with *Helicoverapa armigera* at flowering to pod development stage. Non adoption of control measures lead to severe pod damage and finally very poor yields were obtained.Some farmers spent an amount of Rs 2500 to 3000/ha on plant protection.

Keeping in view the problem, KVK introduced LRG-41 Red gram variety, which is tolerant to Helicoverapa with yield potential of 20-22 Q/ha. Kvk organized 50 front line demonstrations with LRG-41 variety in different village's i.e Palukur, Nandavaram, Aluru, & Panyam. The results indicated that the yields and tolerance to Helicoverapa was good and farmers were impressed with performance of LRG-41. During the crop period field days were also organized in the villages in order to educate the farmers.

Comparative performance of LRG-41 V/s LRG-30

Year	Mean yield Kg ha		% increased in yield
	LRG-41	LRG-30	
2005	1212	880	37.2
2006	1081	780	38.5
2007	1134	933	21.5

The results indicated that on an averageLRG-41 recorded 32.4% increased yield over LRG-30. By cultivating this variety farmer obtained an additional income of Rs.18,000 and also Rs.1200-1500/ha savings on Crop Protection. These results encouraged the farmers towards this variety. During subsequent years LRG-41 variety completely replaced LRG-30 variety in these villages.

To popularize and cater to the needs of farmers, seed production of LRG-41 variety was taken up at KVK farm and seed supplied to the farmers. **Area under LRG-41 through intervention of KVK is 2300 ha.**

4.Direct sown paddy with Drum seeder - A success story:

Transplantation is one of the component involving labour, time and money in cultivation of paddy. Due to scarcity of labor in peak season sowings are often delayed resulting in yield reduction due to transplanting of aged seedling and also running short of time for second crop. Changed scenario of resources availability was noticed by the farming community and it lead KVK for introduction of conservation technologies which can be feasible viable and adoptable. Thus drum seeder was chosen for on farm testing in kharif 2008. Eight rowdrum seeder from TNAU was brought and on farm testing was organized in 2 ha with 5 farmers besides on station trail at kvk farm in 2008-09 and 2009-10 and 2010-11.

As seeing is believing farmers were invited to kvk on the day of sowing to build their confidence. Hands on experience was gained by them and sowing with drum seeder was done despite of the disagreement with the fellow farmers. Capacity building on use of weedicides was also done to arrest the weed growth which is a major constraint in direct sown paddy. Duration of the crop reduced by 15 days(135 days) and the yield was enhanced by 10%.This created confidence among them during the first year it self which lead to adoption of this technology in rabi season.

Based upon the success, farmers from nearby villages have purchased five drum seeder from TNAU, Coimbatore for their use with the facilitation of KVK .This technology has attracted all categories of farmers due to easy operation, less weight, line sowing with less seed rate (15 kg / acre) more tillers, early maturity etc., apart from savings in transplanting cost. This paved the way for usage of cono weeder for weeding.

Drum seeder sowing is the only unique technology which was spread horizontally with out entering into demonstrations.

Yield particulars of direct seeding with drum seeder

Title of OFT	Technology assessed	Data on Yield parameters		Result of assessment
		Drum seeder	Transplanting	
Direct seeding V/s Transplanting	Direct seeding with drumseeder	No of hills/sq m—38.8 Tillers/hill18.8 Cost of treatment-Rs 300/ Yield-7690 kg/ha	No of hills/sqm-22.6 Tillers/hill-23.4 Cost of the treatment-4500 Yield-6965 kg/ha	Results show 10.4% increase yield over transplanting. Labour saving was by Rs 4300/ha

WOMEN IN DAIRY

5. Introduction of Perennial Fodder Grasses:: Whole Village Approach

Introduction: Andhra Pradesh accounts 8.4% of the national dairy animal population and produces 7.6% of the country's milk. Andhra Pradesh's milk production comes from farms of less than 2hacs with 1 to 4 dairy animals. More than 70% of rural people own dairy as it provides higher share of household income among rural families especially for women it became an important lively hoods besides Agriculture.

Background: Dairy Activity became one of the major enterpreneuring activity and it is mainly shoulded by the women like cleaning sheds, cleaning animals, feeding animals, milking, etc and they are also spending 1½ to 2 hours daily in searching green fodder. This prolonged searching daily shows negative impact on their personal health i.e leg pains, backaches, headaches, scratches on legs and hands, hair loss and finally effects quality time spending on taking care of family members and household works.

Though the dairy activity was taken up by the rural folk as major income generating activity, but they are not aware of scientific management practices for milch animals which leads to poor milk yield, poor fat percent, poor animal health leads to poor returns / income and are spending 60 to 70% on feeding of milch animals from the dairy source of income and also 30-40 kgs of green fodder is required per animal per day for high milk yield and better health of the animal.

Intervention: KVK initially in 1998,1999 started motivating farm women to turn towards cultivation of fodder jowar i.e SSG 59-3 in 0.2 hac each for 58 no and 49 farm women raised SSG-898 in 0.2 hac each in Sadhukottam and Battulurupadu villages.

Slowly women were convinced to shift to the perennial fodder grasses by noticing negative impact on their personal health and found that they had less leisure time to relax because of their dual work in farm and home.

KVK organized 11 Training programmes for 262 farm women and explained the importance on cultivation of green fodder to reduce drudgery and to increase milk yield. Women were also convinced by taking them to the exposure visit to green fodder fields at farmer fields and also to the Regional Animal Husbandry Training Centre, Banavasi.

After the Training Programmes and Exposure Visits, Demonstrations on cultivation of green fodder i.e. APBN-1 fodder variety was taken up in 2007-08 & 2008-09. Initial demonstrations @ 25-30 cents each with 10 women from Yagantipalle, 10 women from Mettupalli and 10 women from pathapadu villages came forward to raise green fodder as there is no practice of cultivation of green fodder in Yagantipalle, Mettupalle and pathapadu villages

Impact:

Initially started with 25-30 cents by each farm women. After completion of farm work while coming back home in the evening they used to bring fodder from their own fields. This saves time in searching green fodder (11/2 to 2hrs), energy and reducing drudgery for farm women. By seeing its advantages in reducing drudgery while searching fodder and increase in milk yield adoption of cultivation of green fodder has taken up tremendously by 40 to 50 fellow farm women by taking strips from neighbors by convincing family heads.

The initial establishment of green fodder was 4hacs in each village @ 0.2 ha/unit. At present the area increased up to 10hac in each village. Now the yagantipalle, mettupalle and pathapadu villages became community fodder plots with APBN-1 fodder variety.

Economic Benefit :

The cultivation of Green Fodder also helped in increasing family income by increasing average milk yield from 3.5lts to 4.3lts per day and increase in fat percent i.e 5.6 to 6.5. With the increase in milk yield and fat percent the average monthly income of the families raised from Rs.1,446 to Rs 2,039 per month..

Feed Back:

Women of these villages expressed that green fodder cultivation changed their life styles in reducing drudgery in searching fodder, saves time, energy and spending quality time for the house hold work and they also found leisure time for productive work. These women motivated other women to take up and managed fodder in a better way this has revolutionalized the dairy farming of that area. With easily accessible and promising availability of green fodder women came forward in purchasing buffaloes by taking loans from their SHG groups for better income supplementation to the family

Table- I : Average Increase in Fat percent/day

Village	Before Adoption of Green Fodder	After Adoption of Green Fodder
Yagantipalle	5.6	6.3
Mittapalle	5.4	6.2
Pathapadu	5.7	6.5

Table- II: Average Increase in Milk Yield/day

Village	Before adoption of green fodder	After adoption of green fodder
Yagantipalle	3.5	4.3
Mittapalle	3.3	4.5
Pathapadu	3.6	4.6

Table- III: Increased no.of Milch Animals with the Guaranteed Availability of Green Fodder

Village	Before Adoption of Green Fodder	After Adoption of Green Fodder
Yagantipalle	1200	1800
Mittapalle	600	1000
Pathapadu	1400	2100

Table- IV: Increase in milk production /day

Village	Before Adoption of Green Fodder	After Adoption of Green Fodder
Yagantipalle	1200	1800
Mittapalle	600	1000
Pathapadu	1400	2100

Table- V: Horizontal spread of Technology

Village	Initial demo`s	No.of women adopted
Yagantipalle	10	55
Mittapalle	10	40
Pathapadu	10	45

6. Promotion of Millet products through SHGs.

Introduction:

Jowar is an important traditional millet crop in Andhra Pradesh growing in sizeable area. Particularly in Kurnool district Jowar is grown in an area of 75226 ha. It is a nutritious millet with good amount of dietary fibre and essential minerals compared to rice and wheat. The grain is rich in starch (70%), Protein (11%) , Fat (1.9%) and dietary fibre and minerals. The added advantage of the grain is the slow digestability and it is good diet for the diabetic patients. The consumption of Jowar is limited to traditional recipies i.e. roti and sangati. To increase the consumption of jowar, diversified and value added products are essential that deliver convenience, taste, texture, colour and shelf stability at an economical cost. In this scenario, there is a need to develop and diversify different value added products with jowar according to the choice and taste of the consumer. Women participation is very much crucial in promotion and popularization of any kind of food products. To generate income among the rural women folk, involving SHGs, a product of local traditional innovation is now to be manufactured and marketed. The decentralized, small scale house hold based economy of food production and food processing is huge in aggregate. It also generates livelihoods for the economic sustainability of rural women.

Background:

Women play a vital role in food security and they personally involve in food preparation and ensure basic nutrition and food need of the households. As the majority of the rural women were formed into SHGs and taking up various entrepreneurial and income generating activities, with the help of various line departments, banks, agencies and NGOs, any technology or intervention taken up by them will have wider access and acceptability. Hence, KVK has involved SHGs in promotion of Jowar Products and selected Sri Kalki Bhagawan Podupu group of Pandurangapuram village of Nandyal mandal.

Intervention:

KVK organized 14 Training programmes and method demonstrations on value added products with jowar i.e, Breakfast, Lunch and Ready to eat Snack items for 162 farm women of Yagantipalle, Battulurupadu, Nandavaram, Banaganapalle, Kalugotla, Sadhukottam, Madasupalle, Koilakuntla etc. The consumption of value added products was restricted to roti and sangati only, because of non availability of Jowar bi products like dehulled flour and ravva. Establishment of dehullers and flour mills at village level is needed to make the bi products available to the consumers. Keeping this in view, KVK has Planned to promote preparation of jowar bi products i.e, Jowar fine, Bold ravva and flour, by involving local SHGs and supporting them with machinery and giving technical knowhow. The SHGs were encouraged to market the bi products by tapping local avenues like word of mouth among friends and relatives, weekly shandys, rythu bazaars, super markets and local grocery shops.

Impact:

Initially two women members of the SHG have come forward to start the jowar bi products preparation, by procuring 10 quintals of Jowar to start with. Seeing the acceptance and demand from the local community and near by villages, they increased the scale to 150 quintals, with the financial support from Mahila Bank and Bank Linkage, the group had. By seeing the success and profitability of the unit, another 3 women of the group have joined hands and now they are planning to expand the business, with prior orders from super markets and shops.

Economic Benefit :

Cost of Production for 10 quintals (per month) of Jowar bi products

S.No.	Item	Quantity	Cost (Rs.)	Total cost for 6 months (60 qtls)
1	Jowar	1000 kg	15,000-00	90,000-00
2	Labour	80 man days @ 100/- per day	8,000-00	48,000-00
3	Packing	Q.S.	800-00	4,800-00
4	Electricity charges	15 units/ quintal (@ 7/- per unit)	1,050-00	6,300-00
5	Rent for building	Rs. 500/-	500-00	3,000-00
6	Interest on capital invested @ 12% p.a.	Rs. 25,000-00	250-00	1,500-00
Total cost of production /month (10 qtls)			**25,600-00**	**1,53,600-00**

The unit is producing 10 quintals of Jowar bi products (3 types) per month and the cumulative production and gross income for 6 months is as under :

S. No.	Jowar Bi Product	Quantity produced	Cost per Kg	Gross Income (Rs.)
1	Jowar bold Ravva	3900	40	1,56,000-00
2	Jowar fine Ravva	900	35	31,500-00
3	Jowar flour	780	30	23,400-00
4	Jowar Bran	420	15	6,300-00
	Total	**6000**		**2,17,200-00**

Economics of the enterprise:

S. No.	Item	Amount (Rs.)
1	Gross Income from sale of bi products (60 qtls)	2,17,200-00
2	Cost of production for 60 qtls	1,53,600-00
3	Net income	63,600-00
4	BCR	1 : 1.41

A net income of Rs 63,600 is obtained, in addition to their earning as labour for this activity.

Feed Back:

With ready acceptance and bulk requirement from the consumers, there is a lot of demand for these jowar bi products. As the raw materials are easily available in the villages, procurement is easy. As the awareness on use of millet products is increasing among consumers, jowar bi products consumption is increasing along with other millet products like ragi and korra. The technology of preparation of millet products from KVK has come in right time and helped the SHG members to catch up the arising demand for jowar products.

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

3.9 Give details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photographs)

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1	Chillis	Using wet gunny bags drenched with Jaggery solution to attract the *Spodoptera* larvae.	To manage Spodoptera in chillis
2	Redgram	When the plants were shaken vigorously, the larvae feeding on pods will dislodge and fall onto the blanket laid under the plants. Then, the larvae will be collected and destroyed.	To manage Helicoverpa in Redgram
3	Redgram	When Jaggery solution is sprayed on the crop, black ants were attracted to the plants and all the egg and larval stages were seen eaten away by the ants.	To manage Helicoverpa in Redgram
4	Paddy	When 1.5 lt Neem oil is mixed with 25 kg sand and applied in 1 acre after reducing the water in the field, in 48 hours all the BPH were seen flushed out from the field and pungent smell of neem oil persists in the field for 5 days.	To control BPH in Paddy
5	Paddy	Cattle dung & Urine were putrified for 4 nights and to the filtrate, 200 g of Asafoetida powder is mixed and sprayed for Blast in Paddy. It was found stopped from spreading further.	To Manage Blast in Paddy

3.10 Indicate the specific training need analysis tools/methodology followed for

Identification of courses for farmers/farm women

- Baseline survey
- Family survey
- PRA
- Group discussion

For Rural Youth

- Group discussion
- PRA
- Through interaction with farmers clubs

3.11 Field activities

i. Number of villages adopted - 10
ii. No. of farm families selected 50
iii. No. of survey /PRA conducted - 10

3.12. Activities of Soil and Water Testing Laboratory

Status of establishment of Lab

1. Year of establishment : 2005
2. List of equipments purchased with amount :

Sl. No	Name of the Equipment	Qty.	Cost
1	Digital pH Meter	1	7,080-00
2	υ P based EC-TDS Analyser	1	13,680-00
3	Scanning Visible Spectrophotometer	1	36,800-00
4	υP based Flamephotometer	1	30,400-00
5	Nephelometer	1	7,600-00
6	Electronic KEL Plus Automatic Microprocessor (Digestion system)	1	79,200-00
7	Electronic Superior Automatic Microprocessor based Distillation system	1	1,42,300-00
8	Electronic Laboratory Shaker	1	57,350-00
9	Mettler Electronic Analytical Balance	1	91,843-00
10	INDION two bed portable Deioniazer	1	45,900-00
11	INDION portable mixed bed Deionizer	1	
12	Atomic Absorption spectrophotometer	1	8,11,108-00
	Total	**12**	**13,23,261-00**

3. Details of samples analyzed so far:

Details	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs. In Lakhs)
Soil Samples	3080	2365	327	5.741
Water Samples	428	419	95	0.344
Plant Samples	64	64	2	0.384
Petiole Samples	-	-	-	-
Total	3572	2848	424	6.469

4.0 IMPACT

4.1. Impact of KVK activities (Not to be restricted for reporting period).

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.) Before (Rs./Unit)	After (Rs./Unit)
Nutrient Management in rice based on STCR	438	66	47990/ha	57839/ha

4.2. Cases of large scale adoption

(Please furnish detailed information for each case)

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

5.0 LINKAGES

5.1 Functional linkage with different organizations

S.No.	Name of organization	Nature of linkage
1	FTC, Nandyal	Advisory board member, Krishi Vigyan Kendra as resource persons
2	RARS, Nandyal	Technical support to Krishi Vigyan Kendra
3	ATMA, Kurnool	GB member, AMC member and stakeholder of ATMA
4	DAATTC	DLCC member & technical support from DAATTC
5	Dept. of Agriculture	Advisory member for NWDPRA & programs, supply of earthworms and organic farming.
6	Local NGOs	Technical support by KVK
7	Agri Biotech Foundation	Spawn production of milky mushrooms & establishment of jowar bakery unit.
8	Department of Women Development & Child Welfare	Training Programmes to Extension Functionaries
10	NABARD	Conducting training programmes and demonstrations
11	Department of Animal Husbandry	Organising, Health camps and Technical support

5.2 List special programmes under taken by the KVK, which have been financed by State Govt./Other Agencies

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Training programme to extension functionaries	April,2011	Women Development & Child Welfare	9,47,434-00
Demonstration and training programmes and extension activities	April, 2011	ATMA	8,00,000-00
Soil test crop response based nutrient application in rice under FTTF scheme	April-2011	NABARD	3,46,500-00

5.3 Details of linkage with ATMA

a) Is ATMA implemented in your district : Yes

S. No.	Programme	Nature of linkage	Remarks
1	Training Programme	Financial support from ATMA	
2	Demonstrations		
3	Exposure visit		
4	Kisan ghosti		
5	Technology assessment & refinement		

5.4 Give details of programmes implemented under National Horticultural Mission

S. No.	Programme	Nature of linkage	Constraints if any
		NIL	

5.5 Nature of linkage with National Fisheries Development Board

S. No.	Programme	Nature of linkage	Remarks
		NIL	

6. PERFORMANCE OF INFRASTRUCTURE IN KVK

6.1 Performance of demonstration units (other than instructional farm)

Sl. No.	Demo Unit	Year of estt.	Area	Details of production			Amount (Rs.)		Net income
				Variety	Produce	Qty. tones	Cost of inputs	Gross income	
1	Vermi composting unit	2003	-	*Udrilus eugeni*	Vermi compost Earthworms	109 2.628	2,52,881	6,36,417	3,83,530
2	IBRC	2010	-	Pseudomonas Trichoderma Neem Powder	Pseudomonas Trichoderma Neem Powder	1.577	29,180	55,900	26,720

S. No.	Demo Unit	Year of estt.	Area	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1	Dyeing & Printing	1999	-	-	Cotton sarees	90	27,900.00	40,500.00	-

6.2 Performance of instructional farm (Crops) including seed production

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty (Qtl).	Cost of inputs	Gross income	
Cereals									
	1 St wk of July	3 rd wk of Nov	1.2	NDLR-7	Seed	65	62,000	1,95,000	
	1 St wk of July	1 St wk of Dec	5.6	BPT-5204	Seed	383	2,80,000	11,49,000	
Millets									
Setaria	3rd wk of July	2nd wk of Oct.	0.4	SIA 3085	Seed	4.5	5,000	11,250	
Pulses									
Pigeonpea	Last wk of July	2nd wk of Jan	0.6	LRG-41	Seed	5	10,000	25,000	
Oilseeds									
Castor	Ist wk of Oct	2 nd wk of April	1.0	PCH-111	Seed	9	1,10,000	2,25,000	

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

Sl. No.	Name of the Product	Qty tonnes.	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1	Vermicompost	109	2,52,881	6,36,411-00	
2	Earthworms	2.628			
3.	Pseudomonas	0.144	67480.00	20100.00	
4.	Trichoderma	0.143	7865.00	14,300.00	
5.	Neem powder	1.290	14835.00	21500.00	
	Total	109.98	3,21,533-00	7,48,900-00	

6.4 Performance of instructional farm (livestock and fisheries production)

Sl. No	Name of the animal / bird / aquatics	Details of production		Qty.	Amount (Rs.)		Remarks
		Breed	Type of Produce		Cost of inputs	Gross income	
1	Poultry	Rajasri	Chicks	9430	447814.00	565800.00	

6.5 Rainwater Harvesting

Training programmes conducted by using Rainwater Harvesting DemonstrationUnit

Date	Title of the training course	Client (PF/RY /EF)	No. of Courses	No. of Participants including SC/ST			No. of SC/STParticipants		
				Male	Female	Total	Male	Female	Total

6.5 Utilization of hostel facilities

Accommodation available (No. of beds) : 40

Months	Title of the training course/Purpose of stay	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
April-12		30	90	
		30	90	
Total		**60**	**180**	
May,12		25	75	
Total		**25**	**75**	
June,12		30	60	
Total		**30**	**60**	
July,12		22	66	
		30	90	
		25	75	
		25	50	
Total		**102**	**281**	
Aug,12		26	130	
Total		**26**	**130**	
Sep,12				
		72	72	
Total		**72**	**72**	
Oct,12				
		52	260	
Total		**52**	**260**	
Nov,12		114	228	
Total		**114**	**228**	
Dec,12		201	603	
Total		**201**	**603**	
Jan,13		45	45	
Total		**45**	**45**	
Feb,13		210	420	
Total		**210**	**420**	
Mar,13		270	540	
Total		**270**	**540**	
Grand total		**1207**	**2894**	

7. FINANCIAL PERFORMANCE

7.1 Details of KVK Bank accounts

Bank account	Name of the Bank	Location	Account Number
With Host Institute			
With KVK			
Main A/C	Andhra Bank	Banaganapalle	SB 005910011006023
Revolving Fund	Andhra Bank	Banaganapalle	SB 005910011006024

7.5 Utilization of KVK funds during the year 2012-13

S. No.	Particulars	Sanctioned	Released	Expenditure
A. RECURRING ITEMS				
1	**Pay & Allowances**	77,00,000-00	77,00,000-00	81,81,474-00
2	**Traveling allowances**	1,20,000-00	1,20,000-00	1,16,191-00
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (purchase of News paper & Magazines)	4,30,000-00	4,30,000-00	4,27,721-00
B	POL, repair of vehicles, tractor and equipments			
C	Meals/refreshment for trainees (celling upto Rs.40/day/trainee be maintained)			71,035-00
D	Training material (posters, charts, demonstration material including chemicals etc., required for conducting the training).			15,078-00
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)			75,946-00
F	On farm testing (on need based location specific and newly generated information in themajor production systems of the area)	3,00,000-00	3,00,000-00	96,430-00
G	Training of extension functionaries			16,736-00
H	Honarorium for Trainers			
I	Establishment of Soil, Plant & Water Testing Laboratory			
J	Libray			6,613-00
K	Maintenance of farm			15,823-00
	TOTAL (A)			
B.Technology Demonstration on Pulses				
A.	Redgram 30 demonstrations for Kharif @ Rs.4000/demo = Rs.120000			1,19,235-00
B.	Bengalgram 30 demonstrations for Rabi @ Rs.4000/demo = Rs.120000	3,20,000-00	3,20,000-00	1,18,871-00
C.	Contractual Services = Rs. 60000			60,000-00
D.	Micro irrigation			19,965-00
	TOTAL (B)			***10,43,453-00***
C.FLD Cotton				
	TOTAL (C)			
D. Non Recurring Contingencies				
1	Works			
2	Equipments including SWTL & Furniture			
3	Vehicle (Four wheeler/Two wheeler, please specify)			
4	Library (purchase of assets like books & journals)			
	TOTAL (D)			
E	**REVOLVING FUND**			
	GRAND TOTAL (A+B+C+D+E)	**88,70,000-00**	**88,70,000-00**	**93,41,118-00**

7.5 Status of revolving fund (Rs. in lakhs) for the three years

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year
April -2010 to March-2011	32,59,421-00	25,57,064-00	17,14,450-00	41,01,978-00
April -2011 to March-2012	41,01,978-00	39,34,975-00	37,64,788-00	42,72,165-00
April -2012 to March-2013	42,72,165-00	35,31,491-00	25,93,520-00	52,10,136-00

8.0 Please include information which has not been reflected above (write in detail).

8.1 Constraints

(a) Administrative

(b) Financial

(c) Technical

ANNEXURE – 1

District Profile :

1. **General Census :**

Area	:17658 sq. km
Population	:35.29 lakhs
Male population	: 17.96 lakhs
Female population	: 17.33 lakhs
No of households	: 6.99 lakhs
Inhabited villages	: 1514
Literates	: 15.92 lakhs
Literacy rate	: 53.22
Normal rainfall	: 670.0 mm
Revenue villages	: 928
Gram panchayats	: 898

2. **Agriculturural and Allied Census :**

Gross cropped area	9.91 lakh ha
Net cropped area	8.86 lakh ha
Cropping intensity	111.87 %
Gross area irrigated	2.31 lakh ha
Net irrigated area	1.92 lakh ha
Forests	3.18 lakh ha
Cultivable waste	0.77 lakh ha
Uncultivable land	0.99 lakh ha
Land put to non agricultural use	1.35 lakh ha
Permanent pastures	0.04 lakh ha
Other fallow lands	1.21 lakh ha
Current fallows	1.16 lakh ha
Net area sown	8.86 lakh ha
Area sown more than once	1.05 lakh ha
No of marginal farmers	2.02 lakhs
No of Small farmers	1.41 lakhs
No. of Medium farmers	0.51 lakhs
No. of Large farmers	0.09 lakhs
Cultivators	3.64 lakhs
Agricultural labour	6.25 lakhs
Livestock population	24.44 lakhs
Cattle population	4.29 lakhs
No of Buffaloes	4.59 lakhs
Sheep	11.49 lakhs
Goat	3.87 lakhs
Pigs	13.47 lakhs
Poultry	11.79 lakhs

3. Agroclimatic Zones :

Scarce rainfall zone	Low scanty and erratic rainfall due to which successful crop production with good yields is unexpectable and dryland agriculture is predominant with a variety of rainfed crops in the zone.

4. Agro –Eco systems :

K.C.Canal irrigated red soils
T.B.Low level canal irrigation red soils
T.B.High level canal irrigation black soils
K.C.Canal irrigation blacksoils
T.B.Low level canal irrigation black soils
T.B.high level canal irrigation black soils
Problem soils
Tank irrigation red soils
Tank irrigation black soils
Well irrigation red soils
Rainfed red soils
Rainfed black soils

5. Major and micro farming systems :

1 Agriculture + Horticulture
2 Agriculture + Dairy
3 Agriculture + Horticulture + Dairy
4 Agriculture + Horticulture + Pastural culture

6. Major production systems :

Paddy- Paddy,
Greengram- Paddy,
Paddy- Groundnut/ vegetables
Paddy-fallow
Paddy/Groundnut/vegetables-fallow
Paddy- Greengram- Paddy,
Paddy/Groundnut- vegetables
Sunflower/ Groundnut- fallow
Groundnut/ Cotton- fallow
Sunflower- Groundnut
Groundnut- Sunflower
Cotton-fallow
Paddy- Sunflower
Cotton/Onion- fallow
Cotton/Onion/ Chillies- fallow
Sunflower- Groundnut+ Redgram
Groundnut+ Jowar, Cotton
Cotton+ redgram/ Korra/ Redgram-fallow
Jowar/Bengalgram/Tobacco- fallow
Jowar-fallow
Groundnut-fallow

7. Major agriculture and allied enterprises

Agriculture
Horticulture
Floriculture
Olericulture
Silviculture
Pastoral culture
Dairy farming
Pisciculture
Sheep farming
Goatry

Agro-ecosystem Analysis of the focus/target area

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

Farming situation	Name of the village	Focus area	Target area
Rainfed black soils	Manekurthi	Groundnut-200 ha Cotton- 40 ha Bengalgram -800 ha	Groundnut-Cotton-Bengalgram
Rainfed red soils	Aluru Aluru		
Tank irrigation black soils	Jalaknur		
T.B. Low level canal irrigation black soils	Yemmiganur Kadimetla		

2. Survey methods used (survey by questionnaire, PRA, RRA, etc.)

Questionnaire: Primary and secondary data about the villages was collected through a pre scheduled questionnaire by gathering a group of farmers. Information about the management practices being followed and technology used was collected from individual farmers through semi structured interview schedule.

3. Various techniques used and brief documentation of process involved in applying the techniques used like release transect, resource map, etc.

Resource map: Villagers were involved in a transect walk along the pathways of the village and later on a social map was drawn to know the resources available in and around the villages.

4.Analysis and conclusions

Rainfed red soils:

Major crops are Sunflower, Groundnut, Jowar and Redgram Specific constraints are poor soil fertility and water retentivity, late rains, drought and frequent dry spells. Production constraints are improper spacing, non usage of recommended fertilizers , high doses of pesticides. Potentials identified are rainfed greengram to enrich soils, encourage inter crops against failures.

Rainfed black soils:

Major crops are Bengalgram & Cotton. Specific constraints are erratic rainfall, drought, frequent dry spells and terminal drought in bengalgram and jowar. Production constraints are improper spacing, non usage of recommended fertilizers , high doses of pesticides. Potentials identified are rainfed greengram to enrich soils, encourage inter crops against failures.

TBP LLC canal irrigated black soils:

Main crops are Groundnut, Sunflower, Paddy: Specific constraints are late and uncertain release of water due to erratic rainfall, non availability of water in tail end areas. Production constraints are poor pod filling in groundnut. Potentials identified are double cropping in tail end areas and growing of off – season vegetables.

TBP LLC canal irrigated red soils:

Main crops are Paddy, Groundnut and vegetables like Onion Chillies and Tomato. Specific constraints are soils poor in organic carbon content, water problem in tail end areas due to erratic rainfall leading to non availability of water in critical crop stages. Production constraints are high N&P application in paddy, poor pod filling in groundnut. Potentials identified are greengram or green manure crop preceding paddy to enrich soil and kharif pulse crop in the follow areas.

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

Rainfed red soils: The area being mostly rainfed, farmers were found to be non aware of moisture conservation measures, methods of fertilizer application, appropriate spacing etc.

- Need based plant protection measures are not adopted.
- Traditional varieties are cultivated. Crop rotation is not followed.

- Groundnut:
    - Proper plant population not maintained.
    - Usage of local variety for a long time.
    - Improper fertilizer management.
    - Lack of knowledge on usage of bio pesticides.

Rainfed black soils:

- Mungari cotton:
    - Proper spacing not adopted.
    - Non awareness of IPM measures.
- Bengalgram:
    - No practice of growing preceding crop to Bengalgram.
    - Latest improved varieties not adopted.
    - Proper management practices not followed.
    - IPM techniques not adopted.

TBP LLC canal irrigated red soils:

- Improved and high yielding varieties not grown.
- Indiscriminate usage of fertilizers.
- Recommended spacing and plant population not followed.
- Timely and proper plant protection measures not adopted.

Paddy:

- High doses of fertilizers being applied.
- IPM techniques not adopted.

Groundnut:

- Improved varieties not adopted.
- IPM measures not followed.
- Non usage of micronutrients.

Tank irrigation black soils:

Chillis:

- Indiscriminate usage of Fertilizers and pesticides.
- Direct sowing of seed. No nursery management.