ANNUAL REPORT - 2011 -12

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-2012)

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	28,790-00	36,790-00	3-4-2003	Permanent	OC
2	Subject Matter Specialist	K.Venkata Ramanaiah	SMS (Soil Science)	Soil Science	23,470-00	28,870-00	10-7-1996	Permanent	BC
3	Subject Matter Specialist	M.Sudhakar	SMS (Agronomy)	Agronomy	23,470-00	28,870-00	23-9-1996	Permanent	OC
4	Subject Matter Specialist	D.Balaraju	SMS (Plant Protection)	Plant Protection	19,310-00	24,710-00	4-4-2003	Permanent	OC
5	Subject Matter Specialist	K.Rajeswar Reddy	SMS Horticulture	Horticulture	15,600-00	21,000-00	1-10-2008	Permanent	OC
6	Subject Matter Specialist	A.Krishna Murthy	SMS (Animal Husbandry)	Animal Husbandry	15,600-00	21,000-00	20-6-2010	Permanent	OC
7	Programme Assistant	K.Lakshmi Priya	Programme Asst. (Home Science)	Home Science	16,600-00	20,140-00	18-6-1996	Permanent	BC
8	Accountant / Superintendent	Y.V.Rama Subbaiah	Accountant Supt.	Accountant Supt.	17,010-00	20,520-00	1-1-1996	Permanent	OC
9	Jr.Asst. cum Typist (SK)	B.V.M.V.Prasad Rao	Jr. Asst. cum Typist	Jr. Asst. cum Typist	11,900-00	13,810-00	21-3-1990	Permanent	BC
10	Jr. Asst cum Typist (Against Jr. Steno)	S.Md. Khasim	Jr. Asst cum Typist (Against post of Jr. Steno)	Jr. Asst cum Typist (Against post of Jr. Steno)	11,900-00	13,810-00	6-4-1990	Permanent	OC
11	Driver	Iqbal Basha	Driver cum Mechanic	Driver cum Mechanic	9,480-00	11,090-00	20-9-1995	Permanent	OC
12	Driver	D.Obulesu	Driver cum Mechanic	Driver cum Mechanic	8,860-00	10,520-00	1-8-1996	Permanent	SC
13	Attender	P.Raghava Reddy	Attender	Attender	7,220-00	9,020-00	2-11-1990	Permanent	OC
14	Watchman	T.P.Gurappa	Watchman	Watchman	6,690-00	8,490-00	30-12-94	Permanent	BC
15	Cook	T.Rajeswari	Cook	Cook	6,690-00	8,490-00	20-9-1995	Permanent	BC
16	Farm Attendent	A.Rama Subbaiah	Farm Attendent	Farm Attendent	6,690-00	8,490-00	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	7040	7.59	1990-91		
2.	Farmers Hostel	ICAR	1994	4040	8.0	1990-91		
3.	Staff Quarters(6)	ICAR	1998	5710	32.27	1992-93		
4.	Demonstration Units (2)	ICAR	1992-93	4150	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	40,831 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	18,904 KM	OK
Motorcycle (Suzuki MAX-100)	2002	34,100-00	73,005 KM	OK
TVS XL-Super	2002	17,900-00	38,892 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	Obsolete
Digital Camera Nikon	2005	15,100-00	Obsolete
L.C.D	2005	1,00,000-00	OK

1.8. A). Details SAC meeting conducted in the year- Rabi-2011

Sl. No.	Date	Name and Designation of Participants	Salient Recommendations	Action taken
1	6-8-2010	1. Dr.M.R.Sreenivasulu, Special Officer, SHE&CS 2. Dr.Sankar Reddy, ADR,RARS, Nandyal. 3. Sri.Venkateswarlu, Joiint Director of Agriculture, Kurnool. 4. Dr.K.V.Subba Rao, DDA (FTC), Nandyal. 5. Sri K.Satyanarayana, Project Manager, CCF, Koilkuntla. 6. Dr.Y.Narasimhudu, Principal Scientist, RARS, Nandyala. 7. Sri K.Pandu Prakash, Additional Project Director,	* Popularization of Redgram + Korra cropping system. * Popularization of post emergence weedicide in paddy sown with drum seeder. * Demonstration for minikits to be conducted in Association with	*It is included in kharif action plan 2011. * Demonstrations with post emergence weedicide under progress. * Conducting Cotton, Bengalgram and groundnut minikits with collaboration of RARS.

		Agricultural. (DWMA), Kurnool. 8. Sri. B.R.Gangawar, Senior Techical Officer, NHRDF, Kurnool 9. Dr.Y.Rama Reddy, Senior Scientist, RARS, Nandyal. 10. Dr.Saralamma, Coordinator, DAATTC, Kurnool. 11. Sri D.Naveen Kumar, Horticulture Officer. 12. Sri Krishnudu, Farmer, Yagantipalle. 13. Sri Thulasi Eswar Reddy, Farmer, Nandavaram.	RARS.	

Details of SAC meeting held For Kharif,2012

Sl. No.	Date	Name and Designation of Participants	Salient Recommendations	Action taken
1.	8-2-2011	1. Dr.Y.Padmalatha, Associate Director of Research, RARS, Nandyal 2. Dr.K.Anand Singh, Deputy Director of Extension, ANGRAU, Hyderabad. 3. Dr. M.R.Sreenivasulu, Retd. ADR & Special Officer, SHE&CS 4. Dr. S.Saralamma, Coordinator, DAATTC, Kurnool 5. Dr. Y. Narasimhulu, Programme Coordinator, KVK, Banavasi 6. Sri.P.Wilson, ADA, AFT, Nandyal 7. Sri.U.Somasunder, R.A.(Plant Protection), KVK, Banavasi 8. S.Vijaya Bhaskar Reddy, Yagantipalle (V), Banaganapalle (M) 9. M.Krishnudu, Yagantipalle (V), Banaganapalle (M) 10. T.Rama Subba Reddy, Sanjamala 11. M.Raghunath Reddy, Kaipa, Banaganapalle (M) 12. D.Chinnapa Reddy,	• Soil properties to be furnished along with yield particulars in demonstration on Reclamation of sodic soils. • Sprinkler irrigation in Bengal Gram may be tested in more locations. • Promotion of micro irrigation systems in horticultural crops. • Awareness to be created on high P content soils of Kurnool district. • More number of vocational trainings may be conducted.	• Organized demonstrations on Zinc management in Paddy. • Seed production was taken up with Korra var.SIA-3085 and supplied to the farmers • Awareness and training programmes were organized.

Banaganapalle
13. A.Padmavathi,
Banaganapalle
14. M.V>Krishna Reddy,
Kalugotla
15. M.Subramanyam,
Yagantipalle,
Banaganapalle (M)
16. B.Venkata Subba Reddy,
Yagantipalle (V),
Banaganapalle
17. K.Vijayalakshmi,
Pandurangapuram,
Nandyal (M)
18. A.Padmavathi,
Pandurangapuram,
Nandyal (M)

2. DETAILS OF DISTRICT (2011-12)

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.

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

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 -2011

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 -2011

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	-	-

2.5. Weather data 2010-11

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)
		Maximum	Minimum	
Apr -10	-			
May-10	-			
Jun -10	77			
Jul -10	177			
Aug -10	135			
Sep -10	126			
Oct -10	114			
Nov-10	28			
Dec -10	7			
Jan -11	3			
Feb -11	-			
Mar -11	-			

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

Category	Population	Production	Productivity
Cattle			
Crossbred	3167	3.98 lakh	6-8 lt
Indigenous	514259	metric	1.5-2.5
Buffalo	646453	tonnes of milk	2-3
Sheep			
Crossbred	-	19,087 metric	
Indigenous	1391474	tonnes of	12.5 kg
Goats	607907	meat	
Pigs	13,474		
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	651		
Turkey and others			

Category	Area	Production	Productivity
Fish			
Marine			
Inland			
Prawn			
Scampi			
Shrimp			

2.6 Details of Operational area / Villages (2011-12)

S. No.	Taluk	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1	Banaganapalle	Nandyal	Bhanumukkala	Paddy	Indiscriminate use of pesticides	Bio intensive pest management in rice
2	Bethamcherla	Nandyal	Embai	Onion	Indiscriminate use of Pesticides	IPM in Onion

3	Koilkuntla	Nandyal	Kalugotla	Bengal gram Dairy	Low yields in bengalgram Wilt and dry root rot and s.exigua in bengalgram	Management of soil borne diseases with application of *Trichoderma viridi* as seed treatment and soil application and management of S.exigua with newer chemicals.
4	Owk	Nandyal	K.Sunkesula	Chillies	High cost of plant protection	IPM in chillies
5	Banaganapalle	Nandyal	Rallakothuru Pathapadu Yerragudi Yagantipalle Applapuram Nandavaram Banumukkala	Groundnut	Low productivity in groundnut	Management of Stemrot IPM 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	Indiscriminate and excess application of NPK	Soil test based nutrient management. INM
				Mango	Low yields	
6	Allagadda	Dornipadu	Dornipadu Ramachandrapuram Ammereddy Nagar Bagyanagarm Kondapuram	Rice	Indiscriminate and excess application of NPK	Soil test based nutrient management

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 2010-11

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	27	27	270	270

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	70	70	1750	2341	7	7	350	454
Rural youth	9	9	200	218				
Extn. Functio.	9	9	225	347				

Seed Production (Qtl.)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
Paddy JGL-3844 30.0	32.70		
NDLR-7 45.0	57.00		
NDLR-8 10.00	6.90		
5204-200.0	232.50		
Arboreum Cotton –Yaganti -3.00	2.00		
Groundnut K-9 10.00	3.20		
Groundnut –farmers fields-K6	500.00		
Blackgram –LBG-645 farmers fields	500.00		

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	Increasing cost of plant protection and pesticide residues in grain and straw	Bio- intensive Integrated Pest Management		IPM in rice & sustainable pest management methods	-	-	
		Groundnut	Stemroot,LLS, Helicoverpa,RHC	Management of stemrot	IPM in Groundnut	IPM in Groundnut	-	-	-
		Bengalgram	Soil borne diseases & S.exigua	Management of S.exigua with newer chemicals.	Management of soil borne diseases in bengalgram	IPM in bengalgram	-	-	-
		Redgram	Helicoverpa and wilt	-	IPM in redgram	IPM and sustainable methods of plant protection	-	-	-
		Chillies	Thrips and powdery mildew	-	IPM in chillies	IPM in chillies	-	-	-
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..

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	Bengalgram	Low yields with local varieties	-	Varietal demo	Production technology	-	Field day Literature on production technology	Supply of improved variety JG-11 seed
			Balanced nutrient management		Nutrient Management based on Soil Test Crop Response formula	Soil sampling and soil test based nutrient management			
		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	Bengalgram	Low yields due to non-application of sulphur	-	Sulphur nutrition	-do-	-	Field day	Sulphur @ 25kg/ha
6	Improving productivity under rainfed situation	Seteria Bengalgram	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

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Varietal Evaluation		1	2						1	4
Seed / Plant production										
Weed Management										
Integrated Crop Management										
Integrated Nutrient Management		1			1					2
Integrated Farming System										
Mushroom cultivation										
Drudgery reduction										
Farm machineries										
Value addition										
Integrated Pest Management	1			1						2
Integrated Disease Management		1								1
Resource conservation technology	1	1				1				3
Small Scale income generating enterprises										
TOTAL	2	4	2	1	1	1			1	12

* *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-2011,Rabi & Summer 2011-12)

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Varietal Evaluation										
Seed / Plant production										
Weed Management										
Integrated Crop Management										
Integrated Nutrient Management										
Integrated Farming System										
Mushroom cultivation										
Drudgery reduction										
Farm machineries										
Post Harvest Technology										
Integrated Pest Management										
Integrated Disease Management										
Resource conservation technology										
Small Scale income generating enterprises										
TOTAL										

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

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

Thematic areas	Cattle	Poultry	Sheep	Goat	Piggery	Rabbitary	Fisheries	TOTAL
Evaluation of Breeds		1						1
Nutrition Management	1							1
Disease of Management								-
Value Addition								-
Production and Management								-
Feed and Fodder	1	1						2
Small Scale income generating enterprises								
TOTAL	2	2						4

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	32738-00	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	6568-00		
					Greengram-bengalgram	Net returnsRs/ha	26909-00		
						Additional income Rs/ha .	739-00		
					Fallow-bengalgram	Net returnsRs/ha	26170-00		
						Additional income Rs/ha			

Technology Assessed	Production per unit	Net Return (Profit) in Rs./unit	BC Ratio
11	12	13	14
Korra- bengalgram	1660 -1156 kg/ha	32738-00	**1:2.2**
Greengram- bengalgram	487 -1175 kg/ha	26909-00	**1:1.8**
Fallow- bengalgram	1287 kg/ha	26170-00	**1:2.0**

OFT 2:

S.No	Item		Particulars
1	Title	:	**Performance of groundnut varieties in rainfed situation**
2	Problem diagnosed/refinement	:	Low yields in groundnut due to moisture stress at critical stages.
3	Details of technologies selected for assessment/refinement	:	✓ T1-TMV-2 ✓ T2-ICGV-91114 ✓ K9 ✓ TG-37A
4	Source of technology	:	Groundnut varieties developed by ANGRAU and ICRISAT
5	Production system	:	Red soils ,rainfed
6	Thematic Area	:	Varietal evaluation for rainfed situation
7	Performance of the Technology with performance indicators	:	✓ No. of pods per plant ✓ Shelling percentage ✓ Yield / ha
8	Final recommendation for micro level situation	:	The result indicated that highest yield was recorded with K9 (804 kg/ha) followed by ICGV-91114 and TG-37A, as compared to TMV-2, 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
Groundnut	Rainfed	Low yields due to low moisture stress at critical stages.	Performance of Groundnut varieties under rainfed situation	5	TMV-2	* No. of pods /plant	6.2	The results indicated that K9 has recorded highest yield (1428 Kg/ha) followed by TG-37A and ICGV-91114 as compared to TMV-2 due to its tolerance to drought.	.
						*Shelling percentage	63.5		
						* yield /ha.	608kg/ha		
					ICGV-91114	* No. of pods /plant	7.2		
						*Shelling percentage	68.8		
						* yield /ha.	787kg/ha		
					K9	* No. of pods /plant	7.6		
						*Shelling percentage	69.6		
						* yield /ha.	804 Kg/ha		
					TG-37A	* No. of *pods /plant	6.7		
						Shelling percentage	68.0		
						* yield /ha.	738 kg/ha		

Technology Assessed 11	Production per unit 12	Net Return (Profit) in Rs./unit 13	BC Ratio 14
TMV-2	608kg/ha	6860-00	**1:1.33**
ICGV-91114	787kg/ha	14915-00	**1:1.72**
K9	804kg/ha	15680-00	**1:1.76**
TG-37A	738 kg/ha	12710-00	**1:1.62**

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 – Digvijay
4	Source of technology	:	Bengalgram 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 there is no significant difference between Digvijay 1788 kg/ha and JG11(1749 kg/ha) and no. of pods per plant (54.7.) (51.8) respectively compared to JG-130.
8	Final recommendation for micro level situation	:	-
9	Constraints identified and feedback for research	:	-
10	Process of farmers participation and their reaction	:	Farmers participated in planning execution, monitoring, evaluation of Varieties and their opinion towards the performance and, adoptability etc. of the improved varieties was 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
Bengalgram	Rainfed	Low productivity of local varieties	Varietal evaluation	5	1. Digvijay	No. of branches/plant,	7.8	Results showed that there is no significant difference between Digvijay 1788 kg/ha and JG11(1749 kg/ha) and no. of pods per plant (54.7.) (51.8) respectively compared to JG-130.	.
						No. of pods/plant,	54.7		
						Yield Kg/ha	1788		
					2. JG-11	No. of branches/plant,	7.0		
						No. of pods/plant,	51.8		
						Yield Kg/ha	1749		
					3. JG-130	No. of branches/plant,	7.2		
						No. of pods/plant,	45.6		
						Yield Kg/	1454		

Technology Assessed 11	Production per unit 12	Net Return (Profit) in Rs. / unit 13	BC Ratio 14
1. Digvijay	1788	45680-00	1:3.7
2. JG-11	1749	44315-00	1:3.6
3. JG-130	1454	33990-00	1:3.0

OFT 4:

S.No	Item		Particulars
1	Title	:	**Direct seeding V/s Transplanting in paddy**
2	Problem diagnosed/refinement	:	High cost of cultivation due to labour scarcity and increased labour wages in paddy transplanting method
3	Details of technologies selected for assessment/refinement	:	T1: Direct seeding with drum seeder T2: Manual transplanting
4	Source of technology	:	DRR
5	Production system	:	Low land - irrigated
6	Thematic Area	:	Resource conservation
7	Performance of the Technology with performance indicators	:	✓ Numbers of hills/sqm ✓ Number of tillers/sqm ✓ Yield kg/ha ✓ Cost of treatment/ha
8	Final recommendation for micro level situation	:	The results indicated that 5.2% increased over manual transplanting method. The major difference between two methods was saving of labour charges in direct seeding with drum seeder, which is Rs.500/-/ha against 4500-00 in manual transplanting method.
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
Paddy	Irrigated	High cost of cultivation due to labour scarcity and increased labour wages in paddy transplanting method	Direct seeding V/s Transplanting in paddy	5	T1: Direct seeding with drum seeder	* No.of hills /sqm	37.1	The result indicated that 5.2% increased over manual transplanting method. The major difference between two methods in the cost of cultivation was saving of labour charges to a tune of Rs. 4200-00 per ha with drum seeder.	.
						* No.of tillers/hills	14.83		
						* cost of treatments	500-00		
						* Yield kg/ha	7174kg/ha		
					T2:Manual transplanting	* No.of hills /sqm	27.4		
						* No.of tillers/hills	17.16		
						* cost of treatments	4500.00		
						* Yield kg/ha.	6815kg/ha		

Technology Assessed 11	Production per unit 12	Net Return (Profit) in Rs. / unit 13	BC Ratio 14
T1: Direct seeding with drum seeder	7174 Kg/ha	41531-00	1:2.04
T2:Manual transplanting	6815 kg/ha	33463-00	1:1.76

OFT 5:

S.No	Item		Particulars
1	Title	:	**Performance of Blackgram Varieties under rainfed black soils (Scarce 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 LBG-752 has recorded highest Yield (1446 Kg/ha) followed by PU-31(1407 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 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
Black gram	Rainfed	Low productivity of local varieties	Varietal evaluation	5	LBG 645 LBG 752 PU 31	Yield Kg/ha Yield Kg/ha Yield Kg/	1357 1446 1407	The results indicated that the among the Varieties LBG-752 has recorded highest Yield (1446 Kg/ha) followed by PU-31(1407 Kg/ha).	.

Technology Assessed 11	Production per unit 12	Net Return (Profit) in Rs. / unit 13	BC Ratio 14
1. LBG-752	1446	39232-00	1:2.8
2. PU-31	1407	34780-00	1:2.6
3. LBG-645	1357	35494-00	1:2.7

OFT 6:

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 treatment * yield /ha. * Stem rot % *Cost of treatment * yield /ha.	0.70 650-00 772 kg/ha 0.55 1200-00 810 kg/ha	The result indicated that recommended practice gives better yield (810 kg/ha) compared to farmers practice (772 kg/ha). The stem rot disease was at its minimal in both the treatments.	.

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	772 kg/ha	2132-00	1:1.09
T2: Recommended practice – T.v@ 5kg/ha + spray Hexaconazole @ 2 ml/lt on incidence of LLS.	810 kg/ha	2810-00	1:1.12

OFT 7:

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)	5164	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.
						*Incidence of Jassids/Aphids	3.31/pt 5.53%		
						• Yield kg/ha	1971		
					T2 – Technology assessed – ANGRAU recommended practice	* Cost of Plant protection (Rs./ha)	3364		
						*Incidence of Jassids/Aphids	0.93/pt. 1.04%		
						• Yield kg/ha	2150		

Production per unit (Kg/ha)	Net Return (Profit) in Rs. / ha	BC Ratio
13	14	15
1971	30,693-00	1:1.63
2150	39,779-00	1:1.86

OFT 8:

S. No.	Item		Particulars
1	Title	:	**Evaluation of Bio Intensive Pest Management module (BIPM) for rice pests and diseases.**
2	Problem diagnosed/refinement	:	In Kurnool district, the major pests of rice are Leaf folder, BPH, Stem borer and among diseases Blast is important and causing potential damage to crop, for which farmers are indiscriminately using pesticides, which even remain as residues in final produce, which reduces immunity of consumers on long run.
3	Details of technologies selected for assessment/refinement	:	**Assessment** of Bio-Intensive Pest Management package. T1 – Farmer practice – Indiscriminate use of insecticides and fungicides. T2 – Technology assessed – BIPM o Seed treatment with *Pseudomonas fluorescens* @ 8 g/kg. o Release of *Trichogramma japonicum* @ 1 lakh/ha. o Bird perches @ 10/ha. o Apply *Beauveria bassiana* 10^{13} spores/ha against sucking pests. o Spray Bt @ 1 kg/ha. o Need based application of 5% NSKE.
4	Source of technology	:	ANGRAU
5	Production system	:	Irrigated
6	Thematic Area	:	Integrated Pest Management
7	Performance of the Technology with performance indicators	:	1. Leaf damage % and dead hearts before and 7 days after each spray. 2. Disease incidence as per standard scales. 3. Yield (Q/ha). 4. C:B Ratio
8	Final recommendation for micro level situation	:	With BIPM, pest and diseases could be effectively controlled at lower cost compared to farmers practice in addition to quality produce.
9	Constraints identified and feedback for research	:	The methods are tedious to adopt and slow in action.+
10	Process of farmers participation and their reaction	:	Farmers actively involved in diagnosis, selection of method of application, application, observations and enumeration of results and found satisfaction with the efficacy of BIPM.

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
Rice	Irrigated	Incidence of Leaf folder, BPH, Stem borer and Blast are causing potential damage to crop	Evaluation of Bio Intensive Pest Management module (BIPM) for rice pests and diseases	7	T1 – Farmer practice – Indiscriminate use of insecticides and fungicides. T2 – Technology assessed – BIPM	*Cost of Plant protection *Leaf folder damage *Blast incidence *Cost of Plant protection *Leaf folder damage *Blast incidence	4000/ ha 4.35% 2.8% 2350/ ha 3.95% 2.57%	With BIPM, pest and diseases could be effectively controlled at lower cost compared to farmers practice in addition to quality produce	The method involves physical risk, but gives better control of pests and diseases as most of methods are prophylactically taken up.

Production per unit (Kg/ha)	Net Return (Profit) in Rs. / ha	BC Ratio
13	14	15
6131	17,072-00	1:1.30
6304	20,798-00	1:1.37

Performance of BIPM in Rice for three years:

Year	Leaf folder (%)		Blast (%)		Cost of Plant Protection (Rs/ha)		Yield (kg/ha)		C:B Ratio	
	OFT	FP	OFT	FP	OFT	FP	OFT	FP	OFT	FP
2009-10	3.1	5.5	2.2	3.4	2730	3426	6863	6469	3.4	3.1
2010-11	2.9	6.4	4.6	9.8	1713	2875	5953	5644	2.4	2.18
2011-12	3.95	4.35	2.57	2.80	2350	4000	6304	6131	1.3	1.37
Avg.	**3.31**	**5.41**	**3.12**	**5.33**	**2264**	**3434**	**6373**	**6081**	**2.36**	**2.21**

OFT-9

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 (1022kg/ha) was recorded in T_{-2} (NPK:69-66-23kg/ha) when compared with T_1 (NPK:32-58-0kg/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:32-58-0kg/ha	* Yield Kg/ha	860	The result indicated that highest yield was recorded in T2 over T1	STCR based nutrient application is more effective to get higher yields .
					T_2 NPK:69-66-23kg/ha	* Yield Kg/ha	1022		

Technology Assessed	Production per unit	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14
T_1 -Farmers' practice	860 Kg/ha	15509	3.01
T_2 -STCR	1022 kg/ha	18869	3.16

OFT-10

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 (5124kg/ha) was recorded in T_{-2} (NPK:400-50-80 kg/ha) when compared with T_1 (5101kg/ha) (NPK:55-450-75Kg/ ha) hence it may be continued for 2 more years
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)	5101 99967 5124 78976	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	5101 Kg/ha	1,29,592	2.30
T_2 -STCR	5124 kg/ha	1,51,609	2.92

OFT 11:

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	* Yield /ha.	75.27 ton/ha	Due to high density planting, 14.19% increased yield over farmers practice was recorded.	Due to high density planting, Rs.55,000/ha more income was obtained over farmers practice.
					T2. 1.8 X 1.5m	* Yield /ha.	89.38 ton/ha		

Production per unit (kg/ha)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15
75.27	283075.00	4.0:1
89.38	341544.00	4.2:1

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)	42100 kg/ha 1,34,250/-	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)	28530 kg/ha 1,86,780/-		

Technology Assessed 11	Production per unit 12	Net Return (Profit) in Rs. / unit 13	BC Ratio 14
T1: Tomato	42100 kg/ha	1,34,250/-	1:2.76
T2: Carrot	28530 kg/ha	1,86,780/-	1:2.90

OFT-13

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 9.38% increased milk production by feeding SF heads supplemented ration over farmers method of rice bran feeding. Difference of Rs.3414/- on net profit was observed in T2 over T1.
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	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%	697.3 lt. (T1) 762.8 lt.(T2) 6.3 (T1) 7.1 (T2)	The results indicated that 9.38% increased milk production and 12.69% increase in fat by feeding SF heads supplemented ration over farmers method Difference of Rs.3414/- 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)	697.3 lt	15630	1:3.39
T2: Feeding of SF heads supplemented ration	762.8 lt	19044	1:5.95

OFT-14

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 31.1% animals exhibited heat symptoms and 7.6% 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.	45 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)	14 (31.1%) 426.2 (T1) 458.6 (T2)	The results indicated that 31.1% animals exhibited heat symptoms and 7.6% 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	426.2 l	8826.00	1:3.22
T_2 –Farmers practice + RSMM @ 80g/day	458.6 l	9798.00	1:3.47

Treatment period	1-10 days	11-20 days	21-30days	1-2 months	2 -3 months
Animals responded	1 (7.14%)	7 (50%)	3 (7.5%)	3 (7.5%)	-

OFT-15

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 42.38% increased body weight gain and 22.8% 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 469.9 gm 1433.9 gm 1896.9 gm 1002.2gm 1427.0gm 40.2gm 49.4gm	The results indicated that 42.38% increased body weight gain in Rajasri birds by supplementation of azolla in the feed and 22.8% 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	1002.2gm	150.33	1:1.48
T_2 –Scavenging + Grains + Azolla @50g/day	1427.0gm	189.05	1:1.93

OFT-16

S.No	Item		Particulars
1	Title	:	**Assessment of improved poultry breeds for back yard poultry**
2	Problem diagnosed/refinement	:	Low income through local backyard poultry birds
3	Details of technologies selected for assessment/refinement	:	T1 – local birds T2 – Grama priya T3 - Rajashree
4	Source of technology	:	ANGRAU & PDP, Rajendranagar, Hyderabad.
5	Production system	:	Poultry birds
6	Thematic Area	:	Poultry management
7	Performance of the Technology with performance indicators	:	✓ Weight ✓ Mortality Rate ✓ Egg production
8	Final recommendation for micro level situation	:	The results awaited
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	-	Low income through local backyard poultry birds	Assessment of improved poultry breeds for back yard poultry	20	T1 – Local birds T2 –Grama Priya T3- Rajashree T1- Local birds T2 –Grama Priya T3- Rajashree T1- Local birds T2-Grama Priya T3- Rajashree	Weight 16 weeks (gm) Motality rate (%) Egg production	500 -550 900-950 850-900 - 7 9 Results awaited	Trial is in progress	-

Technology Assessed	Production /unit	Net return (profit) in Rs./unit	BC Ratio
11	12	13	14
T1 – Poultry birds T2 –Grama Priya T3- Rajashree		Trial is in progress	

OFT - 1

Korra before Bengalgram

Greengram before Bengalgram

OFT - 2

Field visit to OFT on Groundnut varieties

OFT - 3

OFT on Bengalgram varieties

OFT - 4

Field visit to OFT on Direct seeding in Rice

OFT - 5

Performance of Blackgram varities in rainfed situation

OFT -6

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

OFT - 7

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

OFT - 8

OFT on Bio Intensive pest management in Rice

OFT - 9

OFT on Nutrient management in Sunflower based on STCR

OFT - 10

OFT on Nutrient management in Chillis based on STCR

OFT - 11

OFT on spacing in Banana

OFT - 12

OFT on Introduction of Carrot as alternate crop

OFT - 13

Feeding o SF heads supplemented ration to milch buffalo

OFT - 14

Effect of RSMM on reproduction and production performance in milch buffaloes

OFT - 15

Effect of azolla on growth rate in Rajasri birds

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	Groundnut	Varietal Evaluation	Varietal Demonstration in Groundnut with K6, K9 & ICGV 91114	Demonstrations, Exposure visits, Field Days, Seed village Concept.	35	3400	18000
2	Bengalgram	Varietal Evaluation	Varietal Demonstration in Bengalgram with Jaki-9218	Demonstrations, Exposure visits, Field Days Seed village Concept	22	2700	16000
3	Cotton	Integrated Crop management	Arboreum Cotton (whole package) Varieties i.e, Srinandi & Yaganti	Demonstrations, Exposure visits, Field Days, Seed village Concept	5	270	650
4	Paddy	Resource conservation	Direct Seeding	Demonstrations, Exposure visits, and Field Days	10	480	950
5	Paddy	Resource conservation	Zero tillage	Demonstrations, Exposure visits, and Field Days	8	225	730
	Paddy	Nutrient management	STCR	Demonstrations, Exposure visits, and Field Days	15	496	1055
6	Bt Cotton	Nutrient management	Foliar nutrition	Demonstrations, Exposure visits, and Field Days	8	650	1650
7	Bt Cotton	ICM	Spacing	Demonstrations, Exposure visits, and Field Days	7	260	1350
8	Groundnut	IPM	IPM in Groundnut	• Trainings • Field visits • Mobile SMS	10	160	750

9	Castor	Pest & Disease Mgmt.	Management of Capsule borer and Botrytis in Castor	• Trainings • Field visit • Largescale demonstrations	8	134	220
10	Chillis	IPM	IPM in Chillis	• Trainings • Field visits Largescale demonstrations	8	140	236
11	Onion	IPM	IPM in Onion	• Trainings • Field visits • Demonstrations	5	75	116
12	Bengalgram	IDM	Management of wilt and dry rootrot in Bengalgram	• Trainings • Field visits • Mobile SMS	12	340	1240
13	Mango	INM	INM in Mango	• Widespread demonstrations	5	30	40
14	Chillis	INM	Soil test based fertilizer recommendation in Chillis	• Trainings, exposure field visit to successful farmers. * Adarsha rythus	4	84	155
15	Turmeric	Integrated Disease management	Rhizome rot management in Turmeric	• Farmers field visit to practicing farmers. • Trainings	-	-	-
16	Jasmine	INM	Micronutrient management in Jasmine	• Training and field visit	-	-	-

Details of FLDs implemented during 2011-12 (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-2011	12	12	5	25	30	
2	Bengalgram	ICM	Varietal	K-2011	12	12	6	24	30	
			Other Demonstrations							
1	Rice	Weed management	IWM	K-2011	4	4	3	7	10	
2	Rice	Varietal	BPT 2270	K 2011	4	4	2	8	10	
3	Bt.Cotton	Nutrient management	Foliar nutrition	K-2010	4	4	3	7	10	
4	Castor	Hybrids performance	PCH-11	K-2011	4	4	6	4	10	
5	Arboreum cotton	Varietal	Yaganti	K - 2011	4	4	5	5	10	
6	Maize	Resource conservation	Zero tillage	Ri-2011	4	4	3	7	10	
7	Rice	Nutrient Management	STCR	K–2011	4	4	4	6	10	
8	B.t. Cotton	Integrated Nutrient Management	INM	K-2011	4	4	3	7	10	
9	Rice	Micronutrient Management	Foliar application of Zinc 0.2%	K-2011	4	4	3	7	10	
10	Rice	Reclamation of sodic soils	Gypsum as per soil test	K-2011	4	4	4	6	10	
11	Bengalgram	Nutrient Management	STCR	Rabi-11	4	4	3	7	10	
12	Groundnut	IPM	IPM in Groundnut	K –11	4	4	3	7	10	
13	Castor	Pest & Disease Mgmt.	Management of Capsule borer and Botrytis in Castor	K – 11	4	4	3	7	10	
14	Chillis	IPM	IPM in Chillis	K-11	4	4	4	6	10	
15	Onion	IPM	IPM in Onion	R-11	4	4	2	8	10	

16	Bengalgram	IDM	Management of wilt and dry root rot in Bengalgram	R-11	4	4	4	6	10
17	Mango	INM	INM in Mango	K-11	4	4	-	15	15
18	Chillis	INM	Soil test based fertilizer recommendation in Chillis	K-11	4	4	2	8	10
19	Turmeric	Integrated Disease management	Rhizome rot management in Turmeric	K-11	4	4	3	7	10
20	Jasmine	INM	Micronutrient management in Jasmine	K-11	2	2	01	09	10
21	Tomato	Protected Nursery Raising	Raising of vegetable nursery in pro trays	R-11	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	K-2011	Irrigated	Black soil	L	High	High	Paddy	2nd to 3rd week of August.	Last week of Decm.		
Rice	K–2011	Irrigated	Black soil	L	Med	High	Paddy	2nd FN of August	1st FN of Jan		
Bt.Cotton	K-2011	Irrigated	Black soil	L	Med	High	Maize	2nd to 3rd week of August.	Last week		

									of Jan.
Castor	K-2011	Irrigated	Black soil	L	Med	High	Jowar	1st week of Jan.	1st week of May
Arboreum cotton	K – 2011	I.D.	Redsoil	L	Low	Med	Cotton	1st Wk of April	Last week of Nov.
Maize	R-2011	Irrigated	Black soil	L	High	High	Paddy	1st wk of Jan	Last wk of April
Paddy	Kharif - 11	Irrigated	Black soil	L	H	M to H	Paddy	2nd to 3rd week of August.	Last week of December.
Bt. Cotton	Kharif - 11	ID	Black soil	L	H	M to H	Sunflower	2nd-3rd week of July	last week of Dec.
Paddy	Kharif - 11	Irrigated	Black soil	L	H	M to H	Paddy	2nd to 3rd week of August.	Last week of December.
Paddy	Kharif - 11	Irrigated	Black soil	L	H	M to H	Paddy	2nd to 3rd week of August.	Lastweek of December.
Bengalgram	Rabi11	Rainfed	Black	L	H	M to H	Bengalgram	3nd week of Oct.	3rd week of Jan..
G.nut	K-2011	Rainfed	Redsoil	L	M	M	G.nut	Last wk of July	Last wk of Oct.
Castor	K-2011	Rainfed	Black	Medium	Medium	High	Jowar	1st week of August.	4th week of Jan
Chillis	K-2011	ID	Black	Low	High	High	Onion	1st week of August.	4th week of March
Onion	R-2011	ID	Red	Low	Med	Med	Chillis	1st week of Nov	1st week of March -
Bengalgram	R-2011	Rainfed	Black	Low	Med	High	Jowar	2nd week of Oct	3rd week of Jan
Mango	K-11	ID	Red	Low	Low	Medium	-	-	-
Chillis	K-11	ID	Red/Black	Medium	Medium	High	Maize	1st week of Aug.	4th week of March.
Turmeric	K-11	ID	Red/Black	Low	High	High	Turmeric	3rd week of June	4th week of

Jasmine	K-11	ID	Red	Low	Medium	Medium	-	-	March -
Tomato	R-11	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	LRG-41	15	6.0	1445	1187	1298	1063	22.1		
			PRG 158	15	6.0	1062	912	965	780	23.7		
2	Bengalgram	Component	JAKI 9218 Rainfed	15	6.0	1690	1437	1584	1304	21.4	50.4 pods/plant	45.6 pods/plant
			JAKI 9218 I.D.	15	6.0	2190	1900	2031	1632	24.4	54.8 pods/plant	48.3 pods/plant
Other demonstrations												
1.	Rice	Weedmanagent	BPT-5204	10	4	7537	6843	7195	6936	3.7	82.5(WCE) 4450(Cost on weeding)	68.66 Weeds/m2 5400-00
2	Rice	Varietal	BPT 2270	10	4	8062	7416	7775	6911	12.5		
3	Bt. Cotton	Foliar Nutrition	NCS-145	10	4	2190	1715	1905	1776	7.2	57.8 Bolls/plant	45.6 Bolls/p
4	Castor	Hybrid evaluation	PCH 111	10	4	1090	892	993	787	26.1	5.66 spikes (54.9 Capsules)	4.56 spikes (43.8 Capsules)
5	Arboreum cotton	Varietal	Yaganti	10	4	1837	1595	1687	1472	22.9		
6	Maize	Resource Conservation	Zero Tillage	10	4	7000	6125	6590	6424	2.5		
7	Paddy	STCR	BPT-5204	10	4	78.85	76.22	77.60	77.41	-	The cost on chemical fertilizers and yield	The cost on chemical fertilizers and yield

8	Bt. Cotton	INM	Mallika-Bt	10	4	25.35	23.15	24.11	22.60	6.7	C.P and yield	C.P and yield
9	Paddy	Zinc management	BPT-5204	10	4	68.94	65.39	67.49	62.70	7.64	C.P and yield	C.P and yield
10	Paddy	Reclamation of sodic soils	BPT-5204	10	4	68.80	56.44	63.71	54.26	17.41	pH and Yield	pH and Yield
11	Bengalgram	STCR	JG-11	10	4	16.55	14.63	15.67	15.39	1.83	The cost on chemical fertilizers and yield	The cost on chemical fertilizers and yield
12	Groundnut	IPM in Groundnut	K-6	10	4	8.60	6.40	7.20	6.88	4.65	Cost of PP 825/-ha	1375/-ha
13	Castor	Management of Capsule borer and Botrytis in Castor	Haritha	10	4	14.50	7.50	11.38	9.30	22.36	Cost of PP 2000/-ha	4125/-ha
14	Chillis	IPM in Chillis	LCA 334	10	4	62.50	51.50	56.43	52.75	6.97	Cost of PP 9150/ha	14500/-/ha
15	Onion	IPM in Onion	ALR	10	4	220.0	270.0	240.13	225.5	6.48	Cost of PP 7375/-ha	10500/-/ha
16	Bengalgram	Management of wilt and dry rootrot in Bengalgram	JG 11	10	4	18.00	14.50	16.06	15.10	6.35	Cost of PP 2575/ha	2325/-/ha
17	Mango	INM in Mango	Baneshan	10	4	65.2	48.2	61.7	48.6	26.9	-	-
18	Chillis	Soil test based fertilizer recommendation in Chillis	LCA 334	10	4	54.60	48.30	49.25	42.50	15.9	Fert. Cost in demo reduced by Rs.8750/- ha	-
19	Turmeric	Rhizome rot management in Turmeric	Mydukur	10	4	70.45	66.20	67.05	61.33	9.32	Rhizome rot incidence was low .	-
20	Jasmine	Micronutrient management in Jasmine		10	2	45.30	40.65	42.20	39.87	5.84	-	-
21	Tomato	Raising of vegetable nursery in pro trays	Siri 9005	5	2	685.0	525.0	523.0	413.0	26.6	No. of pickings 18	No. of pickings 14

22	Ram Lambs	Feeding of concrete feed	Nellore brown	10	100 lambs	24.3	20.8	22.59	20.6	41.8	Body weight gain Demo.- 8.31	5.86
23	Calves	Feeding of calf starter	Graded murrah	10	20	76.1	54.0	65.05	57.6	19.82	34.15	28.5
24	Pre-weaned lambs	Supplementation of minerals through salt licks	Nellore Brown	10	100 lambs	14.3	10.1	12.22	11.35	17.18	7.16	6.11
25	Fodder	Haylage making with jowar straw and feeding to buffaloes Milk production (90 days)	Graded murrah	10	10	433.9	322.5	378.2	353.8	6.9	-	-

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	14575-00	13625-00	33775-00	27300-00	19200-00	13675-00	1:2.31 / 2.0
	14575-00	13625-00	45430-00	37205-00	30855-00	23580-00	1:3.1/2.7
2	16900-00	16114-00	55440-00	45640-00	38540-00	29526-00	1:3.2/2.8
	17400-00	17114-00	71085-00	57120-00	53685-00	40006-00	1:4.0/3.2
	Other Demonstrations						
1	45925-00	46875-00	81543-00	78608-00	35618-00	31733-00	1:1.77/1.67
2	44675-00	45362-00	88116-00	78324-00	43441-00	32962-00	1:1.97/1.72
3	23097-00	21842-00	66675-00	62160-00	43578-00	40318-00	1:2.88/2.84
4	15000-00	15000-00	34755-00	27545-00	19755-00	12545-00	1:2.10/1.83

5	10875-00	10250-00	67480-00	58880-00	56605-00	48630-00	1:6.2/5.7
6	20625-00	24250-00	62605-00	61028-00	41980-00	36778-00	1:3.0/2.5
7	37862-00	45048-00	87923-00	87710-00	50061-00	42662-00	2.32/1.95
8	33224-00	39761-00	84375-00	79104-00	51151-00	39343-00	2.54/1.99
9	38604-00	38204-00	76461-00	71033-00	37857-00	32929-00	1.98/1.86
10	39880-00	39684-00	72181-00	61480-00	32301-00	21796-00	1.81/1.55
11	15017-00	18126-00	54842-00	53855-00	39825-00	35729-00	3.65/2.97
12	20825-00	21375-00	23040-00	22016-00	2215-00	641-00	1:1.10 /1.03
13	16688-00	18813-00	45500-00	37200-00	28813-00	18388-00	1:2.73/1:1.98
14	97650-00	111800-00	236985-00	221550-00	139335-00	109750-00	1:2.43/1:1.98
15	74750-00	77878-00	96050-00	90200-00	21300-00	12325-00	1:1.28/1:1.16
16	19325-00	19075-00	51385-00	48308-00	32060-00	29233-00	1:2.66/1:2.53
17	48200-00	51100-00	123400-00	97200-00	75200-00	46100-00	1:2.56/1:1.9
18	112500-00	128570-00	246250-00	212500-00	133750-00	83930-00	1:2.1/1:1.6
19	212500-00	225000-00	201150-0	183975-00	-11350-00	-41025-00	1:0.9/1:0.8
20	138723-00	140434-00	379800-00	358830-00	241077-00	218396-00	1:2.7/1:2.5
21	88000-00	89325-00	261500-00	206280-00	173500-00	120955-00	1:2.9/1:2.3
22	1125-00	750-00	3420-00	2370-00	2295-00	1620-00	1:3.04/1:3.16
23	700-00	600-00	1432-00	1222-00	732-00	622-00	1:2.04/1:2.03
24	270-00	225-00	1496-00	900-00	1226-00	675-00	1:5.54/1:4.0
25	-	-	-	-	-	-	-

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-2011	ICM on LRG-41	Protective Irrigation	1298	1063	22.1
		ICM on PRG 158	Rainfed	965	780	23.7
Bengalgram	Rabi 11	ICM on Jaki 9218	Rianfed	1584	1304	21.4
		ICM on Jaki 9218	I.D.	2031	1632	24.4
Other demonstrations						
Rice	K-2011	Weed management	Irrigated	7195	6936	3.5
Rice	K – 2011	Varietal	Irrigated	7775	6911	12.5
B.t. Cotton	K-2011	Foliar Nutrition	Irrigated	1905	1776	7.2
Castor	K-2011	Hybrid Evaluation	Rainfed	1993	787	26.1
Arboreum cotton	K-2011	Varietal	Irrigated	1687	1472	22.9
Maize	R-2011	Resource Conservation	Irrigated	6590	6424	2.5
Paddy	Kharif-11	Nutrient Management based on STCR	Irrigated	77.60	77.41	Cost of production reduced towards chemical fertilizers is Rs. 7186/ha,
Bt.Cotton	Kharif-11	Integrated Nutrient Management	ID	24.11	22.60	6.7
Paddy	Kharif-11	Zinc management	Irrigated	67.49	62.70	7.64
Paddy	Kharif-11	Reclamation of sodic soils	Irrigated	63.71	54.26	17.41
Bengalgram	Rabi-11-12	Nutrient Management based on STCR	Rainfed	15.67	15.39	Cost of production reduced towards chemical fertilizers is Rs. 3109/ha,
G.Nut	K-11	IPM on K-6	Rainfed	7.20	6.88	4.65% increased yield with a saving of Rs. 550/-ha on cost of PP.

Castor	K-11	Mgmt of botrytis and capsule borer	Rainfed	11.38	9.30	22.36% increased yield with a saving of Rs.2125/-ha on cost of PP
Chillis	K-11	IPM in Chillis	ID	56.43	52.75	6.97% increased yield with a saving of Rs. 5350/- on cost of PP.
Onion	R-11	IPM in Onion	ID	240.13	225.5	6.48% increased yield with a saving of Rs. 3125/- ha on cost of PP
Bengalgram	R-11	Mgmt. of wilt and dry root rot	Rainfed	16.06	15.10	6.37% increased yield with additional cost of Rs.250/- ha on cost of PP.
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.
Ram Lambs		Feeding of concrete feed		22.59	20.6	41.8
Calves		Feeding of calf starter		65.05	57.6	19.82
Pre- weaned lambs		Supplementation of minerals through salt licks		12.22	11.35	17.18
Fodder		Haylage making with jowar straw and feeding to buffaloes Milk production (90 days)		378.2	353.8	6.9

REDGRAM:

The results indicated the redgram variety PRG-158 with component technologies (Improved variety, seed treatment, pre-emergence application of pendimethalin against weeds, Siol test based fertilizer application, Sulphur @20 kg/ha and IPM measures against Helicoverpa and Maruca) has recorded 23.7% increased yield over local check in under rainfed situation with additional net returns of Rs.6475-00 /ha and the variety LRG-41 has recorded 22.1% increased yield over local check with protective irrigation and additional net returns of Rs.8225 /ha was obtained.

BENGALGRAM:

In Bengalgram variety JAKI-9218 with component 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) has recorded 21.4 and 24.4 per cent increased yield in medium black soils under rainfed situation and with protective irrigation respectively.

Economics of demonstration and local check plots indicated that the with cultivation of JAKI 9218 with improved technologies, additional returns of Rs 9800/-and Rs.13965/ha were obtained with BC ratio of 1:3.2/2.8 and 1:4.0/3.2 under rain fed and with protective irrigation respectively .

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 82.50 per cent weed control efficiency , saving of Rs 950/- ha on manual weeding and additional returns of Rs 3884-/- per ha was obtained

2. Demonstration on Paddy Variety BPT-2270:

During kharif-11 five demonstrations was organized on Paddy Variety BPT-2270 at Mukkamalla, Yagatipapalli and peddabodanam villages . The result indicated that paddy variety BPT-2270 was recorded 12.5% increased yield over local check with additional returns of Rs 9789/ha was obtained.

3.Foliar nutrition in Bt cotton

During khair-11 FLDs were taken up at Banumukkala village of Banaganapalle mandal. Foliar nutrition with 19:19:19, multi “K” and boron was taken up at 75, 85, 95 and 105 DAS. The results clearly indicated that the higher boll retention and also reducing the boll shedding and increased the yield by 7.2 percent.

4. Demonstration on Castor Hybrid PCH-111

During kharif-11 five demonstrations were organized with Castor Hybrid PCH-222 at Amadala village. The results indicated that the PCH-111 hybrid has recorded 26.1% 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.

5.Demonstration on Arboreum cotton Var Yaganti: During kharif-11 five demonstrations on Arboreum cotton variety "Yaganti" was organized at Thammarajupalle village. The result indicated that Yaganti variety ICM was recorded 22.9% increased yield over local check under irrigated conditions.

6.Demonstration on Zero tillage maize : During Rabi, 2011 10 demonstrations of 0.4 ha each were organized on Zero tillage maize after rice crop in Bhanumukkala village of Banaganapalle mandal and Motkur village of Nandyal mandal. The result indicated that there is a saving of Rs. 5202/- per ha because of saving on preparatory cultivation and timely sowing compared to farmers practice.

7.Nutrient management in rice based on STCR equation: The results indicated that the average grain yield of paddy under STCR was higher (7760Kg/ha) than the grain yield produced under controlled practice (7741Kg/ha).Gross and net income were high in demonstration plots (Rs.87923 ha^{-1} and Rs. 50061 ha^{-1},respectively) as compared to controlled practice (Rs.87710 ha^{-1} and Rs.42662 ha^{-1},respectively). It was also observed that an amount of Rs.7399/ha was realized as additional income due to low production costs in demonstrations. Benefit-cost ratio was also high in demonstrations (1:2.32) as compared to check (1:1.95) due to low cost production.

8.INM in Bt. Cotton: Ten demonstrations were organized on INM at Dornipadu village of Dornipadu mandal . The average yield of Bt.Cotton under INM approach was higher (2411Kg/ha) than yield produced under farmer's practice(2260Kg/ha). It was also observed that an amount of Rs.11808/ha was realized as additional income due to low cost of production and yield increments in demonstrations. Benefit-cost ratio was high in INM demonstrations(1:2.54) as compared to farmers practice (1:1.99) due to low cost of production and higher gross income.

9.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.

10.Reclamation of sodic soils: The results revealed that the average grain yield of paddy under reclamation was higher (6371Kg/ha) than the grain yield produced under controlled practice (5426Kg/ha).Gross and net income were high in demonstration plots (Rs.72181 ha^{-1} and Rs.32301 ha^{-1},respectively) as compared to controlled practice (Rs.61480 ha^{-1} and Rs.21796 ha^{-1}, respectively).It was also observed that an amount of Rs.10505/ha was realized as additional income due to low cost of production and yield increments (17.41%) in demonstrations. Benefit-cost ratio was also high in demonstrations (1:1.81) as compared to check (1:1.55) .

11.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 (1567Kg/ha) as compared to farmer's practice (1539Kg/ha) . An amount of Rs. 4096/ha was realized as additional income due to low production costs and

yield increments in demonstrations. Benefit-cost ratio was high in demonstrations (1:3.65) as compared to farmers practice (1:2.97) due to low cost of Production and higher gross income.

12. IPM in G.nut: The demo was conducted at Yerragudi village of Banaganapalle mandal. The results indicated that there is no significant difference between the yields of farmers practice (688 kg/ha) and demonstration (720 kg/ha), mainly due to drought prevailed during pod formation and pod filling stages of the crop. The incidence of leaf folder and jassids in FLD were (2.9% and 3.5/plant) lower compared to farmers practice (5.24 % and 6.08/plant).

13.Management of Capsule borer and botrytis in Castor : The demo was conducted at Yagantipalle village of Banaganapalle mandal. The results indicated that in Demo there is 22.31% increased yield in Castor (1138 kg/ha) compared to farmers practice (930 kg/ha), which is mainly attributed to management of Botrytis and Capsule borer in time. The incidence of Capsule borer was reduced by 42.5% in Demo (1.26 larvae/plant) over farmers practice (2.9 larvae/plant) and Botrytis disease was reduced by 54.43% in Demo (13.1%) over control (5.97%).

14.IPM in Chillis : The Demo was conducted at K. Sunkesula village of Owk mandal. The yields in IPM (5643 kg/ha) demonstrations were 6.97% more compared to farmers practice (5275 kg/ha), in addition to saving of Rs. 5350/- per ha. on cost of plant protection.

15.IPM in Onion : The demo was conducted at Emboi village of Bethamcherla mandal. The results indicated that in demo there is 6.48% increased yield with a saving of Rs.3125/- per ha on cost of Plant Protection.

16.Management of Wilt and Dry root rot in Bengalgram : The demo was conducted at Kalugotla village of Koilakuntla mandal. The demo gave 6.35% higher yield (1606 kg/ha) than farmers practice (1510 kg/ha). Wilt incidence in demo (5.1%) was 15.7% less than farmers practice (5.9%), where as Dry root rot incidence was reduced by 34% in demo (4.1%) compared to farmers practice (5.5%), with an additional cost of Rs.250/- per ha on Plant Protection.

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 JAKI-9218 • 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 7186/- per ha) than farmer practice**.** • Nutrient use efficiency (kg grain- /kg^{-1} nutrient) was high in STCR (29.5) as compared to farmers practice (17.28) .
4	**INM in Bt. Cotton** • Soil test based nutrient management helped in fertilizer cost reduction (Rs.6537 ha^{-1}) in demonstrations. • Foliar application of Secondary nutrient(Mg) and micronutrients like zinc and boron gave higher yield in demonstrations (24.11 q ha^{-1})than farmers practice (22.60 q ha^{-1})
5	**Zinc Management in Rice** • Foliar application of chelated zinc performed equally as basal application. • Zinc deficiency correction gave higher yield than control

6 **Reclamation of Sodic Soils**

- Application of gypsum in soil where pH is more than 8.7 have more yield advantage(17.41%) than controlled plots.
- pH of soil is lower in demonstrations than control after reclamation (0.35 to 0.4 is reduced over the initial soil pH).

7 **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 1196/- 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 82.5%
- Weed density was less in demo plot up to 40DAT

Due to less crop weed competition 3.5% yield increase was observed.

3 **Foliar Nutrition in Bt. Cotton:**

- Higher boll retention was observed in demonstration plot with spraying of 19:19:19 @ 1.5% at 75 & 85 DAS multi 'K' @ 1.5% and Boron 0.1% at 95 & 105 DAS.
- Additional returns of Rs.3260-00 was obtained.

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.

7 **Reclamation of Alkaline Soils**

- Reclamation of alkaline soils will improves soil physical properties and productivity.

8 **IPM in Groundnut**

- With seed treatment for collar rot and sucking pests, higher seed rates can be avoided as the plant stand will be good.
- Spraying of Neem oil immediately after observing adult moth activity in the field will reduce the incidence of Helicoverpa.
- Border crop of Jowar will increase the predator activity in the field.

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 in chillis**

- Seed treatment with TSOP and Imidacloprid 70 WS, will reduce the chance of virus infection upto 100 days of cropping period.
- Use of Fipronil granules in the nursery will give protection to chilli crop from thrips upto 30 days of transplantation.

11 **IPM in onion**

- Use of Yellow sticky traps in Onion will reduce the incidence of Thrips.
- Use of sticker like Sandovit alongwith spray solution will increase the efficacy of chemical sprayed.

12 **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.

Extension and Training activities under FLD

S. No.	Activity	No. of activities organized	Date	Number of participants	Remarks
1	Field days	2	21-12-11 8-1-2012 18-1-2012	126 75 86	
2	Farmers Training	5	22-6-2011 18-7-2011 14-9-2011 8-10-2011 7-12-2011.	35 42 30 28 32	
3	Media coverage	1			
4	Training for extension functionaries	1	21-12-2011		
5.	Literature	1			

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

1.Demo on Foliar nutrition in Bt. cotton

2.Demo on Zero tillage Maize

3.Demo on performance of mungari cotton variety – Yaganti.

4.Demo on evaluation of Castor hybrid PCH 111

5.Demo on performance of Rice variety BPT 2270

6.Demo on weed management in rice

7.Demo on STCR based fertilizer mgmt. in Rice

8.Demo on INM in B.t. Cotton

9.Demo on Zinc management in rice

10. Demo on STCR based fertilizer mgmt. in Bengalgram

12.Field visit to Demo On IPM in Groundnut

13.Field visit to demo plot on Mgmt of botrytis and capsule borer in Castor

14.Demo on IPM in Chillis

15.Demo on IPM in Onion

16.Demo On Bio Priming in Bengalgram

17. Demo on INM in Mango

18.Demo on STBFR in Chillis

19. Rhizome rot management in Turmeric

20. Micronutrient management in Jasmine

21.Demo on nursery raising in Protrays

22.Feeding of calf starter to buffalo calves

23.Supplementation of minerals to lambs through salt licks

24.Feeding of concentrates to Ram lambs

25.Demo on Reclamation of sodic soils in Rice

26. Demo on Bhendi cutter for reducing drudgery

27.Demo on wheel hoes for reducing drudgery

(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		
Wheel hoes	Jowar	5	2.0	Labour required/ acre/day	3	8	62.5	Rs. 400/day saving.
				Cost of weeding/ acre/day (Rs.)	240	640	62.5	
Bhendi Cutter	Bhendi	10	4.0	Qty. harvested in kgs/day/person	61.6	52.4	17.5	Rs. 140/day saving.
				Cost on Labour /day	210	350	40%	

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

(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	34.15	28.5	19.8	
Lambs	Nellore Brown	10	100	Body weight gain/90days	7.16	6.11	17.18	
Ram lambs	Nellore Brown	10	100	Body weight gain/90days	8.31	5.86	41.8	
Fodder	Haylage making	10	10	Milk yield/90days	378.2	353.8	6.9	

* 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	18	-	18	7	-	7	25	-	25
Cropping Systems	1	14	-	14	6	5	11	20	5	25
Seed production	1	30	-	30	8	-	8	38	-	38
Integrated Crop Management	9	244	-	244	124	-	124	368	-	368
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	20	-	20	5	-	5	25	-	25
Management of Problematic soils	1	20	-	20	4	-	4	24	-	24
Nutrient Use Efficiency	1	20	-	20	5	-	5	25	-	25
Soil and Water Testing	3	106	-	106	22	-	22	128	-	128
IV Livestock Production and Management										
Poultry Management	1	-	13	13	-	7	7	-	20	20

V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	1	-	13	13	-	4	4	-	17	17
Value addition	1	-	26	26	-	12	12	-	38	38
Location specific drudgery reduction technologies	1	-	34	34	-	5	5	-	39	39
VII Plant Protection										
Integrated Pest Management	2	55	-	55	16	-	16	71	-	71
Bio-control of pests and diseases	5	112	-	112	29	-	29	141	-	141
TOTAL	**34**	**807**	**94**	**901**	**263**	**36**	**299**	**1070**	**130**	**1200**
(B) RURAL YOUTH										
Biopesticides production	1	23	-	23	2	-	2	25	-	25
Production of organic inputs	1	21	-	21	4	-	4	25	-	25
Microirrigation	1	18	-	18	8	-	8	26	-	26
Dairying	1	15	-	15	6	-	6	21	-	21
Sheep and goat rearing	1	25	-	25	3	-	3	28	-	28
Hand made paperbag making	1	8	17	25	6	8	14	14	25	39
TOTAL	**6**	**110**	**17**	**127**	**29**	**8**	**37**	**139**	**25**	**164**
(C) Extension Personnel										
Soil and Water testing	2	45	-	45	-	-	-	45	-	45
Livestock feed and fodder production	1	7	1	8	-	-	-	7	1	8
Women and Child care	1	-	19	19	-	6	6	-	25	25
Production and use of organic inputs	2	95	20	115	-	-	-	95	20	115
TOTAL	**6**	**147**	**40**	**187**		**6**	**6**	**147**	**46**	**193**
Grand Total	**46**	**1064**	**151**	**1215**	**292**	**50**	**342**	**1356**	**201**	**1557**

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	1	16	-	16	9	-	9	25	-	25
Resource Conservation Technologies	1	35	6	41	8	-	8	43	6	49
Integrated Crop Management	5	77	50	127	68	-	68	145	50	195
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	5	195	-	195	24	-	24	219	-	219
IV Livestock Production and Management										
Dairy Management	2	35	-	35	12	-	12	47	-	47
Poultry Management	3	11	19	30	-	53	53	11	72	83
Disease Management	1	17	-	17	3	-	3	20	-	20
Feed management	2	28	-	28	7	-	7	35	-	35

V Home Science/Women empowerment										
Design and development of low/minimum cost diet	1	-	15	15	-	11	11	-	26	26
Value addition	4	-	72	72	-	48	48	-	120	120
Income generation activities for empowerment of rural Women										
Women and child care	1	-	21	21	-	8	8	-	29	29
VII Plant Protection										
Integrated Pest Management	2	30	-	30	14	-	14	44	-	44
Bio-control of pests and diseases	2	37	-	37	21	-	21	58	-	58
TOTAL	**36**	**610**	**183**	**793**	**202**	**120**	**322**	**812**	**303**	**1115**
(B) RURAL YOUTH										
Tailoring and Stitching	2	-	33	33	-	22	22	-	55	55
Fabric paining	1	-	18	18	-	7	7	-	25	25
TOTAL	**3**		**51**	**51**	**-**	**29**	**29**		**80**	**80**
(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
TOTAL	**3**	**94**	**21**	**115**	**35**	**4**	**39**	**129**	**25**	**154**
Grand Total	**42**	**704**	**255**	**959**	**237**	**153**	**390**	**941**	**408**	**1349**

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	2	34	-	34	16	-	16	50	-	50
Resource Conservation Technologies	1	35	6	41	8	-	8	49	-	49
Cropping Systems	1	14	-	14	6	5	11	20	5	25
Seed production	1	30	-	30	8	-	8	38	-	38
Integrated Crop Management	16	321	50	371	192	-	192	513	50	563
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	20	-	20	5	-	5	25	-	25
Management of Problematic soils	1	20	-	20	4	-	4	24	-	24
Nutrient Use Efficiency	1	20	-	20	5	-	5	25	-	25
Soil and Water Testing	8	301	-	301	46	-	46	347	-	347

IV Livestock Production and Management										
Dairy Management	2	35	-	35	12	-	12	47	-	47
Poultry Management	4	29	32	61	8	60	68	37	92	129
Disease Management	1	17	-	17	3	-	3	20	-	20
Feed management	2	28	-	28	7	-	7	35	-	35
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	1	-	15	15	-	11	11	-	26	26
Design and development of low/minimum cost diet	1	-	13	13	-	4	4	-	17	17
Value addition	5	-	98	98	-	60	60	-	158	158
Location specific drudgery reduction technologies	2	-	34	34	-	5	5	-	39	39
Women and child care	1	-	21	21	-	8	8	-	29	29
VII Plant Protection										
Integrated Pest Management	4	85	-	85	30	-	30	115	-	115
Bio-control of pests and diseases	9	149	-	149	50	-	50	199	-	199
TOTAL	**70**	**1435**	**277**	**1712**	**473**	**156**	**629**	**1908**	**433**	**2341**
(B) RURAL YOUTH										
Bio-pesticides production	1	23	-	23	2	-	2	25	-	25
Production of organic inputs	1	21	-	21	4	-	4	25	-	25
Dairying	1	15	-	15	6	-	6	21	-	21
Sheep and goat rearing	1	25	-	25	3	-	3	28	-	28
Tailoring and Stitching	2	-	33	33	-	22	22	-	55	55
Rural Crafts-Handmade paperbag making	2	8	17	25	6	8	14	14	25	39
Fabric painting	1	-	18	18	-	7	7	-	25	25
TOTAL	**9**	**92**	**68**	**160**	**21**	**37**	**58**	**113**	**105**	**218**

(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	2	45	-	45	-	-	-	45	-	45
Livestock feed and fodder production	1	7	1	8	-	-	-	7	1	8
Women and Child care	1	-	19	19	-	6	6	-	25	25
Production and use of organic inputs	2	95	20	115	-	-	-	95	20	115
TOTAL	**9**	**241**	**61**	**302**	**35**	**10**	**45**	**276**	**71**	**347**
Grand total	**88**	**1768**	**406**	**2174**	**529**	**203**	**732**	**2297**	**609**	**2906**

Training Programmes

Training on SRI cultivation in Rice

Training on Drum seeder in Rice

Training on productivity enhancement in Pulses

Training on weed management in field crops

Training Programmes

Training on Vermicomposting

Training on Soil testing to high school students

Training on NADEP Composting to AOs & ADAs

Training on STCR based fertilizer use in Rice

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 cultivation of medicinal plants

Training on alternate vegetable crops in Rabi

Training Programmes

Training on care and management of milch animals

Training on silage and haylage making

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 farm women on drudgery reducing implements

Training programme on hand made paper bag preparation

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
10.6.11	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
28.7.11	PFM	Production technologies in rice with special reference to direct seeding with drum seeder	-do-	ICM	1	On	28	-	28	15	-	15	43	-	43
30.8.2011	PFM	Low cost production technologies in rainfed oil seeds.	-do-	ICM	1	OFF	27	-	27	8	-	8	35	-	35
7.9.2011	PFM	Integrated weed management in practices in rainfed crops	-do-	Weed management	1	On	18	-	18	7	-	7	25	-	25
24-9-2011	PFM	Critical technologies for enhancing yield in rabi pulses	-do-	Integrated crop management	1	On	18	-	18	3	-	3	21	-	21
4.12-2011	PFM	Production technologies in Redgram and Bengalgram	-do-	Weed management	1	Off	16	-	16	9	-	9	25	-	25
8.12.11	PFM	Seed production technology and importance of seed village concepts	-do-	Seed production	1	On	30	-	30	8	-	8	38	-	38
17-12-2011	PFM	Rice based cropping systems with reference to Zero tillage concept.	do	Resource conservation	1	Off	35	6	41	8	-	8	49	-	49

Sub Total	**8**	**186**	**6**	**192**	**64**	**5**	**69**	**250**	**11**	**261**

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	
1	06.07.11	PF	Non chemical pest management methods for chillis and paddy	-do-	Bio control	1	Off	25	-	25	13	-	13	38	-	38	KVK
2	26.07.11	PF	Non Chemical pest management strategies for rice and redgram	-do-	Biocontrol	1	On	26	-	26	7	-	7	33	-	33	KVK
3	27.09.11	PF	IPM in Onion	-do-	IPM	1	On	17	-	17	4	-	4	21	-	21	KVK
4	28.09.11	PF	BIPM in Rice	-do-	Biocontrol	1	On	18	-	18	3	-	3	21	-	21	KVK
5	15.10.11	PF	BIPM in rice and redgram	-do-	Biocontrol	1	On	15	-	15	4	-	4	19	-	19	KVK
6	17.10.11	PF	Use of biopesticides in bengalgram	-do-	Biocontrol	1	Off	12	-	12	8	-	8	20	-	20	KVK
7	02.11.11	PF	Diagnosis and management of pests and diseases in Chillis	-do-	IPM	1	Off	11	-	11	6	-	6	17	-	17	KVK

8	07.01.12	PF	Non chemical pest management strategies for rice and redgram	-do-	Biocontrol	1	On	22	-	22	6	-	6	28	-	28	KVK	
			TOTAL			**8**		**146**	**-**	**146**	**51**	**-**	**51**	**197**	**-**	**197**		
9	18.6.11	RY	Use of neem and other botanical extracts for crop protection.	Plant Protection	Biocontrol	1	On	23	-	23	2	-	2	25	-	25	KVK	
			Sub Total			**9**		**169**	**-**	**169**	**53**	**-**	**53**	**222**	**-**	**222**		

Soil Science

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	
1	22.4.2011	PFM	Soil Sampling procedure and Soil test based nutrient management	Soil Science	Soil testing	1	On	24	-	24	5	-	5	29		29	KVK
2	09-05-11	PFM	Reclamation of problematic soils	-do-	Reclamation	2	On	20	-	20	4	-	4	24		24	KVK
3	20-06-11	PFM	Methods to improve fertilizers use efficiency	-do-	Nutrient use efficiency	1	On	20	-	20	5	-	5	25		25	KVK
4	09-08-11	PFM	Integrated nutrient management	-do-	INM	1	On	20	-	20	5	-	5	25		25	KVK
7	18-11-11	PFM	Soil Test based fertilizers usage in major crops	-do-	Soil testing	1	On	21	-	21	6		6	27		27	KVK
			Sub total					**105**	**-**	**105**	**25**	**-**	**25**	**130**	**-**	**130**	
9	14-10-11	RY	Preparation of organic inputs	-do-	Organic inputs	3	On	21	-	21	4	-	4	25	-	25	KVK
			Sub total					**21**	**-**	**21**	**4**	**-**	**4**	**25**	**-**	**25**	
10	03-09-11	EF	Soil sampling, testing, Interpretation of results.	-do-	Soil testing	1	On	25	-	25	-	-	-	25		25	KVK
11	14-10-11	EF	Soil sampling, testing and interpretation	-do-	Soil testing	1		20	-	20	-	-	-	20	-	20	KVK
			Sub total					**45**	**0**	**45**	**-**	**-**	**-**	**45**	**0**	**45**	
			Grand total					**171**	**0**	**171**	**29**		**29**	**200**	**0**	**200**	

Horticulture

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	
1	8.07.11	PFM	Cultivation of medicinal plants	Horti culture	Medicinal & Aromatic plants	1	On	19	-	19	3	-	3	22		22	KVK
2	15.7.11	PFM	Micronutrient management in Jasmine	-do-	Micronutrient management in flowers	1	Off	15	-	15	4	-	4	19		19	KVK
3	11.8.11	PFM	Mango Cultivation	-do-	Training & Pruning	1	Off	15	-	15	5	-	5	20	-	20	KVK
4	18.9.11	PFM	Chilli Cultivation	-do-	INM	1	Off	17	-	17	8	-	8	25	-	25	KVK
5	12.10.11	PFM	Cultivation of Tissue culture Banana	-do-	Cultivation of fruit crops	1	Off	14	-	14	6		6	20	-	20	KVK
6	8.11.11	PFM	Nursery raising in pro trays	-do-	Nursery management	1	On	19	-	19	8	-	8	27	-	27	KVK
7	15.12.11	PFM	Cultivation of cool season vegetables	-do-	Production of low volume and high value crops	1	On	22	-	22	5	-	5	27	-	27	KVK
8	20.1.12	PFM	Cultivation of sweet orange	-do-	Cultivation of fruit crops	1	Off	16	-	16	2	-	2	18	-	18	KVK
9	12.2.12	PFM	Micronutrient management in Papaya	-do-	Micronutrient management in fruit crops	1	Off	16	-	16	2	-	2	18	-	18	KVK
			Sub total					**153**	**-**	**153**	**43**	**-**	**43**	**196**	**-**	**196**	
10	7.3.12	RY	Drip irrigation in vegetable crops	-do-	Micro irrigation	1	On	18	-	18	8	-	8	26	-	26	KVK
			Sub total					**18**	**-**	**18**	**8**	**-**	**8**	**26**	**-**	**26**	

Grand total							171	-	171	51	-	51	222	-	222

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
25.05.11	PFM	Preventive measures against contagious diseases in Livestock	Animal Husbandry	Diseases management	1	Off	12	-	12	8	-	8	20	-	20
21.06.11	PFM	Technologies to improve reproductive efficiency in cattle and buffaloes	-do-	Diary management	1	Off	15	-	15	7	-	7	22	-	22
30.07.11	PFM	Cultivation of different fodder varieties	-do-	Feed management	1	Off	12	-	12	3	-	3	15	-	15
08.09.11	PFM	Backyard poultry management	-do-	Feed management	1	On	19	-	19	6	-	6	25	-	25
06.11.11	PFM	Rearing of improved poultry breeds at backyard	-do-	Poultry management	1	Off	12	-	12	5	-	5	17	-	17
19.12.11	PFM	Scientific methods of calf rearing	-do-	Dairy management	1	Off	15	-	15	5	-	5	20	-	20
13.02.12	PFM	Utilization of agricultural by products as feed for livestock	-do-	Feed management	1	Off	17	-	17	3	-	3	20	-	20
30.03.12	PFF	Management of Backyard poultry	-do-	Poultry management	3	Off	-	-	-	-	44	44	-	44	44
24-28 August'11	RY	Preparation of balanced ration with locally available ingredients	-do-	Feed managment	3	On	17	-	17	4	-	4	21	-	21
19-21.10.11	RY	Ram lamb production	-do-	Sheep management		On	23	-	23	5	-	5	28	-	28
30.09.11	EF	Feeding management of dairy animal for better	-do-	Feed management	1	On	7	1	8	-	-	-	7	1	8

		production														
		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
24.6.11	PFF	Awareness among pregnant and lactating women on nutritional deficiency disorders	Home Science	Household food security and kitchen gardening, women and child care.	1	Off	-	21	21	-	8	8	-	29	29
28.6.11	PFF	Awareness among dolescent girs and children on nutritional deficiency disorders	-do-	Design and development of low cost minimum diet House hold food security	1	Off	-	15	15	-	11	11	-	26	26
20.9.11	PFF	Prepareation of value added products with millets	-do-	Value addition	1	Off	-	24	24	-	12	12	-	36	36
18.10.11	PFF	Drudgery reducing implements for farm women	-do-	Location specific drudgery reduction technologies	1	On	-	34	34	-	5	5	-	39	39
20.10.11	PFF	Value added with millets	-do-	Value Addition	1	On	-	26	26	-	12	12	-	38	38
28.11.12	PFF	Back yard poultry management with improved poultry breeds	-do-	Back yard Poultry	1	Off	-	13	13	-	9	9	-	22	22
15.3.12	PFF	Preservation of fruits	-do-	I.G.Activites for	1	Off	-	17	17	-	13	13	-	30	30

	i.e, Jams and squashes preparation for SHGs	empowerment of rural women

20.3.12	PFF	Preservation of Vegetables i.e, Pickle making as entrepreneuring activity for SHGs	-do-	I.G. Activities for empowerment of rural women	1	Off	-	14	14	-	11	11	-	25	25
22.3.212	PFF	Preparation of Sundried products for SHGs as I.G.Acitivity	-do-	I.G.Activites for empowerment of rural women	1	Off	-	17	17	-	12	12	-	29	29
25.8.11 to 27.8.11	EFF	Capsule training programme on pre school creative activities, value added products with Jowar and preparation of low cost pre school educational materials for AWWs & Supervisors	-do-	Women and child care Low cost and nutrient efficient diet designing	3	On	-	19	19	-	6	6	-	25	25
TOTAL								**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	29.6.11 To 28.9.11	Longduration vocational skill training programme on Tailoring	I.G Activity	90	-	25	25	Individual	19	19	-
	25.7.11 To 29.7.11	Hand made paper bag making	I.G Activity	5	14	25	39	Individual	5	5	2
	26.9.11 To 5.11.11	Skill training programme on Fabric Painting	I.G Activity	45	-	25	25	Individual	9	9	3
	3.2.12 To 4.5.12	Long duration Vocational skill training programme on Tailoring	I.G Activity	90	-	30	30	-	-	-	-
		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 2 3 4 5 6 7 8 9	3.12.11 28-1.12 28-2-12 3.3.12 12.3.12 14.3.12 17.3.12 27.3.12 28.3-12	SRI:" cultivation in rice	Agronomy	ICM	1	PFM	9	175	50	225	135	-	135	310	50	360	ATMA	72000-
10	10-5-11	Improved production technologies in Rice , Groundnut, Sunflower, Maize and Redgram.	-do-		2	EF	2	56	8	64	25	-	25	56	8	89	Dept Agrl.	--
11	31-05-11	Improved production technologies in Groundnut, and Redgram.			1	PFM	1	38	-	38	12	-	12	50	-	50	CLRC	

12	27-12-11	Do-	1	PFM	1	35	-	35	15	-	15	50	-	50	CLRC	
		Sub Total			**13**	**304**	**58**	**362**	**187**	**-**	**187**	**491**	**58**	**549**		

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	09.05.11	IPM in rice, redgram, maize and sunflower and use of biopesticides in plant protection.	Plant Protection	IPM	1	EF	1	38	13	51	10	4	14	48	17	65	Dept, of Agri.	-
2	31.05.11	Low cost plant protection technologies in Rice, Redgram, Castor and G.nut	Plant protection	IPM	1	PF	1	38	-	38	12	-	12	50	-	50	CLRC, Ymgr.	-
3	30.8.11	IPM in rice, B.t.cotton, maize and Jowar	Plant protection	IPM	1	PF	1	19	-	19	8	-	8	27	-	27	NGO	-
4	11.01.12	BIPM in Rice	Plant protection	Biocontrol	1	PF	1	31	-	31	9	-	9	40	-	40	ATMA	5000/-
Total					**4**		**4**	**126**	**13**	**139**	**39**	**4**	**43**	**165**	**17**	**182**		

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	22-12-11 & 28.12.11	Soil Test based fertilizers usage in major crops	Soil Science	Soil testing	1	PFM	on	61	0	61	11		11	72		72	CLRC	
2	9.12.11	Preparation of organic inputs viz. Vermicompost and NADEP compost	Soil Science	Organic inputs	1	EF	On	45	10	55		-		45	10	55	Dept. of Agri.	
3	21,23,26, 28, &30th of Sept.	Nutrient management in rice based on STCR equation (Sponsored by NABARD)	Soil Science	Soil testing	1	PFM	off	195	-	195	24	-	24	195	24	219	NABARD	25,000
4	10-2-12	Preparation of organic inputs viz. Vermicompost andNADEP compost.	Soil Science	Organic inputs	1	EF	On	50	10	60				50	10	60	Dept. of Agri.	
		TOTAL						**351**	**20**	**371**	**35**		**35**	**362**	**44**	**406**		

Discipline : 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	12.8.11 16.8.11	Canopy management in Mango	Horticulture	Training & Pruning	1	PFM	2	64	-	64	16	-	16	80	-	80	Dept. of Hort	-
2	9.11.11	Awareness program on micro irrigation	-do-	Microirrigation	1	PFM	1	63	8	71	12	3	15	75	11	86	APMIP	-
3	13.1.12	Cultivation of Aswagandha as alternate to traditional rainfed crops	-do-	Medicinal & Aromatic plants	1	PFM	1	45	-	45	9	-	9	54	-	54	APMAB	-
		Total						**172**	**8**	**180**	**37**	**3**	**40**	**209**	**11**	**220**		

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	8.12.11	Value addition to minor millets and entrepreneurial opportunities	Home Science	House hold food security Value addition	PFF	1	-	13	13	-	4	4	-	17	17	FTC,Nandyal	3,000/-
2	3.2.12 To 4.5.12	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				**2**		**30**	**30**		**17**	**17**		**47**	**47**		

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	6.4.2010 Zero tillage Maize	1	22	-	22	8	-	8	-	-	-	30		30
2	Field Day	18.12.10 STCR in Rice	1	78	-	78	19	-	19	-	-	-	97	-	97
3	Field day														
4	Kisan Mela		1	78	-	78	22	-	22	-	-	-	100	-	100
5	Kisan Mela														
6	Kisan Ghosthi	Soil testing	5	498		498	98		98	6	5	11	602	5	607
7	Exhibition		4												
8	Film Show		6												
9	Method Demonstrations		7												
10	Farmers Seminar														
11	Workshop		1												
12	Group meetings		5	81	-	81	32	-	32	-	-	-	81	-	81
13	Lectures delivered as resource persons														
14	Newspaper coverage		8												
15	Radio talks		7												
16	TV talks		2												
17	Popular articles		4												
18	Extension Literature		6												
19	Advisory Services														
20	Scientific visit to farmers field		782	558	-	558	224	-	224	-	-	-	782	-	782
21	Farmers visit to KVK		2129	1556	-	1556	573	-	573	-	-	-	-	-	2129

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
22	Diagnostic visits														
23	Exposure visits		3	85	-	85	17	-	17	-	-	-	102	-	102
24	Ex-trainees Sammelan														
25	Soil health Camp		5	275	-	275	33	-	33	6	-	6	314	-	314
26	Animal Health Camp		4												
27	Agri mobile SMS		66	-	-	-	-	-	-	-	-	-	-	-	18972
28	Soil test campaigns	April-10 May-10	17	852			123						975		975
29	Farm Science Club Conveners meet														
30	Self Help Group Conveners meetings														
31	Mahila Mandals Conveners meetings														
32	Celebration of important days (specify) 1.World Food Day	Food Prices from Crisis to Stability	1	-	58	58	-	30	30	-	10	10	-	98	98
	2.International Womens Day	Empower women to avoid Poverty and hunger	1	-	63	63	-	37	37	-	12	12	-	112	112
	3.National Nutrition Week	Importance of balanced diets and awareness on micro nutrient deficiencies	1	-	15	15	-	17	17	-	36	36	-	68	68
33	Homestead nutritional gardens	To raise green leafy and other vegetables in the backyards of farm families	146												

Field day in Castor hybrid PCH-111

Field day in Redgram

Field day in Paddy

Farmers visit to vermicompost unit

Method demonstration on seed treatment

Method demonstration on stem application in cotton

Method demonstration on pruning in mango

Group discussion

Demonstration on azolla cultivation

Women farmer visit to fodder bank at KVK

Women farmer visit to nutrition garden at KVK

National Nutrition Week celebrations at KVK

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	JGL-3844	40.00	78,000-00	65
		NDLR-7	65.00	1,30,000-00	150
		BPT-5204	450.00	6,50,000-00	800
Oilseeds	Castor	PCH 111	9.00	2,25,000-00	200
Pulses	Redgram	LRG 41	5.00	25,000-00	75

Summary

S.No.	Major group/ class	Quantity (qtl.)	Value (Rs)	Provided to No of Farmers
1	Cereals	555.00	8,58,000-00	1015
2	Oilseeds	9.00	2,25,000-00	200
3	Pulses	5.00	25,000-00	75
	TOTAL	**569.00**	**11,08,000-00**	**1290**

PLANTING MATERIALS

Major group/class	Crop	Variety	Quantity (Nos.)	Value (Rs.)	Provided to No. of Farmers
FRUITS					
SPICES					
VEGETABLES					
	TOMATO	Siri 9005	80000	20000	12
	BRINJAL	Poluru	10000	3000	2
	CAULIFLOWER		12000	4800	3
	BEET ROOT		10000	2500	2
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	112000	30300	19
3	SPICES			
4	FOREST SPECIES			
5	ORNAMENTAL CROPS			
6	PLANTATION CROPS			
7	OTHERS			
	TOTAL	**112000**	**30300**	**19**

BIO PRODUCTS

Major group/class	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			No	(kg)		
BIOAGENTS						
BIOFERTILIZERS						
	Vermicompost	Eudrilus eugini	-	1,08,000	4,32,000-00	165
	Earth worms	Eudrilus eugini	-	1,980	91,000-00	25
Total				1,09,980	5,23,000-00	190
BIO PESTICIDES						
1	Pseudomonas	*P.fluorescens*	-	545	78,600-00	140
2	Trichoderma	*T.viride*	-	903	90,300-00	282
3	Neem powder	-	-	3800	57,000-00	18
Total				5,248	2,25,900-00	430

SUMMARY

Sl. No.	Product Name	Species	Quantity		Value (Rs.)	Provided to No. of Farmers
			Nos	(kg)		
1	BIOAGENTS					
2	BIO FERTILIZERS	-	-	1,09,980	5,23,000-00	190
3	BIO PESTICIDE	-	-	5,248	2,25,900-00	430

LIVESTOCK

Sl. No.	Type	Breed	Quantity (Nos	Kgs	Value (Rs.)	Provided to No. of Farmers
Cattle						
SHEEP AND GOAT	Sheep	Nellore brown	**53**	**524**	**91726.00**	**12**
POULTRY	Backyard poultry	Rajasri	1440	-	86400.00	95
FISHERIES						
Others (Specify)						

SUMMARY

Sl. No.	Type	Breed	Quantity Nos	Kgs	Value (Rs.)	Provided to No. of Farmers
1	CATTLE					
2	SHEEP	Nellore Brown	53	524	91726.00	12
3	POULTRY	Rajasri	1440	-	86400.00	95
4	FISHERIES					
5	OTHERS					
	TOTAL				**178126.00**	**107**

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 :

- Sasyaposhana.

2. Articles and Scientific Publications:

- A article entitled *"**Soil test crop response (STCR) based nutrient application in irrigated rice domains of Kurnool district of Andhra Pradesh**"* was published in International Journal on Agricultural Sciences Vol. I (1st Issue), pp.55-61, 2011
- An article on ***"Micro-nutrient status and their management in KC Canal command areas of Kurnool district of Andhra Pradesh"*** *published* in International Journal on Agricultural Sciences Vol. I (3rd Issue), pp.335-340, 2011.
- An article on "***Soil quality assessment under different soil management practices"*** is *published* in proceedings of 99 th session of the Indian Science Congress, section of Environmental sciences,2012 pp.59. and presented in 99 th session of the Indian Science Congress from **3rd to 7th January,2012 at Bhubaneswar, Odisha.**

3.Popular articles			
Care and management of Sheep and Poultry during summer		A.Krishna Murthy and G.Dhanalakshmi	Annadata, May'11 Page no.12-13
Effective utilization of dry fodder		A.Krishna Murthy and G.Dhanalakshmi	Annadata, May'11 Page no.22-23
Green fodders-Nutritive values		A.Krishna Murthy and G.Dhanalakshmi	Annadata, July'11 Page No.46-48
Management of sheep at different stages		A.Krishna Murthy and G.Dhanalakshmi	Annadata, February'12 Page No.30-33
	Drum seeder technology		
	Zero tillage	Nutritive value of green leafy vegetables	Azolla cultivation
	Mushroom production	Red gram cultivation	Mungari cotton cultivation
	Amla for Health		
Total			
Grand TOTAL			

(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)

5. 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.

6. 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 2010-11

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
Total		**318.98**	**46204**	**616**

KVK established eight vermicomposting units on the campus since 2003 (Each unit size is 50x24 ft.) and 319 tones of vermicompost was produced and supplied to 698 farmers @ Rs.4-00/per Kg. for various crops. Besides this 46.2 tones of earthworms (including filled material) supplied to 616 farmers of the district for establishing 616 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.

8. 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 lea 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.**

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

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

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		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	2684	1975	315	5.345
Water Samples	299	299	83	0.215
Plant Samples	64	64	2	0.384
Petiole Samples				
Total	3047	2338	400	5.944

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	108	2,10,000-00	4,32,000	3,13,000
					Earthworms	1.98		91,000	
2	IBRC	2010	-	Pseudomonas Trichoderma Neem Powder	Pseudomonas Trichoderma Neem Powder	5.048	1,11,533	2,25,900	1,14,367

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	15	2025-00	3750-00	-
					Organdi Sarees	29	5220-00	8700-00	-
					Supernet patch work sarees	15	7500-00	11250-00	

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.	Cost of inputs	Gross income	
Cereals									
Rice	1 St wk of July	3 rd wk of Nov	0.8	JGL-3844	Seed	40	32,000	78000	
	1 St wk of July	3 rd wk of Nov	2.0	NDLR-7	Seed	65	70,0000	1,30,000	
	1 St wk of July	1 St wk of Dec	5.0	BPT-5204	Seed	450	3,50,000	6,50,000	
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	108		4,32,000-00	
2	Earthworms	1.98	2,10,000-00	91,000-00	
3.	Pseudomonas	0.545	1,11,533-00	78,600-00	
4.	Trichoderma	0.903		90,300-00	
5.	Neem powder	3.6		57,000-00	
	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			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	

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-11		30	90	
		30	90	
Total		**60**	**180**	
May,11		25	75	
Total		**25**	**75**	
June,11		30	60	
Total		**30**	**60**	
July,11		22	66	
		30	90	
		25	75	
		25	50	
Total		**102**	**281**	
Aug,11				
Total				
Sep,11				
		72	72	
Total		**72**	**72**	
Oct,11				
		52	260	
Total		**52**	**260**	
Nov,11		114	228	
Total		**114**	**228**	
Dec,11		201	603	
Total		**201**	**603**	
Jan,12		45	45	
Total		45	45	
Feb,12		210	420	
Total		**210**	**420**	
Mar,12		270	540	
Total		**270**	**540**	
Grand total		**1251**	**2954**	

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	-do-	-do-	SB 005910011006024

7.5 Utilization of KVK funds during the year 2011-12

S. No.	Particulars	Sanctioned	Released	Expenditure
A. RECURRING ITEMS				
1	**Pay & Allowances**	80,00,000-00	80,00,000-00	74,97,904
2	**Traveling allowances**	1,00,000-00	1,00,000-00	99,981
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (purchase of News paper & Magazines)	7,00,000-00	7,00,000-00	1,50,110-00
B	POL, repair of vehicles, tractor and equipments			1,79,745-00
C	Meals/refreshment for trainees (celling upto Rs.40/day/trainee be maintained)			89,200-00
D	Training material (posters, charts, demonstration material including chemicals etc., required for conducting the training).			18,590-00
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)			1,24,953-00
F	On farm testing (on need based location specific and newly generated information in themajor production systems of the area)			87,374-00
G	Training of extension functionaries			
H	Honarorium for Trainers			16,100-00
I	Establishment of Soil, Plant & Water Testing Laboratory			
J	Libray			5,118-00
K	Maintenance of farm			28,380-00
	TOTAL (A)			
B.Technology Demonstration on Pulses				
A.	Redgram 30 demonstrations for Kharif @ Rs.4000/demo = Rs.120000	3,00,000-00	3,00,000-00	1,19,832-00
B.	Bengalgram 30 demonstrations for Rabi @ Rs.4000/demo = Rs.120000			1,19,932-00
C.	Contractual Services = Rs. 60000			60,000-00
	TOTAL (B)			*3,00,000*
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)	91,00,000-00	91,00,000-00	

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 2009 to Mar, 2010	23,33,199-00	18,07,142-00	8,80,920-00	32,59,421-00
April 2010 to Mar, 2011	32,59,421-00	25,57,064-00	17,14,507-00	41,01,978-00
April 2011 to Mar, 2012	41,01,978-00	39,34,975-00	37,64,788-00	42,72,165-00

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

8.1 Constraints

(a) Administrative

(b) Financial

(c) Technical

ANNEXURE I

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. Agricultural 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
Rural livestock units	218
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
Ducks	507

3. Agro-climatic 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-ecosystems

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

S. No	Farming system/ Enterprise
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 pesticides.
- Direct sowing of seed. No nursery management.