5. AGRICULTURE AND ALLIED ACTIVITIES

AGRICULTURE

5.1 With more than half of the State's population still dependent for their livelihoods either wholly or significantly on some form of farm activity, expansion of farm incomes continues to be the potent weapon for reducing poverty. Rapid and sustainable growth in Agriculture has been identified not only as a key driver for economic development but also for achieving self sufficiency and ensuring food security to the people.

Over the decades, Andhra Pradesh has witnessed a gradual transformation in the agriculture sector. The nature of the transformation itself has undergone change overtime. The initial and noteworthy transformation that took place during 1980s was the shift from a traditional cereal-based system towards commercial commodities such as oilseeds, cotton and sugarcane. However, during 1990s, when the crop sector witnessed high volatility due to consecutive droughts and decelerating crop yields, the transformation although continued, was more towards high-value commodities such as fruits, vegetables, milk, meat, poultry and fish,. In fact, the high-value commodities performed impressively and rescued the agriculture sector to a great extent.

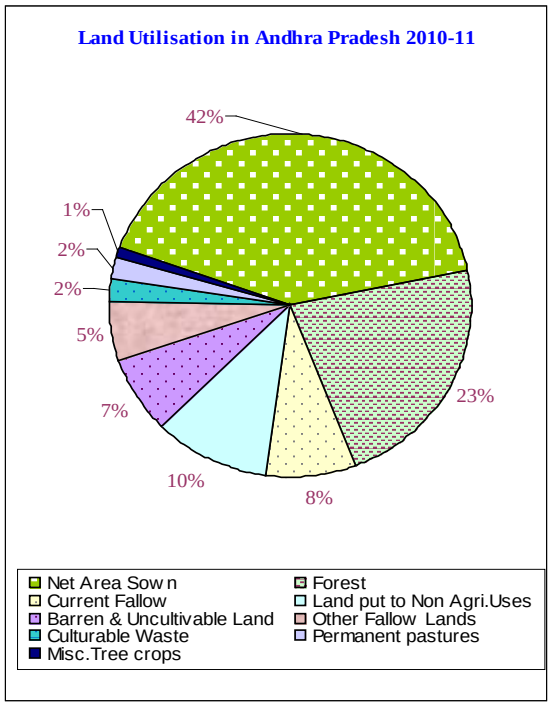
Achieving a growth rate in excess of 4% in Agriculture sector during 11th Five Year Plan period was set with the objective of shifting a sizable excess labor force from the Agriculture sector to other non-farm rural sectors especially to rural industry through skill development, with ultimate object of improvement of productivity in agriculture sector. Ensuring Food security and providing gainful employment to the labor force continues to be the essential premise for the socio economic development of the people and employment guarantee schemes like Mahatma Gandhi Rural Employment Guarantee Scheme(MGNREGS) and other Rural Livelihoods programmes are effectively catering to this objective.

Improving farm incomes and ensuring sustainable growth in the agriculture and allied sectors is on the top of the agenda for the state. Overwhelming priority accorded to the irrigation sector on one hand and the various farmer friendly initiatives put in place on the other, appeared to have helped the State achieve the growth targets during the 11th Plan so far in Agriculture.

The state enjoys a position of pre-eminence in respect of crop production. Andhra Pradesh is set to scale new heights in agriculture during the 12th Five Year Plan, especially with renewed focus on micro irrigation, Sri cultivation micronutrient application, development of dry land agriculture, Farm mechanization increasing storage capacity and other agriculture related strategies.

Land Utilization

The pattern of Land Utilization in the state is depicted in the following diagram.



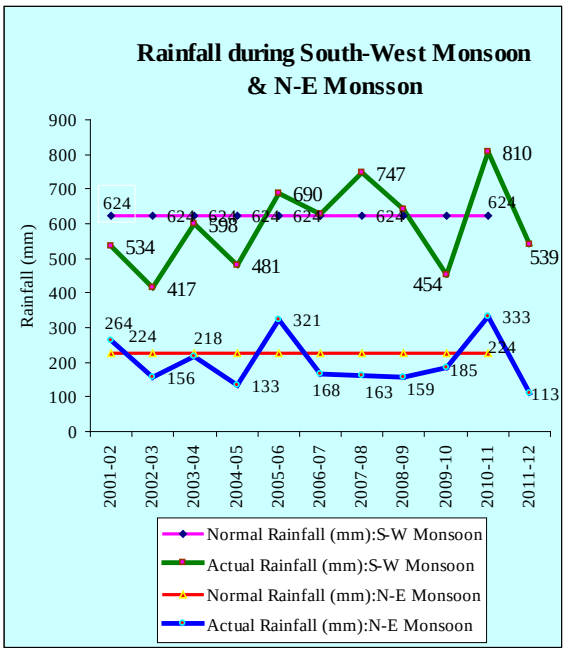
The total Geographical area of the State is 275.04 lakh hectares. Out of the Geographical area, 41.04 % is under Net Area Sown (112.88 lakh hectares), 22.65 % under Forest (62.30 lakh hectares), 8.10 % under current fallow lands(22.29 lakh hectares), 10.08% under Land put Non-

Agricultural uses (27.71 lakh hectares), 7.37 % under Barren and uncultivable land (20.26 lakh hectares) and remaining 10.76 % under other fallow land, cultivable waste, permanent Pastures and other grazing lands and Land under miscellaneous tree crops and groves not included in the Net Area Sown (29.60 lakh hectares). The Land Utilization particulars from 1956-57 to 2010-11 are given in Annexure 5.1.

Rainfall

The rainfall received during the South West Monsoon period for 2011-12 was 539 mm. as against the normal rainfall of 624 mm. recording a deficit by 13.6 %. The rainfall received during the North East monsoon period for 2011-12 was 113 mm as against the normal rainfall of 224mm recording a deficit of 49.6%. The season wise region wise rainfall is given in Annexure 5.2 and district wise rainfall is given in Annexure 5.3

The trend of rainfall over past 10 years is depicted below.



Area and Production (Kharif and Rabi Season) - Second Advanced Estimates 2011-12)

As per the second advance estimates, the area as well as production of food grains for the year 2011-12 are expected to show a decline in comparison with the previous year, viz, 2010-11. While the area under food grains is expected to be 70.60 lakh hectares as against 80.29 lakh hectares in 2010-11, showing a decline of 12.07%, the total production of food grains for the year 2011-12 is estimated to decline by about 30 lakh tones over the previous year - a decrease of 14.81%, from 203.14 lakh tonnes during 2010-11 to 173.05 lakh tonnes in 2011-12.

Kharif:

The area under food grains in Kharif 2011-12 is expected to be 43.06 lakh hectares while it was 45.81 lakh hectares in 2010-11 - a decline of 6%. Similarly, the production estimate of food grains in Kharif 2011-12 is also expected to marginally decline from 98.52 lakh tonnes in 2010-11 to 98.03 lakh tones, a decline of 0.5%, .

The estimate of the area under rice in Kharif 2011-12 is expected to be 28.69 lakh hectares while it was 29.22 lakh hectares in 2010-11. Similarly, the production estimate of rice in Kharif 2011-12 is also expected to be 77.46 lakh tonnes while it was 75.10 lakh tonnes in 2010-11.

Rabi:

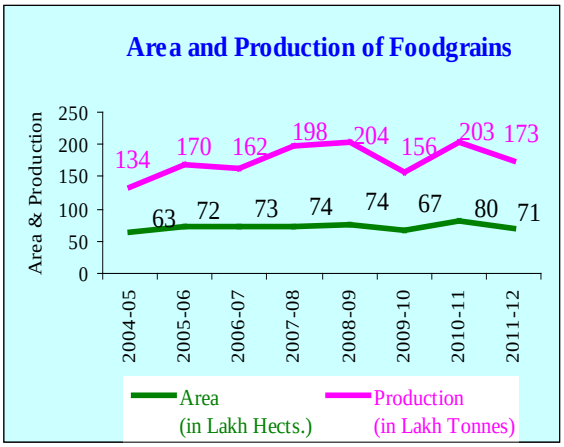
The estimate of the area under foodgrains in Rabi 2011-12 is expected to be 27.54 lakh hectares while it was 34.48 lakh hectares in 2010-11. Similarly, the production estimates under food grains in Rabi 2011-12 is also expected to be 75.02 lakh tonnes while it was 104.62 lakh tonnes in 2010-11.

The estimate of the area under rice in Rabi 2011-12 is expected to be 11.37 lakh hectares while it was 18.30 lakh hectares in 2010-11. Similarly, the production estimates under rice in Rabi 2011-12 is also expected to be 41.73 lakh tonnes while it was 69.10 lakh tonnes in 2010-11.

The area and production of Food grains from 1975-76 to 2011-12 are given in Annexure 5.4

The season wise area, production and productivity of selected crops are given in Annexures 5.5, 5.6 and 5.7 respectively.

Unfavourable seasonal conditions like drought, floods and heavy rains prevailed in the State during the decade have contributed to fluctuations in the area and production of food grains. With the cultivation of High Yielding Varieties, improved seed and cultivation practices, the production of food grains however in general maintained an increasing trend.



Cropping Intensity:
The cropping intensity (the ratio of gross cropped area to net cropped area) is one of the indices of assessing the efficiency of agriculture sector and for the year 2010-11, it works out to 1.29.

Gross and Net area Irrigated:
The gross area irrigated in the State increased to 71.53 lakh hectares in 2010-11 against 57.65 lakh hectares in 2009-10 showing an increase of 24.08 percent.
The net area irrigated in the state increased to 50.34 lakh hectares in 2010-11 as against 42.15 lakh hectares in 2009-10 showing an increase of 19.43 percent. The source-wise Gross and Net area irrigated in the State from 1996-97 to 2010-11 are given in Annexure 5.8 and 5.9 respectively.
It may be seen that the area irrigated is increasing over the last year

Land Holding:
The data on land holdings in the state is being collected since 1970-71 through a quinquennial Census of Land Holdings and the latest available data relates to 2005-06. But the average size of land holdings in the state has marginally declined to 1.20 hectares during 2005-06 from 1.25 hectares in 2000-01. The number holdings have increased from 1.153 crores in 2000-01 to 1.204 crores in 2005-06. Distribution of Land holdings and area according to size class are given in Annexure 5.10.
The 9th Quinquennial Census of Land Holdings commenced on 1st October 2011.

Agriculture Extension Programmes: Mission and Strategies*:*
The major concern that clearly emerges is to improve the farm income both in absolute terms and percentage of GSDP. The Department of Agriculture is therefore working with a mission of "Sustainable Agricultural Production with minimum cost of cultivation, eventually enhancing the return on investment to the farmer".
In the process of making the mission a reality, the following strategies are being adopted.

- Re-engineering extension approach for effective extension reach.
- Empowering farmers with advance agricultural practices.
- Capacity enhancement of departmental staff for efficient use of extension technology.
- Ensuring timely input supply.
- Regulation of inputs and quality control.
- Soil test based fertilizer recommendation.
- Promotion of self reliance in seed production among farmers.
- Promotion of Integrated Crop Management through Integrated Nutrient Management (INM), Integrated Pest Management (IPM), efficient water management, etc.
- Promotion of organic farming to meet the demand of World Market.
- Correcting micronutrient zinc deficiency.
- Reclamation of Problematic soils to restore the productivity.
- Natural Resource Management through watershed approach for agricultural land development and environmental stability.
- Calamity Management in the event of drought, floods, hailstorms etc.
- Promoting cultivation of low risk and low cost intensive crops.
- Farm Mechanisation for item and cost effective farming practices.
- Promoting Farmers Organization (Rythu Mitra Groups) for technical and monetary benefits in Agriculture and allied activities.
- Facilitate the farmer to avail Agriculture Credit.

- Women Empowerment and gender balance.
- Provide day to day information to farmer on crop production, input supply, marketing through Internet Services. (AGRISNET).

The initiatives taken up for increasing productivity levels:

- Increasing crop productivity by developing farming situation based production plans.
- Dissemination of improved technologies through effective extension out-reach.
- Ensuring availability of quality Agricultural inputs.
- Reduce cost of production by educating the farmers on improved crop management practices like Integrated Nutrient Management (INM), Integrated Pest Management (IPM), and Water Management (WM) and Post Harvest Technologies (PHT).
- Providing improved Agricultural implements and farm machinery for reducing the cost of cultivation.
- Crop diversification programme.
- Assist the farmers in the event of natural calamities like droughts, floods and cyclones for providing relief and inputs for alternate cropping programmes.
- Sustainable dry land agriculture development by implementing National Watershed Development Project for Rainfed Areas (NWDPRA).
- Improving soil health through soil test based fertilizer recommendations, encouraging green manuring, vermi compost, reclamation of problematic soils and correction of micro nutrient deficiencies.
- Facilitate availability of credit to more number of non-loanee farmers and tenant farmers.

Extension Activities:

Rythu Chaitanya Yatra :

Inspired by the sucess achived last year from the conduct of Rythu Chaitanya Yatras, the Government have once again organized them in the year 2011 from 17.05.11 to 2.06.11 in 22 districts in the state with a holistic approach to educate the farmers at grass root level particularly small and marginal farmers. The focus was on technology transfer, addressing the technology gaps identified in the village, creating awareness about the programmes of Government for welfare of farmers ensuring timely credit delivery, effective input planning for kharif, agriculture mechanization, crop diversification, water management etc. with an objective to increase productivity and to reduce cost of cultivation, to improve quality and latest technology intervention in Agriculture and Allied activities. Under these Yatras,

- 37,253 habitations have been covered and 20.47 lakh farmers have been contacted
- 3.37 lakh soil samples were collected and sent to Soil testing Laboratories.
- 72,309 live models /demos have been displayed

The financial allocation for Rythu Chaitanya Yatras 2011 is Rs 220.90 lakhs.

Rythu Sadassus :

Rythu Sadassus were organized from 7th June to 11th June 2011 in 71 Revenue Divisions by Department of Agriculture and line departments to explain about the various schemes pertaining to Agriculture and its Allied sectors and to disseminate the Technological advances. These Sadassus also aim to educate the farmers to adopt new technologies for improving quality and increasing productivity and production in Agriculture and Allied sectors and to help them to become more competitive and prosperous. 3,40,506 farmers have attended the Sadassus.

Bi-Monthly Workshop

Bimonthly workshops are being held regularly at identified research stations of ANGRAU in all districts, wherein departmental officers and scientists of ANGRAU discuss and formulate production recommendations for ensuing two months. These workshops are also serving as in-service orientation for middle and senior level officers of the department.

Zonal Research Extension Advisory Council Meeting (ZREAC)

ZREACs for Kharif and Rabi were organized in all the nine Agro-Climatic Zones of the State. During these meetings, officers from Commissionerate and JDAs from districts are deputed and production problems are being reviewed. Research gaps for the zones as a whole and production recommendations for major crops are provided to the departmental officers. Research priorities are finalized.

Staff Trainings:

Trainings for senior and middle level officers have been organized in specialized areas in various Institutes of Government of India located in the country as well as in ANGRAU. Grass-root level extension workers like Agricultural officers are trained at State Government institutes like SAMETI, DR.MCR HRD Institute, WALAMTARI etc.

Training Programmes to Farmers

Under the farmers training programme, trainings on IPM, INM, Organic farming and SRI Cultivation are being conducted to provide Training and Transfer of Technology of IPM, INM, OF and SRI Technology. Like in the previous year, an amount of Rs.65.00 lakhs has been released and 1300 trainings has been organized during 2011-12 also.

Padipantalu

The Padipantalu monthly Telugu magazine is being printed and published every month for updating the knowledge of farming community. One lakh number of copies are being printed and distributed every month to Adarsha Rythus, Agriculture and Allied Department field functionaries apart from supplying to the public representatives.

The articles covered in the magazine include success stories of the farming community and latest technical information on agriculture sector and the information regarding special meetings, seminars, exhibitions being organized by Agriculture and allied departments. The magazine will help the Adarsha Rythus and other extension field staff to disseminate the latest technical knowledge to the farmers and guide them in increasing the productivity and there by improving their economic status.

Soil Testing

For optimal soil productivity, soil sampling and soil testing program is organized in a systematic manner to evaluate the fertility status and to identify the soil problems (Salinity/ Sodality) if any to improve fertility and reclaim the problematic soils.

There are 24 District Soil Testing Labs (STLs), (22 labs are in the 22 districts and other 2 are established under National Project in Mahaboobnagar and Kurnool), 2 Regional Soil Testing Labs and 5 Mobile Soil Testing Labs and 58 Mini Soil Testing Labs located at Agricultural Market Committees (AMC) in the State.

The departmental Soil Testing Laboratories are equipped to analyse the Organic Carbon (OC) (index of nitrogen content), available Phosphorus, Potassium, Zinc, Iron, Copper, Manganese, Salinity (EC) and alkalinity (pH). The mobile Soil Testing Laboratories and AMC mini laboratories however analyse only organic carbon, available phosphorus, potassium, EC and pH. The results of the soil analysis will be communicated to the respective farmers in the form of soil health cards. The soil health cards contain the information on the soil fertility status showing the available nutrient contents. Based on the available nutrient contents, fertilizer recommendations are given in the card for the crop to be grown by the farmer.

The target and achievements for the years 2010-11 and 2011-12 are shown in Table 5.1.

Table - 5.1
Soil Testing

Item	2010-11		2011-12	
	Annual Target	Achievement	Annual Target	Achievement April to Sep. '11
Macronutrients ECand pH	3,90,000	4,28,444	3,68,190	1,47,436
Micronutrients	1,22,995	81,177	1,22,730	8,713
Water samples	11,070	22,317	22,100	8,827

Source: Agriculture Department

During the year 2011-12, it is planned to collect soil samples from the existing 240 farming situations @15 soil samples from each farming situation approximately totaling to 3600 soil samples but actually samples to be collected is 3355 because in some situations the number of villages are less than 15.The collected soil samples are analyzed for macronutrients and micronutrients (Fe, Cu, Zn, Mn & S) and it has to be monitored for 3 years.

District Soil Testing Laboratories (STLs) under Single Window Diagnostic Scheme:

The Soil Testing Labs are strengthened for seed testing and fertilizers testing to analyse service samples in the STLs where notified labs are not available. 19 STLs for Seed Testing and 17 STLs for Fertilizer Testing are strengthened. These labs take up the analysis of seed samples and fertilizer samples other than law enforcement samples. The farmers, dealers, producers or any person interested can know the status of seed lots and fertilizer. Achievements under Single Window Diagnostic Scheme are shown in Table 5.2.

Table - 5.2
Single Window Diagnostic Scheme

Item	2010-11		2011-12	
	Annual Target	Achievement	Annual Target	Achievement (April to Sep. '11
Seed Samples (No.)	13,200	10,376	11,400	5,159
Fertilizer Samples (No.)	1,500	369	1700	64
Source: Agriculture Department				

Agricultural Resources Information Systems NETwork - AGRISNET (For Soil Testing Program)

The soil analysis data is being uploaded on internet. The results of the soil samples can be downloaded by the farmers or any officer by generating the soil health card using the unique code number.

Objectives of the Programme:

- To facilitate and promote Integrated Nutrient Management (INM) through judicious use of chemical fertilizers, including secondary and micro nutrients, in conjunction with organic manures and bio-fertilizers, for improving soil health and its productivity.
- To strengthen soil testing facilities and provide soil test based recommendations to farmers for improving soil fertility and economic return to farmers.
- To provide soil health through green manuring.
- To facilitate and promote use of soil amendments for reclamation of acidic/ alkaline soils for improving their fertility and crop productivity.
- To promote use of micro nutrients for improving efficiency of fertilizer use.
- To upgrade the skill and knowledge of STL/ extension staff and farmers and their capacity building through training and demonstration on farmers fields regarding benefits of balanced use of fertilizers.
- To ensure quality control of fertilizers through strengthening of fertilizer quality control facility including training to enforcement officers of State Governments for effective implementation of "Fertilizer Control Order".
- To provide financial assistance for upgrading and setting up of STLs/ Fertilizer Testing Laboratories and various activities for promoting balanced use of fertilizers.

Under this scheme during 2011-12, (3) new Static Soil Testing Laboratories have been established at Nizamabad, Nellore & Vizianagaram districts. Further, (2) new Mobile Testing Vans are being provided to MSTL, Visakhapatnam & YSR Kadapa in place of old condemned vehicles. The establishment of the above labs is under process. The MSTL, Rajendranagar is strengthened through supply of Atomic Absorption Spectrophotometer (AAS) for analysis of micronutrients. Further Frontline Field Demonstrations are being organized

during Rabi 2011-12 in all the districts under the above scheme.

AGRISNET:

The Government of India has decided to launch a central sector scheme titled "Strengthening/Promoting Agricultural Informatics & Communications" of which one component is AGRISNET. AGRISNET was launched on February 11, 2009 for the benefit of the farming community with the following features incorporated in phase I.

Objective

The objective of AGRISNET is to provide improved services to the farming community through use of ICT.

The services present in the AGRISNET portal are

- Package of practices of 18 important crops grown in AP.
- Information on intercrops
- Integrated Pest Management
- System of Rice Intensification (SRI)
- Weather based information
- Organic Farming
- Information of MSP of crop produce, MRP of Fertilizers etc.
- Precautions to be taken during seed treatment & purchase of inputs.
- Schemes and subsidies of the department
- Crop wise FAQs
- Answers to queries posed by farmers
- Key contacts in Agriculture Department
- Programme schedules of Radio and TV along with misbranded pesticide information and any current issues.
- Video clips of farmers success stories.
- Videos of beneficial and harmful insects.
- Soil fertility maps

Online Soil Health Card Generation System

- An application is developed to computerize the soil test results of the farmers.
- Through this application the officers of the soil testing laboratories enter the soil test results into the system.
- Farmers can download the soil health card online using the unique number allotted to each sample.
- A facility is provided to send the soil test based fertilizer recommendations through SMS to the farmers mobile phone. (A demo is arranged)
- As on date no. of samples fed into the system is 6,14,467.
- This application enables the farmers to pose a question in telugu to the experts online developed by C-DAC (Center for Development of Advanced Computing).
- 18 experts are identified for this purpose. Out of which 17 experts are scientists from ANGRAU and one officer from the department for answering queries on departmental activities.

Web Application for Product Market Matrix (by IIFT, Calcutta)

This web application can be used as a readymade guide for the agricultural exporters to obtain information pertaining to the identification of right market, tariff rates and food safety regulations for a product in a particular country by the use of online database and information.

Delivery of AGRISNET services through CSC

A Pilot Project was taken up from 14-01-2010 to 30-04-2010 on delivering agricultural services to the farmers through Citizen Service Centers (CSCs) in one mandal each of West Godavari (Ganapavaram), Kurnool (Orvakal) and Karimnagar (Vemulavada) districts.

SEEDNET Software:

For automating the Seed Testing Laboratories, software termed "SEEDNET" has been developed by NIC.

Subsidy Seed Distribution

During Kharif 2010, a quantity of 12.02 lakh qtls of seed was distributed with a subsidy value of Rs.155.86 crores and during Rabi 2010-11, a total quantity of 6.67 lakh quintals of seeds was distributed with a subsidy of Rs.122.29 crores. In total (Kharif+Rabi)

18.69 lakh quintals of seeds were distributed on subsidy under different schemes involving a subsidy amount of Rs. 278.15 crores.

Kharif 2011: During Kharif 2011**,** 16.2 lakh **q**uintals of seed was planned for distribution under subsidy programme, under different schemes i.e., NFSM, RKVY, ISOPOM and NSP, out of which 11.01 lakh qtls of seed was distributed with a subsidy value of Rs. 160.38 crores.
Area covered under High Yielding Varieties is given in Annexure 5.11

Fertilizer Policy Initiatives:
Fertilizer consumption during 2010-11 in terms of nutrients (N, P, K) was 34.96 Lakh Metric Tonnes (LMTs) (18.59 LMTs during Kharif and 16.37 LMTs during Rabi). The Nutrient-wise consumption was 19.66 LMTs of N, 10.32 LMTs of P and 4.98 LMTs of K and Details of the fertilizers supplied for the Kharif 2011 are shown in the Table 5.3.

Table - 5.3
Fertilizer Consumption 2011-12 (in LMTs)

Product	Kharif 2011	
	Projection	Consumption
Urea	15.00	14.59
DAP*	7.30	5.36
MOP*	3.25	0.81
SSP	1.50	1.30
Complexes	11.50	11.4.3
Others	1.00	0.51
Total	**39.55**	**34.00**

Source: Agriculture Department

*******The reason for less consumption registered is on account of non-supply of both the products as per requirements especially that of MOP, as the import agreements were not contracted due to abnormal prices in the international market.*

Product-wise consumption of fertilizers and the nutrient wise fertilizer consumption are given in Annexures 5.12 and 5.13 respectively.
Nutrient Based Fertiliser (NBS) Policy: The Department of Fertilizers, GOI announced nutrient based fertilizer Policy (NBS) with effect from 1-4-2010. As per the new policy the subsidy/concession extended on P & K fertilizers is fixed, and manufactures will fix the retail prices of the P & K fertilizers. The per kg subsidy fixed on nutrients viz: Nitrogen, Phosphorus, Potash and Sulphur are Rs. 27.15, Rs. 32.34, Rs. 26.76 and Rs. 1.68 respectively. Accordingly the per Metric Tonne subsidy on DAP, MOP and complexes are fixed by GOI.

Pesticides:
The pesticide consumption has been decreased due to motivation of the farmers through Polambadi programmes to follow Integrated Pest Management practices (IPM). IPM emphasizes need based use of pesticides, bio-pesticides and bio-agents along with cultural and mechanical practices for pest control. The cultivation of Bt. cotton varieties also resulted in the reduction of pesticide usage in cotton crop and thus the pesticide consumption in the state decreased substantially. During the year 2010-11, the pesticide consumption in the State is 5,451 M.T.s. of active ingredient during Kharif and 3,418 M.Ts of active ingredient during Rabi season. During the year 2011-12, the pesticide consumption in the State is 5328 M.T.s. of active ingredient during kharif Pesticide consumption over the years is shown in Table 5.4.

Table - 5.4
Utilization of Pesticides
(M.Ts)

Year	Pesticide Consumption (Active ingredient)
2007-08	8422
2008-09	8374
2009-10	8146
2010-11	8,869
2011-12 (up to Dec,2011)	6346

Source: Agriculture Department

Farm Mechanization Scheme:
Mechanization has been well received the world over as one of the important elements of modernization of agriculture. It is now recognized that availability of mechanical power and improved equipment has enabled many developed countries in the world to achieve high levels of productivity.

In the state, considerable section of the farming community is still lagging behind in the knowledge of latest developments in Farm Mechanization and in adopting modern-day farming technology. However, Farm Mechanization is gaining importance for carrying out various farm activities effectively in less time with less effort. This would result in efficiency and timeliness in the field operations, reduction in the cost of cultivation and improvement in the quality of produce for better marketability.

The achievements under Farm Mechanization scheme are shown in Table 5.5.

Table - 5.5
Farm Mechanization
(Rs. Lakhs)

Year	Beneficiaries (No)	Subsidy Expenditure
2000-01	6,590	253.38
2001-02	9,342	333.41
2002-03	47,390	596.35
2003-04	50,000	1,664.50
2004-05	47,568	2,290.94
2005-06	73,140	3,625.34
2006-07	92,929	5,230.66
2007-08	70,306	4,349.15
2008-09	1,79,312	10,720.26
2009-10	131577	7,878.36
2010-11	176000	7,945.00
2011-12 (up to Sep)	88560	5,048.00

Source: Agriculture Department

Farm Mechanization is taken up under various Schemes. Government of Andhra Pradesh has nominated AP Agros as the nodal Agency towards procurement and supply of farm machinery.

I. Farm Mechanization (MMA & NSP)

Under this scheme, farm equipment pertaining to tractor Drawn, Self Propelled, Power Tillers, Tractors, PP Equipment etc are being supplied on 50% subsidy basis limited to a maximum subsidy of Rs 30000/- to accelerate agricultural mechanization in the state to achieve higher production and to meet the challenge faced due to labour scarcity.

Rs. 7945 Lakhs was the financial achievement against the target of Rs. 8000 Lakh (99%) during 2010-11 and Rs. 5048 Lakhs is achieved against the target of Rs.8150 Lakh (62%) till September 2011.

II. Supply of High Cost Machinery Under RKVY:

Various High Cost Machinery like Rice Combine Harvesters, Rice Transplanter, Highly Automated Power Threshers, Nursery Machines and Trays for Raising nursery were supplied in 2010-11. Against the targeted amount of Rs. 3196 Lakhs, Rs.3066.50 lakhs is achieved (96%). A total number of 506 different machineries were supplied to the farmer groups under this project.

During 2011-12 it is proposed to supply 150 nos of combine harvesters for rice, out of which 33 units worth of Rs.307 lakhs were supplied against the target worth of Rs.1500 lakhs up to 30th September 2011.

III. Organizing 6600 Pulses and Oilseeds villages in Rain fed areas.

Under this scheme, tractors, Rotavator, Ridge and furrow planter are supplied to the identify Rythu Mitra Groups on 100% subsidy basis.

Out of the 660 units proposed, 92 indents are yet to be received from the districts up to October, 2011. Under the scheme, Agros supplies the machinery to the beneficiary groups and funds are adjusted by C&DA.

So far, Rs.1883 lakhs is adjusted towards supplies against the target of Rs.3091 lakhs.

There is no target for the year 2011-12. The pending indents shall be grounded in this financial year through Agros.

Supply of farm equipment under National Food Security Mission:

Under the scheme NFSM 2010-11, diesel and oil engine pump sets are encouraged while discouraging electric motor pump sets. Inter-cultivating machinery is being promoted for Rice and Pulses crops. The scheme is being implemented from the month of September, 2011 in 11 districts for Rice and 22 districts for Pulses.

Crop Insurance:

National Agriculture Insurance Scheme:

National Agriculture Insurance Scheme (NAIS) is being implemented since Kharif 2000 season.

Objectives:-

- To provide a measure of financial support to the farmers in the event of Crop loss in the yield.
- To restore the credit eligibility of a farmer after a crop failure for the next season and to help stabilize farm incomes, as the natural disasters like the cyclone, floods, Drought occur frequently resulting in huge crop loss.

Village as Insurance Unit Scheme:-

A.P is the only State to have 'Village as insurance Unit' in all the districts of the state from Kharif 2008 season onwards. The Village level insurance programme provided more benefits to the farmers as the losses in smaller area would be more representative.

Crops covered during Kharif and Rabi were 20 and 10 respectively.

Under Crop Insurance Scheme, approximately an amount of Rs.4113.03 crores has been paid as Crop Insurance Claim since inception of the scheme i.e., from 2000-01 to Kharif 2010, thereby benefiting 60.60 Lakh farmers in the State.

The details of National Agriculture Insurance Scheme are given in Annexure 5.14.

New Schemes launched in the State:

Apart from the National Agricultural Insurance Scheme the following new schemes are introduced in the state for the benefit of the farming community.

Weather Based Crop Insurance Scheme (WBCIS):

Weather Based Crop Insurance Scheme (WBCIS) is launched in Guntur District on Red chilly crop during Kharif 2009 and it was extended to other crops and districts during 2010-11 and 2011-12 years in the interest of the farming community.

Modified National Agriculture Insurance Scheme (MNAIS)

Apart from NAIS, Modified National Agricultural Insurance Scheme is launched in the State during Rabi 2010-11 on pilot basis in 3 Districts viz., Prakasam, Nellore and Warangal. The scheme is encompassed with certain additional farmer-friendly features viz., Localized calamities such as **Hailstorm** and **Post harvest losses**. Rice, being a major crop in the State, was notified for implementation under Village as Unit. In the interest of the farming community, the modified pilot scheme is continued during Kharif and Rabi 2011-12.

Agricultural Credit:

The Annual Credit Plan 2010-11 for the State was Rs.37,835 crores towards Agriculture Credit. The achievement under Agricultural credit disbursement was Rs.47,930 crores (127%).

During Kharif 2011, Rs. 20,905 crores (67%) Crop loans have been disbursed against the target of Rs. 30,985 crores. Under Agricultural Term loans during Kharif 2011, Rs. 8,615 crores (51%) is disbursed against the target of Rs. 17,015 crores. Over all achievement during 2011-12 (upto Sep,2011) is Rs. 29,520 crores against the target of Rs. 48,000 crores (62%).

The disbursement of Agricultural Credit is given in Annexure 5.15.

Credit to Rythu Mithra Groups, New Non-loanee Farmers and Tenant Farmers:

During 2010-11, the Department of Agriculture has enrolled 2.66 lakh tenant farmers by forming 56,186 Joint Liability Groups (JLGs) and lists were handed over to Bank Branches for facilitating credit to tenant farmers. 7.79 lakh new non-loanee farmers were enrolled and extended credit of Rs. 1936.73 crores and 95,360 Tenant farmers were extended credit of Rs.190.08 crores by covering 11,274 Joint Liability Groups. 13904 Rythu Mithra Groups have been extended credit of Rs. 293.46 Crores.

During 2011-12(up to Sep. 2011), an amount of Rs. 116.14 crores credit is extended to 34,227 non- loanee farmers and an amount of Rs. 204.77 crore of credit extended to 96,845 tenant farmers.

Pavala Vaddi Scheme on Crop Loans:

Lending crop loans to the farmers at an affordable interest rate through Institutional

finance has been the priority of the Government. Although, there has been a consistent increase in credit delivery through institutional finance, a large number of farmers are still in the fold of private finance.

To reduce the financial burden of the farmers, the Govt. of A.P. is implementing Pavala Vaddi scheme (at 3% interest) on crop loans from the year 2008-09.

All the loanee farmers who have availed crop loans from financial institutions and repaid the crop loans within due date are eligible under the scheme. The Govt. will reimburse the 4% interest amount to the bank account of eligible farmers. During 2010-11, an amount of Rs.6000.00 lakhs was released under Pavala Vaddi. An amount of Rs. 4853.86 lakhs was reimbursed to 5,38,793 farmers. During 2011-12 an amount of Rs. 7500.00 lakhs was released under Pavala Vaddi. So far, an amount of Rs. 3863.58 lakhs was reimbursed to 3,13,390 farmers**.**

Interest Waiver Scheme

Farmers were subjected to the nature's fury (heavy rains, Jal cyclone) during Kharif 2010 and 680 mandals in the State were declared as flood affected**.** To mitigate the farmer's distress, Government have issued orders to extend the Interest Waiver of 7% on crop loans given up to 30th November 2010 during Kharif 2010 and to allow this interest waiver up to 31st March 2011**.** During 2011- 12, an amount of Rs. 18515.00 lakhs was provided to 8,89,134 farmers under Interest Waiver Scheme.

Adarsha Rythu

The main objective behind the identification of Adarsha Rythus is to introduce a nodal functionary between the farmers and the extension staff of agriculture and other line departments to help bridge the gap between the scientific know-how and field level do-how.

To strengthen the extension Services in the State 49,161 Adarsha Rythus were deployed as against the target of 50,000 in the state. At present 40,990 Adarsha Rythus are working in the state.

Adarsha Rythu assists the extension staff in implementation of the schemes like Polam Badi, Seed Village Programme, Organic farming, Rashtriya Krishi Vignana Yojana, National Food Security Mission, Agricultural Technology Management Agency, Crop Insurance, Credit and other Central and State Schemes including enumeration during natural calamities. Adarsha Rythus are also facilitating the activities of allied departments i.e Animal Husbandry, Horticulture, Sericulture, Fisheries, Sugars, Irrigation, A.P. Transco, Agricultural Marketing, Revenue, Rural development and Banks.

Adarsha Rythus are involved in day to day developments with regard to schemes, technology etc., input availability with subsidy if any and the procedures to avail the same, broad regulatory mechanism for inputs and for steps to be taken in case of failure of a particular input. Adarsha Rythus are actively involved in mobilizing the farmers in special campaigns like Rythu Chaitanya Yatra, Rythu Sadassu, Prajapatham and Saguku Samayattam. Adarsha Rythus are actively involved in identifying the tenant farmers and formation of Joint Liability Groups to provide credit facilities.

The Mandal Agricultural Officer organizes a meeting with Adarsha Rythus and other line departmental officers on 3rd Monday of every month in the Mandal head quarters to discuss various problems arising at field level. The Padipantalu magazine and honorarium are being disbursed to the Adarsha Rythus on the same day.

On 1st Saturday of every month, the Agricultural Officer and Line Departmental Officers visit the fields, demonstration sites etc. along with Adarsha Rythus in at least 2-3 villages.

Adarsha Rythus maintain the list of 200-250 farmer holdings allotted to him/her in the registers with the information on the type of soils, extent of crops grown, number of Sheep, Cows, Fish ponds, particulars of the credit availment etc. on each farm holding.

An amount of Rs.1000/- per month is provided towards honorarium to each Adarsha Rythu.

Polambadi Programme

Use of chemical pesticides for control pests and diseases have been increasing day by day

leading to increasing cost of cultivation and poor quality of produce, eventually resulting in less market price and less returns. It also leads to disturbance to natural ecosystem thereby causing more hazards to the living entity. With this back ground, it is programmed to take up training to the farmers on their fields on FFS model.

Concept:

Empowering the farmers to take economical decisions by adopting practices of Integrated Crop Management (ICM) with the principles of Growing a healthy crop, Conserve natural enemies, Conduct regular field observations and make Farmers to become ICM experts.

It is programmed to organize one Polambadi by ADA (R) in each division, one by MAO and one by each AEO in the mandal. The Polambadi programme is being done from seed to seed so that the farmers can observe and analyze the dynamics of crop ecology across the season. Polambadi is conducted in paddy, maize, pulses, oil seeds, cotton & coarse cereals. Size of the Polambadi is 10 ha, number of Farmers–30. Field observation will be done on the polambadi day. Season long training programme on Cotton is being organized in Warangal during Kharif-2011.

The Polam badi programmes organized are shown in Table 5.6.

Table - 5.6
Polam Badi Programmes
(Number)

Crop	2010-11			2011-12	
	Kh-arif	Rabi	Total	Kharif	
				Target	Achievement
Rice	1237	778	2015	1318	1216
Maize	219	162	381	150	136
Pulses	123	220	343	90	50
Oil seeds	510	583	1093	542	328
Cotton	306	0	306	325	280
Others	0	3	3	30	30
Total	2395	1801	4196	2455	2040
No.of farmers trained	71850	54030	125880	73650	61200

Source: Agriculture Department

Monitoring: For effective monitoring at district level a monitoring cell in JDAs office has been formed. For effective implementation of Polambadi, the DDAs in the districts have been allotted sub-divisions to monitor duly visiting the Polambadi in the mandals in each month

Distribution of Literature

Adequate number of copies of Polambadi literature pertaining to Paddy and Polambadi Darshani have been distributed to farmers of Polambadi during 2011.

Other Initiatives:

Loan Eligibility Cards:

- Under Recommendation No. 3.1 of Koneru Ranga Rao Committee recommendations on issue of loan eligibility cards to the tenants farmers, Government have issued an ordinance on 8th June 2011 to provide loan and other benefits eligibility card to the farmers, who raise crops with express or implied permission of owner or pattadar of land, but have no record for such enjoyment without effecting the rights of owners, enabling them to access credit from the public financial institutions and to claim benefits of input subsidy, crop insurance, compensation for damage to crop and for matters connected there with and incidental there to**.**
- Revenue (Land reforms) department have issued notification to "Andhra Pradesh Land Licensed Cultivators Rules, 2011" by giving the detailed rules and executive instructions for implementation on 10-06-2011.
- Loan and Other Eligibility Cards (LECs) were issued to 5,49,889 Land Licensed cultivators. Out of which 96,845 LEC holders have been issued crop loans of Rs. 205.00 crores during 2011-12.
-

Rythu Bata

Food production retains utmost importance in a developing Country like India. Unless the potential of the land, water, farmer and labour are fully realized, it is difficult to attain self-sufficiency in foodgrains. Inspite

of various programmes, it is observed that there is still scope to improve the outreach of extension services to benefit the farmers which is very crucial for improving the Agricultural scenario. To take Agricultural extension services to the door step of the farmers, the present programme of "Rythu Bata" is contemplated.

The objectives are:

- To take the extension services to the door step of the farmers.
- To create awareness about the ongoing Government programmes.
- To understand the problems being faced by the farmers.
- To understand the prevailing local situations.
- To organize the farmers into crop wise groups for major crops. So that on a long run, such organizations are instrumental in tackling the problems of farmers.

Mandal Agricultural Officer enlists all the Villages (Gram Panchayat) under his jurisdiction and conducts the farmers meeting at a specified place, like Gram Panchayat Office or Community Hall on a specified date in a month. Adarsha Rythu will act as Convener for this Rythu Bata programme. The Adarsha Rythu, to start with maintains a Register in the prescribed format which will act as a permanent record for the Village and throws light on various issues discussed in Rythu Bata.

World Trade Organization (WTO) Cell:

The primary objective of the cell is to create awareness and build capacities among farmers and departmental officers about the implications of the new global trade regime for the agricultural sector of the state in particular and the country in general.

Important activities taken up during 2011-12 by the WTO Cell include –Software on Research studies/Projects on Inventory of Food Safety regulations for export markets of AP, Product market identification through AGRISNET funds, regular documentation and printing of quarterly news digest "WTO Out Reach", processing Geographical Indication (G.I.) for Kurnool rice and Patent for bore well casing pipe under intellectual property rights.

Extension Reforms

Agriculture Technology Management Agency (ATMA):

Government of India has introduced the "Support to State Extension Programmes for Extension -Reforms'' (ATMA) Scheme from 1st June 2005 in a phased manner and is currently operational in 591 Districts of 29 States and 2 UTs. As a part of this scheme, the entire state of Andhra Pradesh except Hyderabad Urban district is covered under ATMA with 90: 10 Central and State shares.

Objectives of the Programme:

- To develop an efficient, effective, demand driven, research integrated and financially sustainable public extension system
- To revitalize the Agricultural technology Generation Assessment refinement and Dissemination Systems
- Reforming Public Sector Extension. Promoting private sector to effectively complement, supplement and wherever possible to substitute public extension.
- Mainstreaming Gender Concerns in Extension.
- Capacity Building/ Skill up-gradation of farmers and extension functionaries.
- Increase the Quality and Type of Technologies being disseminated by the Extension System.
- Strengthen Research-Extension-Farmer (R-E-F) Linkages
-

Benefits of the Programme:

- Well Integrated technology development and transfer system
- Decentralized decision-making
- Financially sustainable extension system
- Bottom-up Planning
- Increased Use of Information Technology
- Emphasis on in-Service Training
- Developing New Public-Private Partnerships
- Strengthening Key Institutions
- Broad based Extension Delivery

Guidelines of the Programme:

"Support to State Extension Programmes for Extension Reforms (ATMA)" is the main scheme to operationalize agricultural extension reforms across the country. Funding support shall be provided to the State for undertaking extension reforms within the broad purview of the Policy Framework for Agriculture Extension (PFAE), complying with its key areas/norms, and shall be operated based on Extension Work Plans prepared by the State. Funds shall be released to the States based on their Extension Work plans developed within the broad framework of the PFAE and areas indicated under reform oriented activities. The States have the responsibility of implementing the extension reforms at district level.

ATMA is a district level body is an autonomous institution with participation of all the key stakeholders involved in agricultural activities for sustainable agricultural development. It has the flexibility to receive funds directly (Government of India/States, Membership fees, beneficiaries contribution etc). It has the main responsibility of all the technology dissemination activities at the district level. It has linkages with all the line departments, research organizations, non-governmental organizations and agencies associated with agricultural development in the district with a substantial representation of farmer organizations. Research and extension units within the district, such as KVKs, ZRSs, Department of Agriculture, Horticulture, Animal Husbandry, Fisheries, Sericulture, Marketing, etc., are constituent members.

ATMA is supported by a Governing Board and a Management Committee**.** Under each of the ATMA, block level Farm Information and Advisory Centers (FIACs) have been created which are operated by a Block Technology Team (BTT) of technical advisors and a Farmer Advisory Committee (FAC), an exclusive group of farmers**.** Commodity oriented Farmer Interest Groups (FIGs) are promoted at block / village level to make the technology generation/ dissemination farmer driven and farmer accountable. In order to provide needed HRD support in innovative areas of extension delivery, a State Agricultural Management and Extension Training Institute (SAMETI) has also been established in the project states.

To overcome the systemic constraints being faced by the Extension system in the Country, Government of India has revised the on going ATMA scheme guidelines w.e.f 1-4-2010. The revised ATMA guidelines contain few additional / new activities and enhanced new costs in some cases. The Important / new components are as follows:

1. Specialist & Functionary support at State level, District & Block level
2. Innovative support through a Farmer Friend at Village level
3. Support to SAMETIs for creating Essential Infrastructure
4. Delegation of Powers to State Level Sanctioning Committees.

The GOI has given provision to the State for placement of 935 posts at various levels in the revised guidelines. So far GOAP has given permission for placement of 385 posts. The process of placement of 136 Block Technology Managers and 130 Subject Matter Specialists is under final stage.

Strategic Research and Extension Plan (SREP): One of the first tasks of ATMA is to facilitate preparation of Strategic Research and Extension Plan (SREP) of the district. The SREP is prepared through participatory methodologies such as Participatory Rural Appraisal (PRA) involving all the stakeholders and farmers. The SREP contains detailed analysis of all the information on existing farming systems in the district and research – extension gaps required to be filled-up. It also prioritizes the research – extension strategies within the district. It becomes the basis for development of work plans at blocks/ district level. All the (22) ATMA districts have developed their respective Strategic Research and Extension Plans. As the validity of SREPs is five years, the State has already initiated the revisiting of the SREPs of the ATMA districts whose stipulated time of (5) years was already completed.

State Extension Work Plan (SEWP): Based on the research-extension strategies given in the SREPs, block/district level plans for the year 2011-12 were developed by all the ATMA districts as per the revised ATMA scheme guidelines and cost norms. The consolidated State Extension Work Plan for the year 2011-12 was developed at state level and submitted to GOI with an out lay of Rs. 4436.32 Lakhs. The District Action Plans developed under the scheme should be processed consistent with Article 243 ZD of the Constitution.

GOI has given administrative approval for Rs. 4435.72 lakhs for the year 2011-12 and permitted to utilize the revalidated amount of Rs. 1045.87 lakhs for implementation of SEWP 2011-12 of Andhra Pradesh State. Accordingly the districts are organizing the need based activities like farmer trainings, demos, exposure visits, kisan melas, field days, farmer scientist interaction etc. So far nearly 1.38 lakh beneficiaries were covered under different farm oriented activities during the current year.

Major Activities organized during 2011-12

- 1105 Rythu Mahila Sadassu were organized in all mandals of the State to create awareness on Credit, Insurance and other related activities among the farm women and farmers.
- Demos on Paddy and Groundnut Seed treatment with bio fungicides (Pseudomonas & *Trichoderma viridi*) in 2.61 lakh hectares during Rabi 2011-12.
- Promotion of SRI cultivation by organizing Awareness Programmes to the Extension Officers and Farmers
- Trainings on Organic farming in field crops and vegetables, Hybrid Marigold, SRI Cultivation, summer leafy vegetable cultivation under Shade net, Intercrop of vegetables in pure Redgram crop, Introduction of Neem pulvarisers to women SHGs.
- Demos on SRI, Vermi compost, New Basmati Hybrid, short duration Gujarathi Redgram.
- Inter State Exposure visits of farmers to Haryana, Karnataka and Tamilnadu.
- Capacity building of Extension functionaries in technical and managerial aspects.
- Proposed to organize soil test based fertilizer application demos (both on farm demos and Front line demos) in all the 1105 mandals of the State.

Monitoring & Evaluation:

Regular monitoring and evaluation is being conducted through Farmer Advisory Committee and Block Technology Team at Block Level & ATMA Governing Body at District Level. The Chairman, IDWG and State Nodal Officer may continue with the day to day monitoring to ensure that the Extension Reforms are executed in line with the broad policy framework. The scheme also provides for third party M&E from suitable agencies of the State.

Government of India Initiatives:

Rashtriya Krishi Vikas Yojana (RKVY):

RKVY is one of the flagship programs of Govt. of India with 100% central aid, is implemented with an objective to achieve annual growth rate in excess of 4% under Agriculture sector during the XI Plan. Out of the total allocation of Rs.393.45 crores, Rs. 214.50 crores has been allocated under RKVY to Agriculture Department for the year 2010-11. Of this, an amount of Rs. 209.25 crore has been incurred. The Financial and Physical achievements under the two streams of RKVY relating to various components for the year 2010-11 are furnished in Table-5.7. RKVY is being implemented during 2011-12 with an outlay of Rs.730.52crores and the financial achievement upto Oct,2011 is Rs.286.25 cr.

Table 5.7 Achievements under RKVY during 2010-11			
Name of the Project	**Units**	**Physical**	**Fin. (Rs.Cr.)**
Stream-I			**172.82**
1).Strengthening of seed chain	Lakh Qtls.	5.98	109.85
2).Intensive Mechanization	Nos.	300	31.96
3).Soil Health Management		0	20.42
a.Green manure seed	Qtls.	48320	12.08
b.Zinc Sulphate	Mts	3700	5.7
c.Gypsum	Mts	28995	2.64
4).Spl Addl Project on Pulse Devpmt. Mission over & above under NFSM	No.Seed minikits/ IPM&IN M kits	76422/ 76422	10.59
Stream-II			**36.43**
1).Farm Mechan.	Nos	146557	30.96
2).Livelihood support system & production system in watershed areas	Nos/ha	1603/600	2.23
3)A.P. State Warehousing Corporation Ltd	Nos.	1	2.00
4).APSSCA Strengthening of Seed testing laboratory	Nos	0	0.38
5).Capacity building in SRI cultivation	Nos.	20	0.26
6).Revitalisation of Rain-fed Agriculture	No of clusters.	0	0
Admn. Expenses	--		0.6
Total			**209.25**
Source: Agriculture Department			

National Food Security Mission (NFSM):

The National Development Council (NDC) in its 53rd meeting held on 29th May, 2007 adopted a resolution to launch a Food Security Mission on Rice, Wheat and Pulses to increase production in the country and Mission was launched in the state from Rabi-2007-08 with the objective of increasing production and productivity of Rice & Pulses on a sustainable basis to ensure food security. The approach is to bridge the yield gap in respect of these crops through dissemination of Improved Technologies and Farm Management Practices. It is envisaged to focus on districts which have high potential but relatively low level of productivity performance at present. Under the Mission there are series of program interventions efforts to reach resource poor farmers and continuous monitoring of various activities.

NFSM – Rice is being implemented in 11 Districts viz., Srikakulam, Vizianagaram, Visakhapatnam, Krishna, Guntur, Nellore, Medak, Mahabubnagar, Nalgonda, Khammam and Adilabad. NFSM – Pulses is being implemented in 22 Districts.

An amount of Rs.11911.99 lakhs is allotted based on proposals submitted for implementation of NFSM in AP during 2011-12. An amount of Rs. 4356.440 lakhs is released including revalidated amount and so far an amount of Rs.3149.23 lakhs expenditure is incurred upto Sept., 2011.

Accelerated Pulses Production Programme (A3P):

Accelerated Pulses Production Programme (A3P) is another step forward for vigorous implementation of the pulse development under the NFSM – Pulses.

A3P has been conceptualized to take up the active propagation of key technologies such as Integrated Nutrient Management (INM) and Integrated Pest Management (IPM) in a manner that creates catalyzing impact by assuring farmers of the higher returns from the identified pulse crops.

The objective of A3P are to demonstrate plant nutrient and plant protection centric improved technologies and management practices in compact blocks covering large area for five major pulse crops namely Redgram, Blackgram, Greengram and Bengalgram and lentils for increasing production and productivity (lentils not in Andhra Pradesh).

Each A3P unit form of a village level block demonstration covering an area of 1000 hectares. Under this programme 45 blocks(No of units of 1000 ha each) are organized in 14 districts during Kharif- 2011

State Initiatives:

System of Rice Intensification (SRI):

In order to save irrigation water and energy and also to increase the productivity, SRI cultivation is being promoted on large scale in all districts of the State. During kharif 2011-12 the state has programmed to cover an area of 3.5 lakh hects. During Kharif-2011

an area of 48,115 ha. has been covered against the target of 1.52 lakh ha. under SRI.

* * *

COOPERATION

5.2 Cooperatives have traditionally been promoted and organized in a democratic and structural frame work for achieving social and economic betterment of people. Different types of cooperatives are organized essentially to provide agricultural credit to member-farmers so as to enhance employment to its members for alleviating rural poverty. Co-operative movement has completed over 100 years of service to farmers and other weaker sections of the society.

The Department of Cooperation is mainly concerned with the administration of Cooperative Laws. The Department has been pursuing a more liberal policy towards Cooperatives to enable them function as autonomous and independent bodies. Cooperative week is celebrated every year starting from November 14th to promote better understanding of the principles and philosophy duly highlighting achievements of various sectors of the Co-operative movement.

Rural credit Co-operatives

The Rural credit co-operative structure at present is a three-tier structure with the Andhra Pradesh State Co-operative Bank at the APEX level, District Co-operative Central banks (DCCBs) at the District Level and Primary Agricultural Credit Co-operatives at the Village Level. Kisan Credit Cards have been issued to 35.25 lakh farmer members of the PACS. Relief to farmers affected by drought and other natural disasters has been provided. The long pending re-organization of PACS has been completed for making them viable based on the recommendations of the taskforce headed by Prof. A.Vaidyanathan constituted for suggesting the re-organization of co-operative societies. The PACS have been re-organized from 4465 to 2949 in the State. Total financial assistance received so far under Revival Package for Rural Coop. Credit Structure is Rs.1868.69 crores including of State Government share of Rs.261.12 crores.

Loaning Programme 2011-12

A.P. State Co-operative Bank has provided Rs. 4243.27 crores (Kharif – Rs.3942.14 crores and Rabi Rs. 301.13 crores) as production credit to the farmers through the Primaries and the Dist. Co-operative Central Banks during the year 2011-12 (up to November 2011). Out of Rs.3942.14 crores loans disbursed during the kharif, the loans under Seasonal Agricultural Operations (SAO), Oil Seeds Production Programme (OPP) and Development of Tribal Programme (DTP) are Rs.3537.22 crores, Rs.343.75 crores and Rs.61.17 crores respectively.

Short term (Crop) Loans:

An amount of Rs.3942.14 crores has been disbursed by the DCCB's and GCC during Kharif 2011 season.

Long Term Loans:

APCOB has refinanced an amount of Rs.162.73 crores (up to November 2011)to the DCC Banks under Long Term Agricultural Credit to the extent as against the loaning programme of Rs. 295.50 crores allotted to all the 22 DCCBs during the year 2011-12.

Integrated Co-operative Development Projects (ICDP)

The National Co-operative Development Corporation (NCDC), New Delhi has been providing financial assistance towards creation of infrastructure facilities like godown, iron safes, banking counters and storage facilities etc., to the societies under ICDP Scheme for development of agricultural and allied sectors. This project is under implementation since 1989 in the state. This Project has already been completed in seven districts viz. East Godavari, Nizamabad Phase-I and Phase-II, Krishna, Kurnool, Nalgonda, Chittoor and Guntur. The project is now under implementation in another 15 districts namely – Visakhapatnam, Medak, Warangal, Nellore, Srikakulam, Vizianagaram, West Godavari, Kadapa, Mahabubnagar, Ananthapur, Adilabad,

Karimnagar, Ranga Reddy, Khammam and Prakasam districts.

Marketing Co-operative Societies

There are 22 District Co-operative Marketing Societies (DCMSs), which undertake procurement of agricultural produce to enable the farmers to get the minimum administered prices for their produce. The DCMSs are procuring seed on behalf of AP Seeds Development Corporation and also undertaking procurement activities on behalf of MARKFED in addition to carrying local business activities like sale of Fertilisers, Seeds, Consumable articles, Stationary items etc., to various departments located in the districts. The performance status of DCMSs is given in Table 5.8.

Table 5.8
Performance of District Cooperative Marketing Societies as on 31-12-2011
(Rs. Lakhs)

Share Capital Contribution	905.37
Business Turn over	27498.81
Profit	285.21
Accumulated losses	1410.43
Assets	11600.72
Liabilities	12668.59

Source: Cooperative Department

A.P. MARKFED:

The MARKFED is an apex organization for the Co-operative Marketing Societies(CMS) in the state for supplying agricultural inputs, cattle feed, fertilisers, gypsum, provisions and other requirements to Societies and other private run institutions and provisions to government hostels. Subsequent to introduction of single window system in the state in 1987, MARKFED is offering its services through PACS at the primary level and through the DCMS in the district level. It undertakes procurement of agricultural produce like cereals and grams from farmers under minimum support price / market intervention scheme. It is also procuring other commodities under commercial account every year depending upon the market situation. During 2010-11 MARKFED has achieved a business turnover of Rs. 1021.18 crores and during the year 2011-12 up to December it has achieved a turnover of Rs.1159.05 crores.

AP State Co-operative Union (APSCU)

APSCU is an apex cooperative institution in the field of Coop. Education and training. There are five Co-operative Training Centres (CTCs) working under APSCU offering Diploma in Co-operative Management and Computer Applications. APSCU is mainly providing education to the members, conducting short term cooperative trainings to the Staff and member orientation programs to the needy elected Managing Committee members of Primary societies, DCCBs and other Cooperatives. The Union is also publishing a Cooperative Monthly Magazine titled “SAHAKARA SAMACHARAM” for carrying publicity and propaganda of Cooperative Principles and Cooperative Movement in the State.

Andhra Pradesh State Cooperative Rural Irrigation Corporation Ltd., (APSCRIC)

The Andhra Pradesh State Cooperative Rural Irrigation Corporation Ltd., Hyderabad undertakes drilling of in-well bores, surface bores, lift Irrigation schemes and construction of check dams etc., relating to Agricultural sector. Since 1995-96 the Corporation had diversified its activities and started undertaking civil works. During the year 2010-11, the Corporation executed works to a tune of Rs. 16.00 Crores. The state Horticulture Mission / Horticulture Department has identified the APSCRIC Ltd., as “Nodal Agency” for construction of Farm ponds in Horticulture fields for which an amount of Rs. 10.00 crores was provided during 2011-12 and the works are under progress.

Rural Electricity Supply Cooperative Societies (RESCOs)

The Rural Electric Supply Cooperative Societies main objective is to purchase electricity in bulk from the nearest DISCOM and distribute it to domestic, industrial and agricultural consumers in their area of operation. Four RESCOs are working under the administrative control of Cooperative Department viz., RESCOs at Kuppam (Chittoor district), Anakapalle (Visakhapatnam district), Cheepurupalli (Vizianagaram district) and Siricilla (Karimnagar district). These four RESCOs

are having over 4.93 lakh service connections covering 665 villages and 801 hamlets. The four RESCOs are having assets worth of Rs.172.98 crores.

The Hyderabad Agricultural Cooperative Association Ltd., Hyderabad. (HACA)

The HACA was established with the main object of serving the agricultural farmers through PACS as its members. The objectives of HACA include supply of quality seeds like soyabean, groundnut, paddy, castor, red gram, fertilizers, pesticides and other agricultural inputs, supply of rice, pulses, oils and other consumer items such as note books and crackers etc. It undertakes supply of fertilizers, pesticides and other agriculture inputs through its own Branches, (HACA Rythu Seva Kendram) located at HACA Bhavan and through PACSs at competitive prices. The business turnover of the HACA for the year 2010-11 is Rs.1334.54 crores and it earned profit of Rs.160 lakhs.

Consumer Cooperative Societies:

Consumer Cooperatives have been assigned an important role in the distribution of consumer articles of good quality at competitive prices to control price line in both urban and rural areas in the State. 700 Consumer Cooperative Societies are functioning in the State with a turnover of Rs.151.30 crores as on March 2011. Consumer Cooperative Societies are also undertaking the distribution of textbooks, notebooks, cloth, crackers and supply of various stationary items and provisions to the Government hostels etc.

Weaker Section Cooperative Societies:

Weaker sections Cooperatives among others include Labour Contract Cooperative Societies and Cooperative Joint Farming societies etc.

a) Labour Contract Cooperative societies

Labour Contract Cooperative societies are functioning in a 3-tire structure as shown below.

Primary Level	6,714 LCCS with 3,99,321members
District Level	23 District Federations of Labour Contract Cooperative Societies
State Level	Andhra Pradesh State Cooperative Labour Contract Cooperative Societies Federation Ltd., Hyderabad (under liquidation)

b)Cooperative Joint Farming Societies

Joint Farming Cooperatives are also working in a three-tire structure as shown below:

Primary Level	2,295 CJFS and membership of 1,92,716
District Level	23 District Federations of Cooperative Joint Farming Societies
State Level	Andhra Pradesh State Cooperative Joint Farming Societies Federation Ltd., Hyderabad (under liquidation)

The area covered under CJFS is 2,62,776 acres. The area developed so far is 89,567 acres. An area of 1,73,209 acres of land is yet to be developed.

Cooperative Tribunals:

Four Cooperative Tribunals are constituted in the State. Two Tribunals at Hyderabad and Vijayawada were constituted in 1993 and two more Tribunals were formed at Warangal and Visakhapatnam in 2003 to render speedy and effective justice to the affected parties. These Tribunals are vested with Appellate Jurisdiction over the orders passed under APCS Act, 1964 and with original jurisdiction over the disputes filed under AP MACS Act, 1995. 1463 cases are pending in all the four Co-operative Tribunals for disposals as on 31-10-2011.

Audit:

A separate Audit wing headed by Chief Auditor is functioning for conducting audit of Cooperative Societies. Every society is responsible for maintaining its books of accounts and is required to get its accounts audited every year. The audit shall be completed within a period of six months from the closure of Cooperative year and audit certificate shall be issued before the end of succeeding Cooperative year.

* * *

HORTICULTURE

5.3 Horticulture, an important sub-sector of Agriculture sector started gaining ground in the recent past and is evident from its consistently growing contribution to the GSDP. Over the years, by offering a wide range of choices to the farmers for crop diversification and providing opportunities for sustaining large number of agro-industries thereby promising ample employment opportunities to the semi skilled and unskilled labour force, Horticulture has emerged as an indispensable part of Agriculture. In fact, Horticulture as a sub-sector is a revelation – showing remarkable signs of progress in Andhra Pradesh and benefiting from an impressive base.

The technological innovations have helped the Horticulture sector providing abundant scope for empowering the people not only by improving economic conditions of those subsisting on it but also catering to their nutritional security and eventually resulting in transforming the agrarian economy. Most significant development in the last decade is that horticulture has moved from rural confine to that of a commercial activity encouraging private sector investment.

In reality, the transition from traditional Horticulture to trade oriental outlook has brought a perceptible change in the concept of Horticulture development in the state.

In view of the increased public investment in Horticulture sector, the Government of Andhra Pradesh has been giving much needed emphasis to Horticulture development primarily targeted at increasing the production and productivity of horticulture crops, development of infrastructure for post harvest management and providing access to domestic and export markets.

Andhra Pradesh Ranks 1st in production of Spices and Fruits and 3rd in production of Flowers in the Country. Crop wise, Andhra Pradesh Ranks 1st in production of Sweet Orange, Lime/ Lemon, Papaya, Oil Palm; 2nd in the production of Mango, Cashew and Tomato; 3rd in production of Loose flowers, Pomogranate, Cocoa, Brinjal, Bhendi & Tapioca and 4th in production of Banana, Grapes & Sapota (NHB data base 2009).

A large number of concessions, assistance and incentives are given to the growers, processors and exporters by the State and Central Governments. This trend has led to the adoption of improved technology, greater commercialization and professionalism in the management of production and marketing

Growth of Horticulture

The area under Horticulture has increased from 3.70 lakh ha. in 1982 to 24.97 lakh ha. by 2010-11, and it is as per advance estimates (A) 2011-12, 25.59 lakh ha. The details of area and production of horticulture crops during 2010-11 and 2011-12 (A) are given in Annexure 5.16**.**

The abstract showing Horticultural area and production in 2010-11 are given in Table 5.9

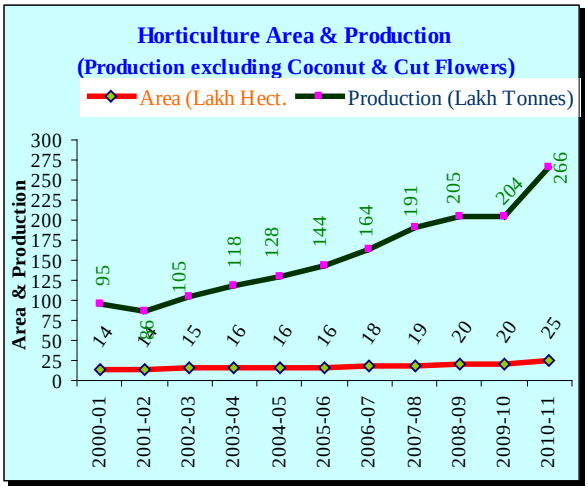
Table 5.9
Horticultural Crops –
Area and Production during 2010-11

Crop Category	Area (Lakh ha.)	Production (Lakh MTs)
Fruit Crops	6.46	94.17
Plantation Crops	3.11	13.30 and 20683 Million Coconuts
Vegetables & Tuber crops	6.51	118.47
Spices	8.25	35.98
Cut Flowers	0.02	7029 (lakh No's)
Flowers (Loose Flowers)	0.63	3.85
TOTAL*	**24.97**	**265.82**

* Cut Flowers and Coconuts production figures not shown in the TOTAL.

Source: Horticulture Department

On the average, the area under Horticulture crops grew annually at a rate of 6.4% from 2001-02 to 2010-11, the production growth is even more impressive at 11.3%.



Programmes

Several farmer oriented activities are being taken up with focus on adoption of modern technologies, evolving sustainable farming practices and providing post harvest infrastructure facilities apart from catering knowledge inputs to the farming community.

Assistance is provided to the farmers on plant material, seed and inputs, Drip and Sprinkler systems, Pre & Post Harvest infrastructure etc., through the schemes implemented by the Department under A.P. Micro Irrigation Project, State Horticulture Mission, Rashtriya Krishi Vikas Yojana, Oil Palm Development Programme and State Plan Programme etc.,

A.P. Micro Irrigation Project

Micro Irrigation Project was launched for encouraging micro irrigation, for conservation of precious ground water resources and conserving power. The objective of the project is effective water management (water saving and water use efficiency) to achieve vertical growth in productivity.

During 2010-11, an area of 1.30 lakh hectares has been brought under drip/ sprinkler irrigation. During 2011-12, an area of 75,963 hectares has so far been brought under Micro Irrigation.

State Horticulture Mission

State Horticulture Mission, a Centrally Sponsored Scheme, is being implemented in the State by the State Horticulture Mission. The Mission was launched on 3rd November 2005 to promote holistic growth of the horticulture sector through an area based regionally differentiated strategies. The focus of the programme is to provide comprehensive development of all the sub-sectors of horticulture so as to provide additional income to the horticulture growers**.** This programme is under implementation in 18 districts (except Hyderabad, Vizianagaram, Visakhapatnam, East Godavari and Krishna districts) and two tribal areas of Rampachodavaram of East Godavari and Paderu of Visakhapatnam districts.

During 2010-11, an amount of Rs. 128.14 crores was utilized for implementation of various activities like establishment of new gardens, rejuvenation of senile gardens, IPM/INM, HRD, Organic farming, farm mechanization and Post Harvest Management etc. During 2011-12, an amount of Rs. 134.00 Crores is utilized so far for implementation of SHM programmes.

Organic Farming / IPM / INM

IPM and INM have played an important role in quality enhancement by control of pest and diseases in horticultural crops. By adoption of IPM / INM, the quality of the produce is increased by reducing the incidence of Mangu in Sweet Orange and Mango, and BBD in Pomogranate. Quality enhancement of the produce was also achieved by using bio-inputs like T.Viridae, Pseudomonas, Neem Oil etc. which reduce the pesticide residues thereby enhancing the market price and also reduces in the cost of cultivation.

Similarly, Organic farming has contributed to enhancement of quality, despite its marginal impact on the productivity. Quality and shelf life have shown an uptrend with the interventions of organic farming in the horticultural crops. The organic produce is fetching 10% to 30% premium price in the market compared to non-organic agri-produce.

900 vermi compost units were sanctioned during 2010-11 and organic farming was taken up under horticulture crops in an area of 3,000 Ha., for encouraging adoption of organic farming. INM / IPM under Fruits / Spices is taken up so far in an area of 13,450 Ha., taken up during 2010-11.

Production of Quality Plant Material

Quality plant material plays a vital role in sustainability of the gardens especially

perennial fruit crops. To cater to the requirement of plant material for bringing additional areas with improved varieties and rejuvenation programmes, small and model nurseries were encouraged to produce quality plant material by providing assistance for infrastructure under NHM.

30 Horticulture farms and 144 nurseries were established and producing around 16 lakh and 150 lakh quality plants. Nursery Act was introduced for regulation of supply of quality plant material to farmers.

Post Harvest Management (PHM)

Horticulture crops are highly perishable in nature and require special attention with respect to their harvesting, handling, packaging, storage and processing operations. The concentration is on providing pre-harvest tools and development of post harvest infrastructure facilities like Pack houses, Cold storages, Refer Vans, Ripening Chambers etc. During 2010-11, assistance was provided for 13 Cold storage units, 25 Ripening Chambers and 560 Turmeric Drying Platforms.

Post harvest management of horticultural produce is an important activity for capturing value by way of reducing losses and increasing the quality.

Several measures were taken up during the period of SHM to preserve the quality of various horticultural products and also for primary handling, storage and transportation.

Particularly, establishment of Ripening Chambers for Banana helped realizing better price at the farm gate.

Establishment of Cold storages with NHM subsidy is catering to agriculture produce as well as to Horticulture produce fetching better market price to the farmers.

Pollution free new technologies in Cashew processing like Steam boiling method which increase the quality of the produce are encouraged.

Human Resource Development

Andhra Pradesh Horticulture Training Institute was established to impart knowledge of new technologies / innovations to the stakeholders (farmers, extension officers, exporters and processors) and to build the capacity of farmers i.e, human resource development through training programmes / workshops/exposure visits identified as one of the critical input for growth of horticulture sector in the state. Seven RHTIs were established at regional centers to impart trainings to the farmers.

During 2010-11, a total of 16,300 farmers were trained at HTI & RHTIs and exposure visits were organized for 1178 farmers. During 2011-12, so far 16,675 farmers have been trained.

Rashtriya Krishi Vikas Yojana (RKVY):

Rashtriya Krishi Vikas Yojana (RKVY) (Central Sector Scheme) has been launched in the State, in 2007-08 and implementation horticulture sector is started from 2008-09 onwards.

This programme aims to achieve 4% annual growth and to increase public investment like infrastructure etc., and also to provide flexibility and autonomy in the process of planning and executing schemes in the horticulture sector.

The RKVY scheme in Andhra Pradesh is projected mainly to implement the major activity in non-SHM districts, while the projects under integrated vegetable production which are not covered in SHM are being implemented in all the 22 districts.

During 2010-11, an amount of Rs. 1662 lakhs is utilized for implementation of RKVY programme under Fruits & Vegetable crops. During 2011-12, an amount of Rs. 1516.25 lakh has been spent so far.

The Government of India as a pilot project launched a scheme “Vegetable Initiatives for Urban Clusters” for the year 2011-12 with an out lay of Rs.17.00 crores.

The implementation areas are identified as Medak, Mahaboobnagar and Ranga Reddy districts covering 77 mandals which are the main feeders of vegetables for the Metro City Hyderabad.

The salient features of the scheme are area expansion of Vegetables with Hybrid Vegetable Seed, Promotion of Farmers associations with establishment of collection centers, assistance for pandals & trellis, Creation of Post Harvest Infrastructures like Pack Houses, Zero energy cool chambers, Onion Storage Structure and small shade net

nurseries raising to cater to the needs of seedlings for Vegetable Cultivation.

Rashtriya Krishi Vikas Yojana (Oilpalm)

Keeping in view of its high oil yielding nature and to augment the domestic requirement, the Government of India is promoting Oil Palm development programme since 1992 under TMOP and from 2004 under ISOPOM.

During the year 2011-12, the Government of India has launched a Special programme to bring additional area of oil palm under Rastriya Krishi Vikas Yojana (RKVY) with a target of 40,000 Ha to Andhra Pradesh with the financial outlay of Rs.19200 lakhs with 100% central assistance.

Oil palm Development Programme (ISOPOM)

Two oil palm seed gardens were established in the state - one by the department and the other in the private sector. The seeds are produced at these gardens under the technical guidance of National Research Centre (NRC) Oilpalm, Pedavegi Center in West Godavari district and supplied to Oilpalm companies.

11 companies with a processing capacity of 134 MTs per hour are working with the Government under this program. The companies have buyback arrangements for purchase of fresh fruit bunches (FFB's) from the farmers in the factory zone at the rate fixed by the Government.

Development of Fruits & Plantation Crops:

Cashew being a remunerative crop, cultivation is being encouraged on a large scale with high yielding grafts and strains/ selections for improved productivity.

Awareness programmes are being conducted on crop diversification, inter cropping and promotion of vermi compost, value addition etc, for sustainability of coconut gardens.

Spices

The need of the hour is effective transfer of technology to the progressive farmers. The department supplied quality plant material and other post harvest infrastructure requirements to reduce the post harvest losses. During 2010-11, assistance is provided for taking up 257 D-Plots under Turmeric, Ginger and Garlic.

Floriculture

Floriculture sector has been identified as one of the focus segments of Horticulture. Due to growing demand for flowers in domestic and export market, Flower cultivation is a profitable prospect for the farmers.

During 2010-11, assistance is provided for erection of shade net houses for raising of seedlings 22,000 Sq. Mtrs and Green Houses 5,700 Sq. Mtrs. Under Area Expansion, an area of 63.50 ha., has been achieved so far against a target of 155 ha., for the year 2011-12.

Landscape and Ornamental Gardening

With a view to transform the urban environment into pollution free and pleasant surroundings, revitalization of Public Gardens is being taken up with an aim to develop model landscape gardens. As a part of beautification, both hard and soft landscape works are taken up.

Exports:

Exports worth of Rs.542.05 crores of horticulture commodities has been made during 2010-11.

The details of exports in quantity, value and destination of horticultural crops are given in Annexure 5.17.

Information Technology and Data Management

Information Technology is the key for effective communication and dissemination of information. The department is connected to APSWAN and receiving data online through dialup network from district office The department has taken up development of software packages for compiling area and progress on production of horticulture crops, Andhra Pradesh Micro Irrigation Project etc. The department Website aphorticulture.com is being maintained. Tele-Conference facility is developed for effective communication and for obtaining immediate progress reports.

A base line survey has been conducted by the department to create a data base of horticulture growers in the state by utilizing the services of Government and Non Government organizations.

* * *

ANIMAL HUSBANDRY

5.4 Andhra Pradesh has some of the richest livestock resources in the Country and is one of the most advanced states in Animal Husbandry activities. The Livestock play a vital role in Socio-economic and cultural life of our people through providing gainful employment to a large number of small and marginal farmers and enhancing their economic status.

For more than 5 decades since formation of Andhra Pradesh, Animal Husbandry Sector has achieved phenomenal growth in its different spheres. Especially with the launching of several five year plans, Animal Husbandry activities were reoriented towards increased production of livestock products like Milk, Meat and Eggs, besides providing adequate health care and control of diseases.

With its livestock resources and gradual enlightenment of the farmers coupled with dedicated and sustained efforts of the Government, the State got elevated to a prominent position in the Country in the Livestock Sector over the years. From a humble beginning of backyard poultry it has grown to a stage of dynamic industry, the Milk production also made quantum leap and Meat production increasing substantially as well.

Effective Veterinary and Animal Husbandry services rendered over the years have been the main instrument in achieving these production levels. Economic support programs like distribution of milch animals, sheep and poultry units have enormously helped the rural masses in bridging their income gaps. Besides conserving domestic biodiversity, it is a means of producing food in dry lands without depleting ground water resources. The sub-sector provides sustainable daily income to nearly 60 lakh families even during adverse seasonal conditions. A sizable number of families owning sheep and goat have already been covered with 100% livestock insurance.

The schemes of the Animal Husbandry department have been formulated in pursuance to the well-laid National policies to improve the Livestock production, to fight protein hunger and to improve nutritional standards of human population and also provide technical support for the maintenance and improvement of livestock.

Livestock population in A.P
(as per 2007 census)

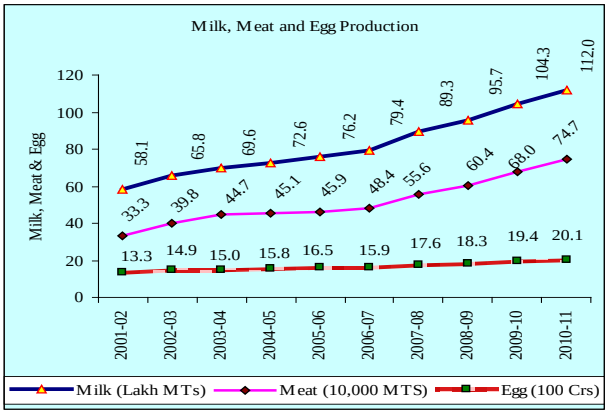
Catgory		No.in lakhs
Cattle	-	112.23
Buffaloes	-	132.72
Sheep	-	255.39
Goat	-	96.26
Pigs	-	4.39
Poultry	-	1239.85

The buffaloes and sheep population has a steady growth over the years whereas the poultry population has steep increase particularly from 1999 census onwards. The livestock population over various census periods is given in Annexure - 5.18.

With the increase in the livestock population, the production and availability of nutritious food to the people and supplemental income to the farmers has increased. Livestock activity contributes 5.6% in the Gross State Domestic Product and it forms 26.0% in Agriculture sector in 2010-11(Advance Estimates).

The production of Milk, Eggs and Meat is as follows:

Item	Unit	2009-10	2010-11	Apr-July.11
Milk	000MTs	10430	11204	3222
Growth	%	9.0	7.4	
Eggs	Cr.Nos	1939	2013	557
Growth	%	5.7	3.8	
Meat	000MTs	680	747	210
Growth	%	12.6	9.8	



The production estimates of milk, eggs and meat are given in Annexure 5.19.

Salient Features of various programmes:

- Under Animal Husbandry Sector, the Government of India have sanctioned "Prime Minister's Package" for rehabilitation of farmers in (16) suicide prone districts of Andhra Pradesh with a view to provide supplementary avenues of income through diary farming since 2007-08 and inducted 48,808 high pedigreed milch animals and heifers from other States with the 50% subsidy of Rs.73.21 Crores.
- For the welfare of BPL families, the Government is implementing "Pasu Kranthi Pathakam" since 2007-08 and inducted 73,753 high pedigreed milch animals and heifers from other States with the 50% subsidy of Rs.100.65 Crores.
- Rashtriya Krishi Vikas Yojana is being implemented in the State since 2008-09 with 100% Central Assistance during 11th Five Year Plan to achieve 9% growth rate in Animal Husbandry Sector and induced 22,099 high pedigreed milch animals and heifers from other States with the 50% subsidy of Rs.29.40 Crores.
- The Government of Andhra Pradesh have introduced a scheme "Jeeva Kranthi Padhakam" since 2007-08, to support BPL families by supplying Breeding Rams, Ram Lamb Units and Sheep and Goat Units under Chief Minister's Package, to enhance the economic status of the targeted families. Under this Scheme 48228 Breeding Rams, 2476 Ram Lamb Rearing Units and 2727 Sheep and Goat Unit were grounded so far.
- In order to guard sheep growers from losses, due to blue tongue disease, the sheep insurance programme has been taken up since 2006-2007 and being continued during 2010-11 also.
- The Government of India has sanctioned centrally sponsored Livestock Insurance Scheme. Under this scheme productive milch cattle will be insured on 50% subsidy basis. It is being implemented in eight districts of the State, during the year 2006-07 and continued during 2010-11.
- A Programme of Mass Vaccination against Foot & Mouth disease in animals was implemented in Chittoor, Ananthapur, Rangareddy and Medak Districts with GOI assistance, to capitalize export market, during 2006-07 and continued during the year 2010-11. The Programme is extended to all the Districts in the State during the year 2009-10 under ASCAD and RKVY.
- Deworming the Sheep belonging to shepherds of all categories of farmers twice in a year on free of cost basis was taken up during the year, resulting in reduced early lamb mortality and improved growth rate due to increased disease resistance in sheep and continued during the year 2010-11.

Animal Health Activities:

Animal Health activities play an important role in the growth of livestock Industry, since the livestock production programmes will not be successful without providing necessary safeguards against hazards of Animal diseases. The department has taken up strengthening the existing institutions to improve the quality of Animal Health Services by providing facilities for surgery, Disease Investigation and treatment and therefore Polyclinics were established at district head quarters.

To effectively organize Animal Health Service to support the production program and prevention and control of livestock diseases, every mandal has been provided with a veterinary graduate.

Five types of regular institutions viz., 20 Veterinary Polyclinics, 3 Super Specialty Veterinary Hospitals, 281 Veterinary Hospitals, 1823 Veterinary Dispensaries, 42 Mobile Veterinary Clinics and 3110 Rural Livestock Units are functioning mainly to attend to animal health needs through out the State. 270.73 Lakh cases were treated, 4.10 lakh castrations were done and 478.73 Lakh vaccinations were conducted by these institutions during the year 2011-12 (up to 30-9-2011). Proper diagnosis of disease is half the treatment. Towards this end, 22

Animal Disease Diagnostic Laboratories (ADDLs) are functioning.

The details of Animal Husbandry institutions are given in Annexure 5.20.

Veterinary Biological Research Institute, Hyderabad:

There are two divisions in the Institute, i.e., Biological Products division and Disease Investigation division. Each division is functioning under the control of separate Joint Directors.

i) Biological Products Division:

The main objectives are

- To prevent the losses of valuable livestock due to various diseases, supply of vaccine to the institutions to protect the livestock is essential. The Veterinary Biological Research institute, is the main source in the State for the production of Viral and Biological Vaccines and is producing nine types of viral and bacterial vaccines.
- productivity of different vaccines in large quantities of safe and potent vaccines for protection of livestock and poultry against infectious & contagious diseases.
- Develop/adopting new techniques in the manufacture of Biologicals in bulk quantities.
- Boosting the economy of the farmer community by taking mass preventive vaccinations for protecting the livestock and poultry.

During the year 2010-11, 788.22 Lakh doses and during 2011-12 (up to 30-9-2011) 496.66 Lakh doses of various types of vaccines have been produced by the institute.

New Vaccine Production Division

The vaccine production facility at VBRI has been producing ten different types of animal vaccines for the last 60 years and supplies vaccine free of cost to the farmers of Andhra Pradesh. All these years, the vaccines are being produced under the license issued by the Director General of Drug Control Administration, India.

Of late, it is mandatory to upgrade the vaccine production facilities in compliance with Good Manufacturing Practice (GMP) of Schedule 'M' of Drug and Cosmetics Act 1940 in order to renew the drug license.

In conformity to the GMP standards, VBRI has modernized vaccine production facility in a phased manner to fulfill the drug regulations with the funds provided under different schemes like NABARD, ASCAD and state plan with total amount of Rs. 1282.00 Lakhs.

ii) Disease Investigation Wing:

Control and elimination of disease depends upon prompt and correct diagnosis of the disease. A team of Disease Investigation Officers and subject matter specialists are attending to this important item of work..

The main objectives of this wing are:

1. Disease diagnosis and investigation of disease conditions among Livestock, Sheep, Goats, canines, pigs, poultry and captive wild animals by subjecting the morbid materials to various laboratory diagnostic tests like cultural, biological, serological, histopathological and other diagnostic tests including latest molecular biological techniques.
2. To collect and analyze the epidemiological data of the disease occurrences in the State and take measures for control and eradication.
3. To attend outbreaks, notifying areas, advising the field staff for intensive follow-up in tackling the disease occurrences and collection of relevant materials for laboratory diagnosis and suggesting measures for the containment of the diseases.
4. Imparting training to the field Veterinarians on latest techniques in diagnosis of a disease.

Veterinary Biological Research Unit, Samalkot:

A mini vaccine production unit at Samalkot, East Godavari district is functioning to meet the increasing demands of coastal districts. During the year 2010-11, 260.55 Lakh doses and 268.12 Lakh doses during 2011-12 (up to 30-9-2011) of various types of vaccines have been produced by this institute.

Government Livestock Farms:

To support the cattle development activities in the state for producing pedigree bulls, the

department has established Cattle breeding farms at suitable places in the State.

At present seven farms and one Fodder Seed multiplication farm are functioning under the control of this department. The livestock maintained by the Government Livestock Farms consists of 496 Ongole breed. Ongole cattle are being maintained at Cattle Breeding Farm, Chadalawada in Prakasam district and composite Livestock farm, Chintaladevi in SPS Nellore District.

During the year 2010-11, 44 breeding bulls were supplied to the Frozen Semen Bull Stations/ farmers.

Andhra Pradesh Livestock Development Agency:

The State Government has launched a massive programme of Restructuring of breeding operations in cattle under the National Project for Cattle and Buffalo Breeding (NPCBB) scheme. To implement this programme, Andhra Pradesh Livestock Development Agency (APLDA) has been established and started functioning from April, 2000. The achievements of APLDA from April to September,2011 are as follows:

i) **Expansion of Artificial Insemination activity:**

The Artificial Insemination (AI) facility is available in 5143 Animal Husbandry departmental Institutions in the State, out of which 2234 centers are provided with Mobile AI facility. To provide doorstep AI facility to the farmers, 3280 private AI centers (Gopalamitra Centers) have been established up to the year 2010-11 by training educated unemployed rural youth. During the year 2011-12, 850 more Gopalamitra Centres were started functioning. At present 4130 Gopalamitras are functioning. Apart from departmental and Gopalamitra centres, 652 Private AI Centers are operated in the state by JK Trust, BAIF and Dairy Union etc.

ii) **Performance of Artificial Insemination (AI) centers and AI activity:**

During the year 2010-11, all the AI centers in the State have conducted 51.80 Lakh inseminations and 18.67 Lakh improved progeny are born. 2,011 Gopalamitras have conducted 19.25 lakh of inseminations and 5.96 lakh improved progeny are born as on March, 2011.

During 2011-12 (up to 30.09.2011), 22.40 lakh Inseminations are conducted by the AI Centers in the State and 8.66 lakh improved progeny are born. The Gopalamitras conducted 10.47 lakh inseminations and 3.37 lakh improved progeny are born.

iii) Production, distribution and utilization of Frozen Semen (FS):

In order to meet the demand of Frozen Semen due to expansion of AI activity, the existing four Frozen Semen Bull Stations have been strengthened to produce at least 70 Lakh doses of Frozen Semen per annum. 22 District Livestock Development Agencies (DLDA) which are involved in distribution of Frozen Semen and Liquid Nitrogen to the village level AI centers, were also strengthened under APLDA, for supply of Liquid Nitrogen and Frozen Semen to all the AI Centers and to monitor AI activity. One 10,000 Liters capacity LN Transport Vehicle and six 6,000 Liters. Vertical Storage tankers are purchased to strengthen the cold chain management.

During the year 2010-11, the four Frozen Semen Bull Stations have produced 63.89 Lakh doses of Frozen Semen and distributed 67.50 Lakh doses. 203 breeding bulls are stationed in four semen stations.

During the year 2011-12(up to September 2011), these four Frozen Semen Bull Stations have produced 28.22 Lakh Frozen Semen Doses are produced and distributed 28.94 lakh doses.

An exclusive laboratory (Andrology laboratory) at Visakhapatnam will undertake the Quality Control of Frozen Semen Produced at Frozen Semen Bull Stations. Bovine Breeding Complex, Nekarikallu has been utilized to rear the young bulls to supply either to Natural Service or Frozen Semen Production in the State. At present 129 bulls are under rearing.

iv) Organization of Fertility Camps- Pasu Vignana Sadassus:

During the year 2010-11, 11048 fertility camps were organized and 3.91 Lakh infertility cases are treated. During 2011-12 (upto September, 2011), 4325 Fertility camps are organized.

v) Implementation of Livestock Insurance Programme:

Government of India has accorded permission to implement the Livestock Insurance scheme in the state from 2010. 71,937 animals are insured during the year 2008-09 & 2.62 Lakhs animals are insured under this scheme during 2009-10. During the year 2010-11, a total of 2,03,970 milch cattle are insured and 1190 claims were made and 11,153 claims were settled. During the year 2011-12(up to September' 2011), 8609 milch cattle were insured and 2754 claims were made and 2680 claims were settled.

vi) Prime Minister's Package:

Under this package, Providing of Cattle and Buffalo Breeding services have been implemented by APLDA in 16 identified districts with the financial assistance of Government of India. The scheme was started during the year 2006-07 and a total of 33.43 lakh doorstep inseminations were conducted up to March' 2011. During 2011-12 (up to September'2011), 6.73 lakh Artificial Inseminations were conducted and 2.04 lakh improved progeny born under this package.

Performance of Frozen Semen Bull Stations is shown in Table 5.10.

Table 5.10
Performance of Frozen Semen Bull Stations

S.No	Item of Work	2010-11	2011-12 (up to 30-9-2011)
1	No. of Bulls Stationed		
	a) Exotic/ Crossbred	57	69
	b) Indigenous	10	12
	c) Murrah	160	146
	Total	**227**	**227**
2	Quantity of Frozen Semen Produced (Lakh Doses)		
	a) Exotic/ Crossbred	19.05	8.86
	b) Indigenous	4.02	1.82
	c) Murrah	40.82	17.53
	Total	**63.89**	**28.21**
Source: Animal Husbandry Department			

Performance of district livestock development agencies is shown in Table 5.11.

Table 5.11
Performance of District Livestock Development Agencies

S.No	ITEM OF WORK	2010-11	2011-12 (up to 30-9 2011)
1`	Quantity of Frozen Semen Supplied (Lakh Doses)		
	a) Exotic	27.04	15.65
	b) Indigenous	5.81	3.41
	c) Murrah	34.66	14.18
	Total	**67.51**	**33.24**
2	No. of Artificial Inseminations Done(in Lakhs)		
	a) Exotic/ Crossbred	15.29	7.76
	b) Indigenous	2.91	1.90
	c) Murrah	33.63	12.07
	Total	**51.83**	**21.73**
3	Artificial Insemination Centers Covered (Nos.)		
	a. Departmental A.I Centres	5143	5143
	b. Gopalamitras	3280	4130
	c. BAIF	115	115
	d. APDDC	137	137
	e. J.K. Trust	429	397
	f. Others	8	8
	Total	**9112**	**9930**
Source: Animal Husbandry Department			

Feed and Fodder Development:

High yielding and nutritious fodder are essential for scientific and economic management of livestock particularly to crossbreeds. It is the endeavor of the department to popularize and propagate the high yielding fodder crops with the farmers on available arable and non-arable land, as it is essential for the scientific feeding of the livestock for the increased productivity of milk and mutton. To intensify the activity, fodder slips and improved varieties of fodder and pasture seed has been supplied to the farmers with most encouraging results. During the year 2010-11, 8.67 Lakh acres and during the year 2011-12 (upto 30-9-2011) 4.25 Lakh acres were brought under fodder cultivation.

Fodder development programmes are being taken up under regular plan schemes to enhance the milk production in the state

Supply of Fodder Seed under Various Schemes:

Under RKVY:

Under RKVY, 1277 MT's of fodder seed has been procured for supply to the eligible

farmers on 75% subsidy for fodder development activities.

Central Minikits Testing Programme:

During the year 2011-12, a total of 31,317 minikits were supplied (legumes & non legumes) during Kharif free of cost. During Rabi, 12500 minikits comprising of Maize, Jowar and Lucerne have been distributed.

Centrally Sponsored Schemes for Fodder and Feed Development:

The Govt. of India have released Rs. 6.22 crores for Fodder & Feed development under Centrally Sponsored Schemes. The components include:

Grass land development:

Grass land area allotted to Government Livestock Farms viz., Chadalawada, Chinthaladeevi, Reddipalli, Penugonda and Banavasi.

Power driven chaff cutters: Assistance under the scheme will be provided as 75% Central Govt. as one time grant out of the total cost of Rs. 20,000/- per unit or 75% cost of the chaff cutters, whichever is less. Balance 25% funds are to be met by the beneficiaries. It is proposed to supply 550 No's with Rs. 82.50 Lakhs.

Silage making: 100% Grant-in aid by the Central Government will be provided for establishment of new silage making Unit @ Rs. 1.05 lakhs (Rs. 75000/- for construction work of trench silo pit and Rs. 30,000/- for purchase of power driver chaff cutter) per unit or the cost of the silo pit collected, whichever is lower.

Fodder Seed Procurement and Distribution Rs.324.25 Lakhs are allotted for Fodder seed procurement & distribution

Azolla cultivation and Demonstration. Assistance under the scheme will be provided @ of Rs.5000/- (50% of total cost of Rs. 10,000) per unit or 50% cost of the Azolla unit and training, which ever is lower. Balance 50% funds are to be met by the beneficiaries. A total of 2500 Units are proposed. The scheme is in progress.

Production of Fodder:

Distribution of improved varieties of fodder seed combing Legume & Non-Legume for 1 acre. It is proposed to cover 1,23,400 acres of land under fodder Development to cover 1,23,400 beneficieries with Kits will be supplied to the farmers on free of cost.

Adoption of appropriate technologies for Post -Harvest Management

It is proposed to distribute 2800 Power driven Chaff cutters on 50% subsidy to cover 2800 beneficiaries.

It is proposed to distribute 800 Tractor mounted /operated chaff cutters to SHG/UnemployedYouth/Dairy Cooperatives. on 50% Subsidy to cover 800 beneficiaries in coarse fodder available Districts

It is proposed to construct 400 Silage Making Units of 6.00 MT's capacity to cover 400 beneficiaries with dairy units. The scheme is in progress.

Watersheds

The project is being implemented in 12 districts in the state. AH activities have been proposed under production Improvement Systems (PIS).

MGNREGS:

The main objectives of the scheme are Rural Employment, Creation of resources, increase the production and Drought proofing. Fodder development and conservation project is identified under Drought proofing.

Five types of fodder works are being implemented under MGNREGS as follows.

Type of work	Estimated value Rs in lakhs
Raising of Fodder Maize or Fodder Jowar in one acre	6520
Construction of Silo Pit	
with RR Masonry and Preparation of of silage	17206
with Brick Masonry and Preparation of of silage	15260
Raising of Perennial Fodder Nursery in one acre for two years	19158
Raising of perennial fodder (APBN/ Co-1/Co-2/Co-3) in one acre for two years	23865
Raising of Silvi pasture in one acre	14295

Fodder works progress in the state as on Nov 2011		
Item of work	**No of works**	**Value Rs in lakhs**
Estimates Generated	107327	22432
Administratively Sanctioned	84351	17015
Commencement Letters Issued	28730	5639
In-Progress	7983	192

Sheep Development

Sheep rearing is an important livelihood activity in Scanty and low rainfall areas and agriculturally less developed areas. Scientific breeding is being advocated in the sheep farms for the production of breeding rams with improved quality of mutton and wool. The rams are distributed to interested breeders for upgrading their local sheep flocks for improved production both quality and quantity.

To achieve the objective, 3 Sheep Farms are functioning. The farm produced Pedigree rams are being distributed to the sheep breeders to upgrade their stock for improved quality of meat and increased meat production.

As per 2007 census, Andhra Pradesh has 255.39 lakh Sheep population and stands first in the country and 96.26 lakh Goats in the state and stand at eigth place at all India level. About 7 to 8 lakh rural families belonging to socially and economically backward classes are involved in sheep & goat rearing.

AP Sheep and Goat Co-op. Federation Ltd:

The following schemes are being implemented by the Federation

i) Jeeva Kranthi Pathakam
ii) Supply of Breeding Rams & establishment of Market Yards under RKVY
iii) Sheep Insurance
iv) Bhed Palak Bhima Yojana (Central Wool Development Board) and
v) NCDC Scheme on production and rearing of Livestock by the District Sheep Breeders Cooperative Union, Kadapa.

The A.P. Sheep & Goat Development Cooperative Federation Ltd shall be the 'Implementing Agency' for implementation of schemes relating to sheep and goat development activities in the State with the officers and staff available under the following schemes/offices.

- ISDP Schemes located in 10 districts,
- Office of the AD(Sheep & Goat Development), Hyderabad,
- Large Scale Sheep Breeding Farm, Mamidipally, RR district.
- Sheep Unit at Composite Livestock Farm, Chintaladeevi, Nellore district.
- Sheep Farm, Penukonda, Ananthapur district.

Sheep Insurance:

To cushion the adverse impact upon livelihood of the poorer sections of the family dependant on sheep rearing. Government of A.P have taken up sheep insurance programme during 2006-07 and continued. The details of sheep insurance coverage are shown in Table 5.12

Table 5.12
Sheep Insurance

Year	Sheep insured (No. in lakhs)			Govt. Share Rs. in Lakhs
	Adults	Young ones	Total	
2007-08	5.92	0.47	6.39	98.52
2008-09	2.20	0.11	2.31	132.42
2009-10	2.88	0.12	3.00	182.60
2010-11	2.09	0.11	2.20	129.94

Source: Animal Husbandry Department

Exgratia:

In case of accidental death of sheep rearer due to unavoidable life risks while in the activity of rearing of sheep, the Government have considered an Exgratia of Rs. 1.00 lakh will be paid to the family members of the sheep rearers in the state.

1. Special Livestock and Fisheries Package for the Suicide prone districts:

Government of India has sanctioned 100 Goat and 100 Sheep units for 16 suicide prone districts of Andhra Pradesh for creating livelihood to the family members of the deceased person. Sheep & Goat units are supplied on 50% subsidy adhering to the guidelines of Jeeva Kranthi Pathakam.

An amount of Rs 101.5 Lakhs for 100 sheep & 100 goat units has been released for implementation of the scheme. Out of which an amount of Rs. 4,12,000 released for (8) Goat units and Rs.11,50,000 for (23) Sheep units to Warangal, Rs 6 lakhs for 12 Sheep units to Nalgonda and Rs 6.5 lakhs for 13 Sheep units to Kadapa districts.

Centralwool Developmental Board:
Bhed Palak Bima Yojana:

It is an insurance scheme for rearers of woolly sheep (Deccani Sheep) implemented through LIC. Total annual premium is Rs. 330 (Beneficiary will pay Rs.80, CWDB will contribute Rs. 150 and LIC will pay remaining Rs. 100). Benefits of the scheme: for Normal Death Rs. 0.60 lakhs, Accidental Death Rs. 1.50 lakhs, Permanent Disability due to accidents Rs.1.50 lakhs and Partial Disability due to accidents Rs.0.75lakhs.

Till date, a total of 10228 Sheep breeders are insured and 21 claims are settled out of 32 claims under Bhed Palak Bima Yojana.

GOI/NABARD Schemes/Projects:

a. NCDC assistance to Govt. of Andhra Pradesh for Development of Small Ruminants by AP Sheep Federation:

The NCDC, New Delhi has conveyed is approval for sanction of financial assistance of Rs.79.67 Crore (Rs.59.75 Crore as loan and Rs.19.92 Crore as subsidy subject to availability from Govt. of India) to Govt. of Andhra Pradesh for Development of Small Ruminants by Andhra Pradesh Sheep & Goat Development Cooperative Federation Ltd., at a block cost of Rs.99.59 crore, in 3 districts viz., Chittoor, Mahaboobnagar and Prakasam, through the district unions. The Programme will be implemented in 300 Primary Sheep Breeders Cooperative Societies viz., 195 societies in Mahaboobnagar District, 60 societies in Prakasam District and 45 societies in Chittoor District.

The project cost is as detailed below:

Project Component	Outlay (Rs. in lakhs)
Ram Lamb Fattening & Breeding	720
Commercial Sheep Breeding Units	1800
Rearing Units	6000
Silage Making Units	928
Commercial Silage Making Unit	269
Mobile Service Units	42
Training	176
Computerization	24
Total	**9959**

b. Formation of JLGs with the assistance of NABARD:

A project proposal was submitted to NABARD for Integrated Small Ruminant Development in Andhra Pradesh. The Proposal was discussed in 2nd meeting of the State Level Sanctioning and Monitoring Committee (SLSMC) for Centrally Sponsored Schemes of Animal Husbandry. The NABARD has advised the Federation to take initiative for formation of JLGs to get them financed under individual/JLG mode. It is also informed that the NABARD would provide Financial Assistance of Rs.2000/- for each of the JLGs promoted by the Federation. The NABARD has also indicated for provision of funds for training of farmers and advised Federation to submit specific proposals for training of farmers on scientific practices, details of No. of programmes, location of programmes, No. of candidates to be trained and budget for the same on formation of JLGs. It is proposed to take up the programme in 3 pilot districts of Warangal, Kurnool and Nellore. The process is initiated by organizing a workshop with the stake holders.

c. Strengthening of Sheep Breeding Farms under Integrated Small Ruminant Development:

The Government of India on consideration of the proposal has conveyed the administrative approval of the project amounting to Rs.1.27 crores for revival/strengthening of two sheep

breeding farms located at Chintaladeevi in Nellore District and Penukonda in Ananthapur District and for organizing three Ram/Buck shows during the current financial year and released an amount of Rs.63.37 lakhs as first installment to the State for implementation of the project.

Piggery Development:

Pig farming has an important role in improving the socio-economic status of sizable population of the weaker sections of the society. Piggery plays an important role in meeting the demands of meat in rural as well as urban areas. To make available "Pork" at a reasonable price, Piggery development has been taken up in Andhra Pradesh under various programs like ITDA, DRDA and SC action plan etc, as the pig is a profile breeder with heavy litter size, short gestation period, and good feed conversion efficiency. 4 pig breeding stations are functioning in the state to make available the required pedigree Male and Female breeding stock to the beneficiaries under various schemes.

Piggery development project, Visakhapatnam:

The project is rendering necessary technical assistance to the beneficiaries in maintenance of fattening units, up gradation of desi pigs, supply of premixed feed, marketing of finished pork and pork products in the districts of Visakhapatnam, Vizianagaram and Srikakulam besides exercising technical control over the 4 pig breeding stations and promotion of Pork sales in the state. 34 pork booths are functioning in the districts of Visakhapatnam, East Godavari, Vizianagaram, West Godavari, Krishna and Srikakulam and the sales of pork and pork products are continued.

Pig Fattening Scheme (Buy back system)

The District S.C.Society has established a Piggery Complex at Krishnapuram a suburb of Visakhapatnam with permanent sheds to rehabilitate Scheduled Caste people through Pig Fattening Scheme and 25 families are provided with L.W.Y weaners and fat pigs produced by them were taken back after attaining 70 to 80 kgs. live weight and each beneficiary is getting an amount of Rs.3,000/- to Rs.4,000/- p.m as remuneration and provided gainful employment.

Poultry Development:

Poultry farming in Andhra Pradesh is most dynamic and fastest growing segment of Agriculture Sector. The State occupies first rank in egg production and broiler production in the Country with an annual production of 2013 Crore eggs and 20 Crore broilers.

The Department is attending to the production and supply of poultry vaccines to protect against various diseases in poultry, besides extending modern technical know-how to the poultry farmers. The scheme Poultry Development contains the following components.

1. Assistance to State Poultry Farms:

The scheme of "Assistance to State Poultry Farms" is under implementation in Andhra Pradesh.

This scheme is implemented in Government Livestock Farm, Mamnoor, Warangal district during the year 2008-09. Vanaraja/ Gramapriya Multiplication Farm and Hatchery has been established and chicks are being supplied at present. Necessary arrangements are also made for training of members on Vanaraja/ Gramapriya birds management and benefits of the scheme. The objectives of the farm are:

- To produce and distribute rural oriental birds with low input technology.
- To provide nutritious and tasty poultry meat, eggs, to under nourished rural masses at an affordable price.
- To supply highly disease resistant and improved rural oriented birds like Vanaraja/ Gramapriya to small/marginal farmers, agricultural labourers, self-help women groups.
- To provide employment opportunities to rural youth/ women.
- To provide special training in profitable maintenance of rural poultry to the rural women/youth and there by increase their family income.
- To strengthen the poultry disease diagnostic facilities.
- To develop marketing infrastructure for sale of chicks, eggs and table birds.

It is proposed to establish 3 Vanaraja/Gramapriya Multiplication Centres in Utukuru village of Kadapa District, Alluru Village of Nellore District and Garividi village of Vizianagaram District under Centrally Sponsored Scheme. The work is under progress in these Centers. A new project with an outlay of Rs. 68 lakhs for Medak district is approved by the Government of India for the year 2011-12.

The ratio of investment for the project by Center and State is 80:20 respectively, the State Government have shown the land belonging to the farm as its 20% share

Out of total sanction of Rs. 251.92 lakhs, an amount of Rs. 237.92 lakhs is released out of which Rs. 81.92 lakhs are utilized. The GOI has revalidated an amount of Rs. 88.00 lakhs and released Rs. 68.00 lakhs during the year 2011-12.

2. Rural Backyard Poultry Development Programme:

The Government of India have sanctioned the Centrally Sponsored Scheme "Rural Backyard Poultry Development" in Andhra Pradesh with total outlay of Rs. 355 lakhs and released Rs. 177.50 lakhs as grant and Rs. 9.72 lakhs as loan component to NABARD, as first installment during the year 2010-11.

The project includes the assistance for infrastructure to the beneficiaries of BPL families for night shelters and other inputs (Rs. 750/- per beneficiary), and for 45 birds in a year to be distributed in 3 cycles at a gap of 16 weeks. A subsidy of Rs. 30/- per bird for 45 birds (3-4 week old) is provided under the scheme. Further, for rearing of Day-old-chicks to 4 weeks age, before distribution to beneficiaries, an intermediary structure called Mother Units are also included with a subsidy of 20%, 36% interest free loan from NABARD and 44% as beneficiary contribution.

In this system of backyard poultry, "the mother unit" will procure day old chicks from the Vanaraja Multplication Farms of the department, PDP, AICRP, private hatcheries etc., to rear them for a period of three to four weeks. These four-week-old chicks, which are vaccinated, fed and strong enough to survive the harsh rural conditions, are then distributed to below poverty line (BPL) families @ 20, 15 and 10 birds in three phases at a gap of 16 weeks. Each mother unit has to cover 300 beneficiaries. With the release of Rs. 177.50 lakhs, it is planned to establish 27 mother units to cover 8100 beneficiaries under the scheme. The number of chicks to be supplied will be 3,64,500.

With the release of first installment under the scheme, it is planned to implement the scheme in 6 districts of the state.

3. Poultry Farming under Prime Minister's Programme:

The Govt of India have sanctioned an amount of Rs. 104.00 lakhs for implementation of poultry development scheme under PM Special Package for 16 distress and suicide prone districts of the state during the current financial year 2010-11 and released Rs. 25.80 lakhs as first installment.

The scheme involves provision of 100 dual purpose low input technology birds under scavenging mode in two batches of 50 each to each beneficiary.

The total cost of each unit is Rs. 13,000/- with a subsidy of 50% and a ceiling of Rs. 6500/- per beneficiary.

Total beneficiaries to be covered is 1600 @ 100 per district.

Human Resource Development:

The training approach in the department was given a new impetus and direction. Training needs of both Veterinarians and Para-Veterinarians in the Department were identified; training action plans were drawn up and are being implemented. In order to meet the growing challenges and opportunities emerging in the livestock sector, the staff of the department needs to be competitive, committed and motivated to provide sound service delivery system. HRD wing in the Directorate is coordinating, monitoring, evaluating and implementing the need based training programmes to the staff of the department, with a view that training is a continuous activity and every employee working in the department would be exposed for one training course per year.

The department has launched three tier training system to meet the training demands of the staff at District, Regional and State level to address area specific needs of livestock and their owners. The Department has restructured its training Programmes for Veterinarians and Para Veterinarians at (3) State Level, (7) Regional Level and (20) District Level Training Centres. 1649 Veterinarians, 1827 Para Veterinarians, 360 Gopala Mitras and 2576 other staff are trained during 2011-12(upto Oct, 2011).

Special Schemes:

1. Prime Minister's Package:

"Special Livestock and Fisheries sector Package" of Government of India is being implemented to provide supplementary avenues of income to the small and marginal farmers who are more vulnerable to economic distress in the 16 suicide incident districts with a total outlay of Rs.247.07 crores.

Implementation Period: 3 years, i.e., 2006-07, 2007-08 and 2008-09. The implementation period is extended up to September 2011.

Components:

1. **Induction of High Yielding Milch Animals**: It is proposed to induct 16000 milch animals per year @ 1000 in each of the 16 districts, during the implementation period. A subsidy of Rs.15000/- per animal is provided by Government of India and remaining amount is through loan from banks. Each beneficiary will be provided with two milch animals, of which, one animal is provided initially and the 2nd animal after 6 months of the induction of the first animal.

2. **Rearing support for Female calves of inducted animals**: It is proposed to enroll 8000 female calves of the inducted animals per year @ 500 in each of the districts during the implementation period of three years.

The female calf of the inducted animal will be provided with rearing support for a period of one year @ Rs.20/- per calf to meet the cost of feed, fodder and health care for a period of one year (total of Rs.7300/-).

3. **Feed and fodder support for inducted milch animals:** All the inducted milch animals will be provided with feed & fodder support @ Rs.25/- per day per animal for a provided of period of one year.

4. **Health Care of inducted animals:** The Inducted animals will be provided with health care on free of cost for a period of one year for which an amount of Rs. 300/- is provided.

5. **Breeding Services:**

Artificial Insemination Services will be provided to the breedable animals including inducted milch animals on free of cost.

Oestrus Synchronization Programme is aimed at synchronization of heat in Cows and Buffaloes, which helps in augmenting milk production. This programme is taken up to cover the breedable animals on free of cost.

6. **Fodder Block making Unit**: Government of India have permitted for setting up of 100 "Mini Feed Mixing Plants" by conversion of 8 Fodder Block making units in addition to establishing of 2 Fodder block making units.

7. **Establishment of Bulk Milk Cooling Units:**

Bulk Cooling Units (BCUs) will be established for holding the milk to facilitate milk procurement. For every 1000 to 12,000 liters of milk producing cluster of dairy units, one MCU/BCU with unit cost of Rs.24.00 Lakhs as total grant, will be established.

State Milk Mission:

The Government has formulated a State Milk Mission envisaging an outlay of Rs. 6203 crore spreading over a period of next five years to enhance the production in the State.

II. Rashtriya Krishi Vikas Yojana projects (Animal Husbandry Sector)

Rashtriya Krishi Vikas Yojana (RKVY) is being implemented in the state with 100% Central Assistance during 11th Five Year Plan (2008-09 to 2011-12) with an objective to achieve 9% growth rate in Animal Husbandry Sector during 11th five year plan with a total financial outlay of Rs.399.28 crores in all the 22 districts except Hyderabad. Implementation Period is 4 years, i.e., 2008-09 to 2011-12.

Promotion of Mini Dairies for augmentation of milk production :

It is proposed to promote dairy units with 5 milch animals by providing 25% subsidy towards cost of milch animals**.**

A subsidy amount of Rs.43,750/- subsidy(25%) will be provided on each cross breed Cow unit and Rs.50,000/- on Buffalo unit. High yielding Crossbred Cows and Murrah buffaloes will be promoted in order to provide sustainable income to the beneficiaries from the sale of milk.

It is proposed to promote 8945 mini dairy units with a financial out lay of Rs. 42.19 Crores.

Rashtriya Krishi Vikas Yojana Sub Schemes -2011-12:

1. Production of Fodder and adoption of appropriate technologies for post-harvest management under accelerated fodder development programme. Technologies like power operated, Tractor mounted chaff cutters and silage making units for fodder processing and conservation would be promoted in the selected / targeted clusters and Mandals
2. National mission on protein supplements.

Ram Lamb Rearing:

It is proposed to promote Ram lamb rearing units to augment meat production in the state and to provide substantial income to the farmers by providing 50% subsidy up to Rs.14000/- per farmer. Under this one Ram Unit with 20 ram lambs to each beneficiary will be provided.

Cost of one ram lamb units: Rs.28000/-

Subsidy provided under RKVY: Rs.14000/- (50%)

5000 Ram Lamb Units will be promoted in State: 5000 Subsidy with an amount of Rs.7.00 Crores

3.Livestock Health and supportive Programmes:

In order to ensure good reproductive health, it is planned to conduct health, awareness & fertility camps in villages to improve the reproductive status to produce its progeny, health of livestock and also to bring awareness among farmers on livestock rearing techniques to augment maximum milk production.

4. Healthcare to sheep and Goats:

It is proposed to take up organizing Sheep health camps, disease prevention and control and deworming in sheep & Goat. It is proposed to take up production of vaccines & diagnostic and health & awareness camps.

III. Implementation of Chief Minister's Special Package

To uplift the BPL families, the Government have taken up the following programmes and also allocated the budget under plan schemes for implementation during the year 2011-12. The details of implementation of Chief Minister's Package is shown in Table 5.13.

Table 5.13
Status of implementation of Chief Minister's Package during the year 2011-12

Component	TARGET		Achievement
	Physical Nos.	Financial (Rs. lakhs)	
Induction of Milch animals, Supply of feed & Health Care	7381	1453	So far 430 milch animals inducted and supplied to beneficiaries.
Calf feed programme	2000	100	So far 300 beneficiaries covered
Pavala vaddi scheme for Sheep & Goat rearing	-	25	Budget is utilized for already functioning units
Pavala vaddi scheme for Milch animal rearing	-	50	
Pavala vaddi scheme for Poultry rearing	-	20	
Induction of Murrah heifers,CB heifers	2376	255	So far 4972 milch animals and 1126 heifers were inducted and supplied to the beneficiaries under RKVY programme
Induction of milch animals supply of feed and health care	12431	2509	

Source: Animal Husbandry Department

Calf Feed Subsidy (50%) Programme:

Under the programme, elite female calves born through A.I. will be selected and provided with feed on 50 % subsidy and health care to protect the elite germ plasm as well as to gain optimum growth rate to become good milk yielder. This programme will be implemented by the Animal Husbandry department under the Chairmanship of District Collectors in the state.

Unit cost is Rs.10,000 and subsidy of Rs.5000/- per calf will be provided and the rest of amount may be met from the bank loan or beneficiary contribution.

Pavala Vaddi scheme for Milch Animal / Broiler (Poultry)/Sheep and Goat Rearing under CM's Spl. Package:

Under this scheme, funds are provided as interest subsidy in the form of Pavala Vaddi to the beneficiaries/ SHG selected for milch animal /Sheep and Goat Rearing/ Broiler (Poultry) rearing.

Statement showing the number of animals inducted and subsidy utilized under Prime Minister's Package, Chief Minister's Special Package, RKVY and SCAP since 2007-08 to 2011-12 is shown in Annexure 5.21.

IV. Chief Minister's Jeeva Kranthi Pathakam:

Govt. of Andhra Pradesh have introduced a scheme "**Jeeva Kranthi Pathakam**" during 2007-08, to support the BPL families by supplying Breeding Rams, Ram Lamb Units and Sheep and Goat Units, under CM package, to enhance the economic status of the targeted families.

The scheme is continued to be implemented during 2008-09, 2009-10, 2010-11and 2011-12 also on 50% subsidy.

Units Grounded on 50% subsidy since beginning of the scheme upto Sept. 2011 are shown in Table 5.14.

Table No 5.14
Jeeva Kranthi Pathakam

Year	Total amount Utilized (50% as subsidy in lakhs)	Breeding Ram units	Ram Lamb units	Sheep and Goat units	Total units grounded
2007-08	198.95	10246	142	0	10388
2008-09	636.21	16635	697	1140	18472
2009-10	639.41	15495	846	1136	17477
2010-11	266.11	5005	681	348	6034
2011-12 (upto Sept. 2011)	53.14	847	110	103	1060

***

FISHERIES

5.5 Sustainable development of Fisheries can only be achieved through improvement of the quality, technical skills and management of human resource in the State, in consonance with the rapidly changing needs. This sub-sector occupies a predominant place in the Socio-economic development of the State as it contributes substantially to economic growth and income generation to lakhs of people. It is a significant employment generator source of nutritious food and foreign exchange earner for the State. About 1.4 million people are employed in the State in this sector either directly or indirectly recording faster growth than the crop and livestock sectors.

Andhra Pradesh ranks First in Brackish water shrimp production, First in Fresh water prawn production; second in Fresh water fish production, second in total value of fish and prawn produced and Fifth in Marine fish production. The State is contributing about Rs.3,000 Crores by way of marine exports, which is nearly 40% of the marine exports from India.

The objectives set for the development of the sector are:

- To ensure sustainable development
- To promote welfare of fishermen
- Promote investment to create infrastructure
- To promote fisheries value chain and boost exports.
- Setup institutions to build and multiply skills.

Fish/Prawn Production:

During 2010-11, 15.60 lakh tonnes of fish and prawn is produced in Andhra Pradesh.

The total Fish and Prawn production during the first six months period of April to August, 2011 is 5.64 lakh tonnes against the annual target of 16.50 lakh tones for 2011-12. The contribution of Fisheries sector in GSDP 2011-12 as per Advance Estimates is expected to be 2.54% at constant prices.

The details of Fish and Prawn production are shown in Table 5.15 and given in Annexure 5.22.

Table – 5.15
Fish and Prawn Production
(Lakh Tonnes)

Year	Marine	Fresh water	Brackish Water shrimp	Total Production	Growth rate %
2007-08	2.54	7.55	0.47	10.56	12.2
2008-09	2.91	9.35	0.26	12.52	18.5
2009-10	2.93	9.70	0.30	12.93	3.3
2010-11	2.90	12.27	0.43	15.60	20.64
2011-12 Target	3.01	12.99	0.50	16.50	
2011-12 Acht. Up to Aug 11	3.20	4.69	0.26	5.64	

Source: - Fisheries Department

The production of fish/prawn in the state has increased constantly from 9.41 lakh tonnes in 2004-05 to 15.60 lakh tonnes in 2010-11. This has become possible because of large scale involvement of farmers who have taken up intensive pisciculture in delta areas of the state; driven by the robust market especially in Kolkata and North-Eastern States.

Important Schemes/Programmes:

Registration of Coastal Aquaculture:

As per Government of India Coastal Aquaculture Authority Act and rules, 2005 the area that comes under the purview of Coastal Aquaculture Authority (CAA) is the area of land with in a distance of two kilometers from the high tide line (HTL) of seas, rivers, creeks, and back waters.

In respect of the Farms up to 2 ha water spread area, the district level committee recommends the applications directly to the CAA for consideration of registration under intimation to the State level committee. Farms above 2 ha. water spread area, DLC has to recommend the applications to State Level Committee for further recommendation to CAA for consideration of registrations. As of now, CAA issued registrations of certificates to 19,665.79 ha which includes both below and above 2 ha area.

Registration of Fresh Water Aquaculture:

Fresh Water Aquaculture in the state has to be undertaken by the interested farmers duly obtaining permission from the department of Fisheries. Till now registration certificates are issued covering 56,387 ha area of Fresh water aquaculture in the state.

Housing scheme for fishermen - (CSS-50:50) The Housing Programme for fishermen is converged with the INDIRAMMA. Under the scheme, a subsidy of Rs. 20,000/- will be released to the fishermen beneficiaries who have availed the housing scheme under INDIRAMMA. The Department has identified 13,690 fishermen beneficiaries to whom the houses are sanctioned under INDIRAMMA for which an amount of Rs. 2738.00 lakh is required. An amount of Rs. 400.00 lakh sanctioned by the GOI and an amount of Rs. 2338.00 lakh is required additionally to cover all families.

Construction of Fish Landing Centers

The Government have sanctioned Rs. 1409.68 Lakh for construction of the following four Fish Landing Centers under Assistance to States for Developing Export Infrastructure and other allied activities(ASIDE)funds ie., (i)Vodalarevu, East Godavari District (ii) Laxmipurampalle palem, Krishna District (iii) Gundaipalem, Prakasam District (iv)Uppalanka, East Godavari District

Group Accident Insurance Scheme for Fishermen (CSS-50: 50)

The annual premium under the scheme is Rs.29/- per person. The premium is shared

equally by Central and State Governments. The Government of India is releasing their share directly to the National Federation of Fishermen Cooperatives, New Delhi for payment of premium to the Insurance Company. The Ex-gratia payable is Rs.1,00,000/-in case of death/ permanent disability and Rs.50,000/- in case of partial disability. In addition to insured amount, the State Government is providing an ex-gratia of Rs. 1.00 Lakh to the families of deceased fishermen.

Relief-cum-SavingsScheme-(CSS-50:50)

The Scheme envisages inculcating the habit of saving among the fishermen and to provide relief to fishermen depending on marine fishing and licensed fishermen of reservoirs/rivers. The fishermen has to save Rs.600/-@ Rs.70/- per month for a period of 8 months and Rs. 40/- in the 9th month. An amount of Rs.1,200/- per beneficiary is contributed by Central and State governments in equal proportion. A total of Rs. 1800/ is sanctioned to fishermen as grant for sustenance during lean season for fishing.

Motorization of traditional crafts – (CSS-50:50)

Motorization of traditional crafts by fixing up outboard/in board Motors is taken up to reduce the manual effort in sailing the craft by the marine fishermen. The subsidy is 50% of cost not exceeding Rs 30,000/ per craft towards the cost of Out Board/In Board Motor.

Prime Minister's Package for Farmers: (100% CSS):

The scheme is meant for the benefit of the fishermen & fish farmers in the 16 drought prone districts. Under this scheme "Construction of fish ponds and input cost" has been taken up. The unit cost is Rs.2.30 Lakh per ha.(Rs. 2.00 lakh for construction of pond and Rs. 0.30 lakh for inputs). 40% of the unit cost is given as subsidy for general farmers and 50% in case Scheduled caste and Scheduled Tribe farmers. By implementing the scheme during the last (4) years. 819.00 Ha of fish ponds have been constructed.

Supply of fish seed to Fishermen Cooperative Societies:

Under the scheme, 50% subsidy on the cost of fish seed stocked in tanks is provided to ensure adequate seed stocking and increase in inland fish production. The unit cost is Rs. 25,000 per tank and 50% subsidy will be Rs. 12,500 per tank.

Exemption of Sales Tax on HSD Oil :

The Scheme is to meet the State commitment on exemption of Sales Tax on HSD oil used by mechanized and motorized fishing crafts. The ceiling limit of HSD oil is 3000 liters per month in case of mechanized boats and 300 litres per month in case of motorized crafts. The subsidy on sales tax is Rs.6.03 per litre.

Special Component plan for Scheduled Castes:

The Scheduled Caste fishermen are given assistance for supply of fishery inputs like supply of fish / prawn seed, supply of nets, boats and other fishing inputs. The unit cost is Rs.10,000/- and 50% subsidy will be Rs. 5000.During 2010-11 to provided 332 beneficiaries benefited with a financial assistance of Rs.17.50 lakhs. .During 2011-12 (up to October 2011) 135 members are benefited with a financial assistance of Rs.6.75 lakhs.

Tribal Sub-Plan for Scheduled Tribes:

Scheduled Tribe fishermen are given assistance for supply of fishery inputs like supply of fish / prawn seed, supply of nets, boats and other fishing inputs. The unit cost is Rs.10,000 and 50% subsidy will be Rs. 5000. During 2010-11, 231 beneficiaries were benefited with a financial assistance of Rs.11.75 lakhs. .During 2011-12(up to October 2011) 130 members are benefited with a financial assistance of Rs.6.50 lakhs.

Supply of Rice during ban period:

In order to obviate the hardship of the fishermen during fishing ban period at sea in the months of April-May, Government of Andhra Pradesh has extended Relief measure to the affected fishermen families in the form of supply of Rice. Under the scheme, 31 Kgs. of Rice for each of the 66,183 affected fishermen families (Mechanized and Motorized Boat owners and crew) on free of

cost for the (47) days Marine Fishing Ban period will be supplied.

National Fisheries Development Board (NFDB).

The National Fisheries Development Board has sanctioned Rs. 489.45 Lakh which includes Rs. 329.21 Lakh for seed stocking in (17) reservoirs which were stocked earlier and Rs. 160.24 Lakh for seed stocking in (14) new reservoirs during 2011-12 under Reservoirs Fisheries Development scheme.

Organization of Fishermen cooperative societies:

The Government of Andhra Pradesh has given great importance to cooperative societies in fisheries sector in order to empower the fishermen to manage their own affairs. As a matter of policy the tanks are given on very nominal lease to these cooperative societies for exploitation of fishery wealth. They are also provided assistance for inputs like fish seed stocking, feed, boats and nets on subsidy

As far as Marine Fishermen societies are concerned, they are involved in schemes like diesel subsidy, Relief-cum-saving scheme, Group Accident Insurance scheme.

So far 4,11,481 fishers are organized in to societies. Still a large number of fishers are yet to be brought under the fold. This is a continuous process and wherever the fishers are coming forward to form cooperative societies, they are being registered immediately.

Type of Societies	Nos	Membership
Inland Fishermen Coop. Societies	4241	3,15,293
Marine Fishermen Coop. Societies	388	72,115
Brackish water Fishermen Coop. Societies	17	1041
Fisherwomen Coop. Societies	368	23,032
TOTAL	**5014**	**4,11,481**
District Fishermen Coop. Societies	22	FCS: 2,955
APS Fishermen Coop. Societies Federation-AFCOF	1	FCS: 625

Matsya Mitra Groups (SHGs of fisherwomen):

Women SHG (Self Help Group) movement in the state is very strong. Taking advantage of the prevailing favourable conditions, the department has organized fisherwomen into SHGs called 'Matsya Mitra Groups' (MMGs). There are 368 fisherwomen Co-op. Societies with total membership of 23032. The MMGs are organized with in the fisherwomen Co-op.Societies. Sofar 1539 MMGs covering 18,000 fisherwomen are organised.

These MMGs prepare their micro-business plan and take up income generating schemes for improving their economic condition. Revolving fund is given to the groups under CM Package and RKVY @ Rs 25000 per group of 10-15 women. The groups also approach the banks for taking loans to augment their resources.

Rashtriya Krishi Vikas Yojana:

During the year 2011-12 State Level Sanctioned Committee of Rashtriya Krishi Vikasa Yojana (RKVY) has approved one project for "Integrated Project for Enhancement of Fish Production" for Rs.1447.33 Lakh with four components viz.,(i)Fish fingerlings stocking in perennial reservoirs/tanks of less than 40 hectares area,(ii) Strengthening of Government Fish Seed Farms, (iii) Supply of Sea safety/navigational equipment to marine fishers,(iv) Construction of fish markets in Municipalities and Gram Panchayats. The Commissioner of Agriculture, A.P. Hyderabad has released Rs. 226.00 Lakh in two installments for implementation of the project

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FORESTS

5.6 Forest cover has been recognized as critical for a living environment as it influences the quality and quantity of air and water. The role of forests as carbon sinks endows them added recognition as an important environmental factor. With the responsibility of management of forests vested with the State Forest administration, the Central interventions are essentially towards reinforcing the capacity of the States to undertake the National Policy mandates towards conservation and sustainable use with a strategy to create an environment for

achieving sustainable forestry and wild life management with specific focus on socio-economic targets. The core objective of forest sector development strategy would therefore be enhancing the green cover by integrating it with livelihood opportunities.

The tangible benefits derived from Forests like Timber, Bamboo, Fuel wood, Fodder, Non-Timber forest Products etc., are quantifiable. Intangible benefits like maintenance of ecological balance, conservation of soil and moisture, regulating the water flow, sequestering carbon-dioxide from the atmosphere etc., are of great significance and if quantified.

Andhra Pradesh is the second largest State in forest area in the Indian Union. Andhra Pradesh has 62.30 lakh ha. of forest area constituting 22.65 percent of the total geographical area of the State. Out of the total forest area, Reserved Forest area accounted for 50,478 Sq. Kms. Protected forest forms 12,365 Sq. Kms and the rest 971 Sq. Kms are unclassified.

Forest Department is implementing various development schemes to protect and develop the existing forests, to improve its productivity and economic value, as per the National Forest Policy 1988 and the State Forest Policy announced during 1993 and as revised during 2002 and also keeping in view the vision 2020 of the State of Andhra Pradesh. Enriching existing low density forests and alleviating rural poverty are main objectives of these programmes viz., Community Forest Management (CFM), Centrally Sponsored National Afforestation Programme (NAP) through Forest Development Agencies, RIDF Projects, Soil & Moisture Conservation, Social Forestry, Wildlife Development and Human Resource Development.

The scheme for Soil conservation in River Valley Project was also taken up from that time in the Machkhand/Sileru basin in Visakhapatnam District and upto 1975 over 7850 Hectares of badly eroded area have been afforested and 43120 Hectares of Agricultural land were treated with various soil conservation measures like contour bunding, bench terracing, gully plugging, stabilization of river banks etc.,

Forest resource surveys of industrial catchments were undertaken between 1965-75 and most of the important forest zones of the state have been covered under schemes sponsored either by the Government of India or State.

The department has set a programme under RIDF projects and other schemes having provision for soil and moisture conservation with the financial assistance of NABARD for constructing various types of water harvesting structures such as Check dams, Contour Trenches Rocks fill dams, percolation tanks etc. in forest areas. These structures are help recharge ground water, there by improve the forest vegetation besides stabilizing the status of agriculture in the adjoining fields.

The Silvicultured research for the improvement of the natural forests has assumed a greater significance. Keeping in view of the recent trends in forest research, the department has laid special emphasis on Forest Research to conduct experiments, improved nursery and plantation techniques, Vegetative propagation, Seed development and natural forest management etc.

Monitoring of vegetation(Forest) Canopy Cover Density, Forest Fire Risk Zonation Mapping, Mapping all the forest areas with site suitability, Kolleru lake restoration, Re-locating & demarcating the forest boundaries and Inventory of forest resources are some of the major and most important activities taken up by the department using the latest information technology.

Almost all the programmes/schemes of the Forest Department are being implemented through participation of local people,Vana Samrakshna Samithis (VSS) and Eco-Development Committees (EDCs) in Protected Areas and Watershed Development Committees in River Valley Project. The breakup of No. of VSS/EDCs in each scheme are as follows:

1.	APCFM	–	5250 VSS
2.	FDA	–	2332 VSS
3.	NABARD / RIDF	–	2161 VSS
4.	W.L.I	–	243 EDCs

Forest Produce

The Abnus leaves trade in Andhra Pradesh (Telangana Region to begin with) was nationalized in 1971 season eliminating the Contractors agency. In April 2006, the Government have decided to distribute the net revenue to the beedi leaf collectors in proportion to the quantity of beedi leaf collected by them as per wage cards from 2006 beedi leaf season. The quantity of beedi leaf collected during 2010-11 was 3,00,175 S.B.s with a net revenue of Rs.20.50 crores (approx). The quantity of leaf collected during 2011 season was 3,49,272 S.B.s.

The Departmental Extraction of Timber, Fuel and Pulp Wood, Faggot Wood, Long Bamboo and Bamboo Industrial Cuts (BIC) from natural forests as well as Plantations were introduced from the year 1976-77, after disbanding the existing Contractor System.

At present there is moratorium on extraction of timber from natural forests except for bamboo from the overlapping bamboo forests. The major activity comprises of harvesting timber and poles from matured plantations of Teak, Eucalyptus, Casuarinas etc. and long bamboos and BIC from the bamboo coupes as per the prescriptions of working plan of the respective Divisions. To implement this scheme the State Government makes budget provision and fixes the physical and financial targets every year.

The Physical Targets and Achievements of Departmental Extraction of Forest Produce of Timber, Fuel, Poles and Bamboos details are given in Table-5.16.

Table 5. 16
Forest Produce extraction (up to Sep.2011)

Species	Target	Achievement
Timber(cmt)	19138.74	5861.99
Fuel (cmt)	64374.90	5101.40
Poles (Nos)	37,661	8,765
Bamboo (lakh Nos)	192.68	48.78

Source: Forests Department

The forest products in the state include Timber, Bamboo, Firewood & Charcoal, Beedi Leaves and Miscellaneous. The income accrued from forestry sector in the State was Rs. 81.38 crores in 2006-07, 80.14 crores in 2007-08, 87.19 crores in 2008-09, 103.38 crores in 2009-10, 128.74 crores in 2010-11 and 69.04 crores in 2011-12 (upto September 2011). The details of value of forest produce in the State are given in Annexure-5.23

47 FDA projects have so far been sanctioned by the government of India. The total outlay of all the projects for 2010-11 is Rs. 1577.25 lakhs and 2332 VSSs/EDCs are involved in implementing these projects. An area of 3176 Hectares was proposed to be treated during the project period and 3176 Hectares was planted by spending an amount of Rs.1164.830 lakhs during 2010-11. The, production capacity, type of raw material available are given in Annexure 5.24.

Social Forestry

The State Government has launched a massive People's movement involving General Public and farmers in a big way to increase Tree cover outside the Reserve Forests to improve the Environment and to provide gainful employment to thousands of unemployed youth. These efforts were continued in the XI five year plan period also. Under Social Forestry programme, Public Distribution of seedlings, Raising community land plantations/ Avenue/ Shelter belt Plantations; and Raising of Institutional Plantations have been done.

The species raised mainly are Neem, Pongamia, Ficus species like Raavi & Marri, Gangaraavi, Usiri (Amla), Seethaphal, Badam, Mango, Teak, Casuraina, Eucalyptus and others for public distribution and planting in public lands.

Vanamahostava
(Two Million Tree Plantation):

Every year Forest Department celebrates Vanamahostava during rainy season in the month of July to give wide publicity and to inculcate planting culture in the society.

- During this year, 21.12 Lakh saplings were planted in 534 locations in the State in a Single Day ie on 9-7-2011.
- Monitoring of performance of these seedlings is being done through Remote sensing and GIS.

Seedlings under Social Forestry from 2005-06 up to Oct,2011:

Seedlings raised	7727.656 Lakhs
Seedlings distributed	7170.234 Lakhs
Block plantation raised	3870.808 Hectares
Avenue plantation raised	4926.790 KM

Species wise Tall (6”x12”,8”x12”,8”x15”, 10”x12) and Very Tall (10”x16”,12”x18”, 14”x20”) seedlings raised by all agencies for the planting season 2011-12 is given in Annexure 5.25.

Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) –

Forest Department is taking up forestry operations both within the Reserved Forest area and outside as well by participating through convergence in implementation of MGNREGS. Raising of Plantations, Soil & Moisture Conservation works and Habitat Improvement works are being taken up in the VSS areas and forest areas. Raising of Nursery Plantations in farmers lands, Institutions and Community lands, Avenue plantations etc., are being taken up by the Social Forestry wing outside the Reserved Forest areas.

Large number of nurseries is being raised under the Mahatma Gandhi Vana Nursery (MGVN) Program as a part of MGNREGS. These nurseries are being raised to produce good quality seedlings of tree species which are preferred by the people and which are suitable to the agro climatic conditions of the district concerned. 2775 MGVN nurseries are established in the state at the rate if 2-3 nurseries in each mandal by the Forest Department under MGNREGS. In each MGVN nursery, about 70000 to 80000 plants of forest species will be raised each year for next 3 years and will be handed over to the Rural Development Department for planting on the lands of farmers. 19.78 Crore seedlings were raised during 2010-11 and in 2011-12 it is planned to raise 20 Crore seedlings.

Mahatma Gandhi Vana Nursery Program 2011-12	
Annual Work Plan	Rs.247.35 Crores
Expenditure up to (Up to Sep.2011)	Rs.74.81 Crores
Wage employment generated (Up to Sep.2011)	33.14 lakh person days
Block Plantations raised	1914 Ha
Avenue Plantations raised	814 Kms

Compensatory Afforestation Fund Management and Planning Authority (CAMPA):

Government of India, Ministry of Environment & Forests has constituted an authority to be known as Compensatory Afforestation Fund Management and Planning Authority (CAMPA) for conservation, protection, regeneration and management of existing natural forests and wildlife and its habitat including environmental services, Research, training and capacity building.

The Annual Plan of Operation (APO) is being prepared every year for implementing the A.P.CAMPA Scheme for protection of forests and wildlife. The A.P. State CAMPA is implemented in Andhra Pradesh from 2009-10 onwards. The main components of APO of CAMPA are:

1) Compensatory Afforestation (CA) in compensatory areas
2) Natural Forest Management through treatments to the natural forest area and regeneration of degraded areas.
3) Forest & Wildlife Protection through establishment of base camps, strike forces, check posts to check the illicit smuggling and transportation of timber and poaching of wildlife.
4) Forest Fire Management to improve the growth of natural forests and improvement of habitat of wildlife.
5) Bio-Diversity Conservation.
6) Research and Development to get good quality seedlings.
7) Capacity Building by updating the skills and knowledge of the frontline staff.

8) Information and Communication Technology for monitoring the implementation and progress of the APO
9) Infrastructure Development and Maintenance to ensure the frontline staff stay in their head quarter and protect the forests and wildlife efficiently.

Achievements 2010-11:

- In 2010 an amount of Rs. 120.74 crores (2010-11) were released to A.P. State CAMPA by Ministry of environment & Forests (MoEF), Govt. of India.
- 180 nos. Base camps, 77 Strike forces, 154 Check posts are established and maintained to assist the forest officials for protection of valuable forests in A.P.
- During the year 2277 ha. degraded, open and blank forest areas were planted with forest species. Further, advance operations are being carried out in 4325 ha. of area for planting during the year 2011 season with forests species.
- The front line staff was provided with communication facilities and vehicles for mobility to improve forest protection.

Achievements of 2011-12:

- APO – 2011-12 was approved for an outlay of Rs.228.00 crores by the Executive Committee .
- 200 nos. Base camps, 85 Strike forces, 160 Check posts, 11 Police Parties are established and maintained to assist the forest officials for protection of valuable forests in A.P.
- Under Natural Forest Management component, out of the target of 4604 ha, planting has been completed in 4455 ha (97%). Planting in th remaining area is under progress during North east monsoon.
- The artificial regeneration is supplemented with the Forests species only, i.e., Teak, Red Sanders, Bamboo and with secondary timber species, NTFP species etc.
- Under Compensatory Afforestation component, out of the target of 4676 ha, planting has been completed in 3625 ha (78%).
- The artificial regeneration is supplemented with the Forests species only, i.e., Teak, Red Sanders, Bamboo and with secondary timber species, NTFP species etc.

Wildlife Conservation

Andhra Pradesh is endowed with rich Flora and Fauna with 5000 plant species, 500 bird species, 100 species of mammals and more than 100 reptile species. Important endemic species of the state are Cycas beddomi, Red sanders, Shorea talura, Jerdon's courser, Golden gecko and Slender loris.

There are 6 National Parks and 21 Wildlife Sanctuaries for *in situ* conservation. Protected Areas are spread over 13005.78 Sq.Kms. or 4.72% of the Geographical area or 20.38% of the forest area of the state. There are (4) Zoological Parks and (6) Deers Parks in the State for ex situ conservation of wildlife.

Development Activities during 2011-12

Centrally Sponsored Schemes

Integrated Development of Wildlife Habitats:

The high priority Protected Areas with rich biological diversity are funded through the Centrally Sponsored Schemes.

Project Tiger:

Nagarjunasagar Srisailam Tiger Reserve (Rajiv Gandhi Wildlife sanctuary) was established in the year 1979 and attained the status of Tiger Reserve in 1983. This tiger reserve sprawls over an area of 3,568.09 Sq. Kms. in parts of (5) districts of Kurnool, Prakasam, Guntur, Nalgonda and Mahaboobnagar.

The mixed dry deciduous forests of this Sanctuary contains rich biodiversity of both floral and faunal species. About (353) species of medicinal plants are known to occur in this area. Considering the geo-morphological, ecological, hydrological values, this project plays a vital role in protecting not only the tiger as an apex animal, but also the whole eco-system of the important Nallamalai region.

Presently, there are more than tigers are found. It has large and sufficient prey base ranging from spotted deer, sambar, four horned antelope, chinkara, wild boar etc. This project represents and protects the Biodiversity of (6d & 6e) of biogeography of the country. As seen from the population

estimation now the tigers are in increasing trend from 34 in the year 1994 to 70+ in 2011. It is all because of a good management practices and protection of the habitat and the animals from poaching.

The increase in wild animal population has become possible with the help of 115 Eco-Development Committees (EDCs) and a sustained efforts of the staff and the administration. The management of this project has been guided by an approved Biodiversity Management Plan based on the scientific outputs given by the Biodiversity research wing.

Strengths of the Project:

- This project is located in the country's one of the rich biodiversity hot spot having a contiguous landscape of a good forest eco-system of unfragmented Nallamalais of the Eastern Ghats.
- Many undiscovered flora and fauna area still existing in this area of which a few new species have been discovered by the Forest Department.
- As it is the project is going on sound principles of conservation and management.
- Almost the project is now manned by professionally trained officers.
- Habitat is well protected and good browse and grazing material is available to sustain large number of herbivore population for sustaining the highly endangered top predatory species – the Tiger.

Achievements:

- People's participation through (115) EDCs has been made mandatory and most of the people's problems are mitigated.
- Upgradation of skills of Stakeholders:
- About 1140 trainings & workshops organized involving about 700 staff, 434 representatives of N.G.Os, 130 employees of Govt. Departments, 7580 villagers, 4836 EDC members
- Employment generation through regeneration of Forests (2000 Ha. Every year generates about 3,20,000 man days @ Rs.120 lakhs.)
- Successfully taken up a good habitat management practices resulting in increase of the Tigers, Co-predators and their prey species.
- The Sanctuaries and National Park including Nagarjunasagar Srisailam Tiger Reserve under Project Tiger are being developed under the State and the Centrally Sponsored Schemes.
- The Rayala Elephant Reserve including the Koundinya Wildlife Sanctuary has been established for the Elephants that have migrated from the adjoining States and is being developed under Project Elephant.
- The State Board for Wildlife and the Zoo Authority of Andhra Pradesh have been constituted for advising the Government on protection and conservation of wildlife in the State.

Restoration in Kolleru Lake Eco-System

For restoration of the Kolleru Lake, an Integrated Management Action Plan for Kolleru Sanctuary with an outlay of Rs.950.56 Crores for a period of 5 years has been prepared through an expert consultant, Wetland International South Asia, New Delhi. This will be implemented after its approval. Proposals were submitted to GOI for sanction of Rs.220.00 lakhs.

Restoration of Mangroves Forests:

A target area of 5600 Hectare of degraded mangrove and blank areas in Godavari and Krishna river estuaries has been taken up for restoration of the mangroves under Tsunami Mitigation activity through the World Bank aided A.P. Community Forest Management Project. So far mangrove plantations are raised in 3042 hectares.

Special measures for Tiger Conservation:

As per the provisions of Wildlife (P) Amendment Act, 2006 instructions of National Tiger Conservation Authority (NTCA), a Steering Committee has been constituted for the State with the Hon'ble Chief Minister as Chairman to look into Tiger Protection.

The Andhra Pradesh Tiger Conservation Foundation (APTCF) which receives funds from various sources directly has also been established recently to take care of the

development and conservation efforts focused on tigers in the State.

Research Activities:

The Bio-diversity conservation laboratory has been setup at Nagarjunasagar, Srisailam Tiger Reserve, Srisailam and the various research activities are being taken up. This includes preparing an inventory of the Biodiversity of Nagarjunasagar - Srisailam Tiger Reserve and other P.As.

Environmental Education:

The Curator, National Parks, Hyderabad and other Protected Area Managers have been bringing out several Educational material for various target groups including the school children on environmental education. Booklets on the Protected Areas, Endangered species etc., are being brought out including periodical Newsletter viz. "Palapitta".

Forest Protection Schemes:

Intensification of Forest Management Scheme

The objectives of the scheme are prevention and control of fire, Survey and Maintenance of boundaries, preparation of working plans, development of infrastructure and protection of forests and wildlife.

Scheme for Maintenance of Forests – Grants of 12th and 13th Finance Commission:

Under this Forest Protection Scheme, it was envisaged to create infrastructure for protection of forests and wildlife by providing mobility to the staff, engaging of Tribal Helpers as striking force, and base camps, Dog squad maintenance, Survey and demarcation of Forest land, constructing of internal roads in the Forests, building and information network etc. The main objective of the scheme is to ensure protection to forests and wildlife.

12th Finance Commission:

The Twelfth Finance Commission (TFC) has recommended a total grant of Rs.3788.65 Crores for Andhra Pradesh to be spent from 2005-06 to 2009-10. Out of the above grant, an amount of Rs.65 Crores was earmarked to Forest Department for maintenance of Forests.

13th Finance Commission:

The Government of India Communicated the allocation of Rs.26864.00 Crores for Forestry Sector to Andhra Pradesh for five years commencing from 2010-11 to 2014-15. Out of which an amount of Rs.596.43 lakhs is for Forest Protection Component, which has been revised to Rs.479.250 lakhs.

During 2011-12, the Government have released an amount of Rs.1203.90 lakhs as revalidation amount of 2010-11 for utilization in 2011-12. Out of this, an amount of Rs.185.89 lakhs is meant for Forest Protection Component.

Andhra Pradesh Forest Development Corporation:

The Andhra Pradesh Forest Development Corporation was established in 1975 on the recommendations of the National Commission on Agriculture, with an objective to raise massive plantations to cater to the needs of wood based industries.

Objectives:

- To raise large scale plantations to meet the demands of forest based industries with species such as Eucalyptus, Bamboo, Coffee, Cashew etc.
- To generate gainful employment to the landless poor, particularly in remote and agency areas.
- To undertake consultancy services to the industries to raise and maintain plantations in their vicinity.

The plantations raised by APFDC upto 31st October, 2010 and 2011 are shown in Table 5.17.

Table 5.17
Area Planted by APFDC
(Area in Hectares)

Species	**Upto Oct, 2010**
Eucalyptus (Seed origin)	15983.94
Eucalyptus (Clonal)	40358.92
Bamboo	12068.56
Cashew	9526.22
Coffee	4010.00
Teak	844.32
Medicinal plants	524.80
Casuarina, Pines and other Misc. species	352.29
Total	**83669.05**

Source: Forest Department

New Initiatives:

Eucalyptus Plantations:

The APFDC has proposed to expand raising of the Eucalyptus Clonal plantations over 40,000 hectares.

Bamboo Plantations:

Besides the old (1976-1983) 7,149 Hectares of Bamboo plantations raised, new plantations over 4,920 hectares (1999-2011) with intensive site management practices. Due to better management practices, as against the normal rotation of 3 years, 2 years rotation has been adopted thereby increasing the revenues.

The Corporation is intending to expand the Bamboo plantations over 2500 Hectares under National Bamboo Mission. This will ensure more supply of raw material per annum to the Paper Industries besides raw material to the artisans.

Coffee Plantations

The Corporation is maintaining about 4010 Hectares of coffee plantations in the agency areas with intensive cultivation practices by the scientific methods. These plantations are generated about 6.00 lakh mandays of employment to the tribals all around the year. Scheme proposals are sent to GOI to expand the Coffee Plantation areas over 10000 Hectares in the agency areas of Eastern Ghats.

Pepper Cultivation

APFDC had 4.09 lakh Pepper standards in its Coffee Estates, comprising of high yielding varieties like Panniyur-I, Purnima, Sreekara, Subhakara, Panchami, Panniyur-5.

Cashew Plantations

The Corporation has raised cashew plantations over an area of 9526 hectare along the coastal belt in Prakasam and Nellore districts and in the inlands of Khammam, West Godavari and Chittoor districts. Presently, the older plantations are being replanted with high yield cashew varieties using scion banks. Planting over 100-150 hectare is being taken up annually under this programme.

Eco -Tourism

APFDC has entered into the field of development of Eco-Tourism in Andhra Pradesh, with the investment from private entrepreneurs for developing infrastructure and tourist amenities. The Hyderabad Botanical Garden near the Hi-tech City and Mahavir Nischal Van projects are already opened to the public. The Rajiv Eco-Park is developed on the lines of Botanical Garden to conserve local species and for propagation and to serve as a Study Centre at Idupula paya and Shamirpet Eco Park and they were opened to public. Projects like Night Safari, Bird Park, Chilkur National Park and Nehru Zoological Park are in the pipeline.

Other Activities:

The Corporation has diversified its activities by providing consultancy services in afforestation to the industries such as NTPC, SCC Ltd., Heavy Water Plant, Ordnance Factory, ICRISAT and institution like Osmania University and supplying high quality Eucalyptus clones to public and institutions. It is acting as an Agent to the Government for carrying out the Trade of Beedi Leaves and for disposal of Red Sanders Wood.

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SERICULTURE

5.7 Sericulture in A.P. is a sustainable farm-based economic enterprise positively favouring the rural poor and the unemployed youth yielding regular returns in 4 to 5 splits from one acre of mulberry by providing employment to (5) persons throughout the year. An important feature of Sericulture Industry is involvement of women around 60%. Realising the importance of the activity the Government have earmarked adequate outlay for Sericulture sector for implementation of various schemes

Andhra Pradesh is the second largest producer of Mulberry and tasar cocoons in the country, and Muga culture is in initial stage. Andhra Pradesh has the privilege of producing all 4 types of silk called Tasar, Eri, Muga besides mulberry being predominantly practiced in Tribal areas of the State. As vast tracts of forest based tasar plantations are available in the State, judicious exploitation for rearing tasar silkworms can offer supplementary gainful employment for tribals.

New Initiatives:

1) Linkages to Farm Sector:

State Government have recently announced the following incentives to the Sericulture Farmers and Reelers.

Providing an incentive amount of Rs.40/- per kg for Bivoltine Hybrid Cocoons and Rs.20/- per kg for Multivoltine Cocoons transacted in Govt. Cocoon Markets. Incentive amount of Rs.102.90 Lakhs was disbursed to 2003 BVH Farmers and Rs.11.29 Lakhs was disbursed to 782 CB farmers.

The BVH cocoon arrival has increased (i.e., from 549.311 Mts to 670.833 Mt**s)** in the cocoon markets of AP with the introduction of incentives to the farmers on BVH Cocoons.

2) Linkages to Non Farm Sector:

- Providing of incentives on silk production
- Rs.130/- per kg for bivoltine silk produced on multiend silk reeling units.
- Rs.80/- per kg for Multivoltine silk produced on multiend silk reeling units.
- Rs.30/- per kg for motorized charka, backend Italian model charka & cottage basin silk in the State.
- An incentive amount of Rs.76.489 Lakhs was disbursed to an allowed quantity of 142.831 Mts of silk produced on Charkas, Cottage Basin, Multiend , and Automatic reeling unit
- 50% subsidy on the cost of the reeling sheds.
- 90% subsidy for conversion of Charka / Motorized charka to backend Italian model reeling machinery.
- Establishment of silk exchange in Proddutur of Kadapa District and Hindupur of Anantapur district for dupion and raw silk trading.
- .The Mini spun silk mill under private sector M/s Indian Silk Mills for marketing of Eri cocoons has been established at Parigi in Hindpur division, which is a boon to the poor and dry land Eri farmers of the State which can process 79.20 Metric tonnes of eri spun silk yarn and 36.432 Metric tones of noil yarn per annum. The consumption capacity of the unit is 70 Metric Tonnes of Eri Cocoons. The unit will take care of the Eri cocoons produced from 5000 – 7000 acres of Eri food plantation of tapioca or castor.
- To encourage post cocoon activity and to bridge the gap between On farm and Non-farm Sectors to maximum extent, one Chinese Automatic Reeling Unit under Private Sector is established with an annual production capacity of 24 Metric Tonnes of Bivoltine Raw Silk at Janagaon of Warangal District with a unit cost of Rs.2.67 crores, out of which, Rs.1.00 cr. subsidy was equally contributed by GOI & GOAP. The unit is functioning well and has produced a quantity of 45.563 Metric Tonnes of Bivoltine Silk of International Standards upto March. 2011.

Impact of Initiatives:

The BVH cocoon arrivals have increased from 549.311 MTs to 670.833 MTs in the cocoon markets of Andhra Pradesh with the introduction of incentives to the farmers.

Hitherto, most of the cocoons were purchased in Andhra Pradesh by Karnataka Reelers and got converted into silk in Karnataka State. With the impact of Government initiatives, a quantity of 3184.390 MTs of cocoons was consumed by the local reeling units in the State out of the total quantity of 3,767.984 MTs transacted in the cocoon markets, which constitutes about 84%, during 2010-11

Promotion of new technologies at the field level for increasing the productivity.

- Plantation with high yielding varieties.
- Maintenance of exclusive chawkie gardens for Supply of Silkworm seed.
- Promotion of controlled irrigation system like “DRIP”
- Mass Disinfection Programme to reach all practicing Sericulturists.
- Separate pucca-rearing houses with shoot rearing for Cocoon production.
- Human Resource Development.

- Research & Development to evolve suitable silk worm races for the state requirements.
- Promotion of Multi-end silk reeling, twisting, processing units and looms.

Schemes implemented:

I. Mulberry sector

Central Silk Board Schemes (CDP Schemes) are implemented by providing associated facilities with subsidy on the unit cost shared by CSB and State for A) separate pucca rearing shed (Rs 1.50 Lakhs of which 50% is subsidy) B) providing irrigation facilities (Rs 40,000/- per hectare of which 75% is subsidy) C) Supply of Saplings (Rs. 5500/- per acre of which 75% is subsidy) D) Rearing equipments (Rs.40,000/- of which 75% is subsidy).

A) Construction of rearing sheds under CDP:

To ensure hygienic conditions and to prevent contamination during silk worm rearing, construction of a separate pucca silk worm rearing house is very essential. Therefore, a scheme for construction of rearing shed has been sanctioned under CDP with a unit cost of Rs.1,50,000/- to each of Bivoltine farmer with a pattern of assistance of 25:25:50 by Central Silk Board, State Government and Beneficiary contributions respectively. So far 15,233 rearing sheds were constructed of which 10,007 sheds were equipped with shoot feeding stands.

B) Irrigation and other water conservation and usage techniques:

Focus is made on conservation of available water resources to the extent of maximum utility. The scheme of " Irrigation and other water conservation and usage techniques" is implemented under Catalytic Development Programme with a unit cost of Rs.40,000/- per hectare, of which Rs. 25,000/- subsidy provided by the CSB and Rs.12,500/- subsidy provided by the State and the balance Rs. 12,500/- is the beneficiary contribution. An extent of 7,366 acres of mulberry has been covered with irrigation facility including drip up to the end of March, 2011.

C) Supply of Saplings:

The objective is to procure saplings of High Yielding Mulberry varieties from Kisan Nurseries raised by farmers for supply to New Farmers and Sericulturists who desire to replant their mulberry plantations with the improved varieties and to increase productivity and quality of leaf which in turn leads to increase in the production of cocoons, at low/marginal cost.

The pattern of assistance under the scheme is 50:25:25 i.e., CSB: State Govt.: Beneficiary Contribution for raising of one acre with High Yield Variety Mulberry. The farmers will be provided @ Rs.4,125/- as subsidy against the Unit cost of Rs.5,500/-, which is of basic help to the farmers who comes under the fold of mulberry. An extent of 24.421 acres of mulberry has been covered with saplings up to the end of March, 2011.

D) Rearing equipments:

Farmers are encouraged to take up Bivoltine Sericulture by providing assistance in purchasing modern tools and equipments which makes mulberry cultivation and rearing more efficient and viable.

The pattern of assistance under the scheme is 50:25:25 i.e., CSB: State Govt.: Beneficiary Contribution. Farmers will be assisted for procurement of shoot rearing equipment and supply of Plastic Trays & Mountages for conducting Bivoltine Silkworm Rearings. The farmer will be provided with a subsidy of Rs.30,000/- against the Unit cost of Rs.40,000/- which will encourage the farmer to take up Bivoltine Sericulture and harvest successful crops with the help of modern tools and equipment 10,007 farmers are provided with rearing equipments under the scheme up to the end of March, 2011.

Normal State Plan schemes:

- Supply of disinfectants worth of Rs. 1,500/- per shed to the Sericulture farmers to increase productivity.
- Procurement of tassar cocoons for production of DFLS and supply to tribal tasar rearers.
- Supply of High yielding variety saplings with a subsidy of Rs 6,600/- per acre
- Subsidy of Rs. 100/- to farmers for supply of 100 Bivoltine layings.

II. Non-Mulberry Sector:

Tasar culture

1500 tribal families are engaged in rearing of Tasar silk worms on the food plants available in the forest areas of Adilabad, Karimnagar, Warangal and Khammam Districts. The department has produced 200 Lakhs of Tasar cocoons in the tribal belt of northern Telangana region covering 2803 beneficiaries. During 2010-11, a quantity of 125.77 lakhs of tasar cocoons are expected to be produced by tribal farmers.

Ericulture

Andhra Pradesh is having larger extent of Castor and Tapioca plantations particularly in MahabubNagar, Nalgonda, Rangareddy and East Godavari districts. The farmers can utilise 30% of the castor / Tapioca leaf for rearing of Eri silk worms without any deterioration in the yield of castor seed and Tapioca tuber, to get additional income of Rs.2,000 to 4,000. The department in co-ordination with the Central Silk Board under Catalytic Developmental programme is implementing an Eri project to create additional income to castor / Topioca growers through rearing of Eri silkworms in Nalgonda, Mahaboobnagar and East Godavari Districts. During 2010-11 a quantity of 12.101 MTs of eri cocoons was produced by 500 Castor/ Topioca farmers. The programme is extended to Kurnool and Ananthapur Districts.

Research and Development:

Andhra Pradesh State Sericulture Research and Development Institute, Hindupur is functioning with the main intention to evolve new races, capable of producing International grade cocoons/silk. A new project entitled "Identification of DNA markers for baculovirus resistance in Silkworm was presented to DBT New Delhi for financial sanction. Six new hybrids developed by the institute have been submitted for National Silk Worm Race Authorisation Tests (2009-12) to be conducted by CSB and the tests were already commenced. Bivoltine hybrids with disease resistance races are under field trials. In addition, certain eco-friendly user disinfectants such as Seri-Gold, Seri-Clean, Seri-Plus, Shakthi and Abhaya etc., are released to the fields, there by the production of cocoons increased from 5 Kgs to 10 Kgs by the farmer.

The details of progress under Sericulture are given in Annexure 5.26. The achievements during 2011-12 are shown in the Table 5.18.

Table 5.18
Sericulture - Achievement during 2011-12
(up to Sept. 2011)

Area under Mulberry - Acres	96018
DFLs Production including private & Govt.(Lakh Nos.)	39.833
Cocoon Production (MTs)	22727
Tasar cocoon Production (lakh Nos.)	28.18

Source: Sericulture Department

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AGRICULTURAL MARKETING

5.8 Well-functioning markets are the need of the hour for the agriculture sector for driving growth, employment and economic prosperity in rural areas. With the fast changing production-consumption scenario, the requirement of cold storages in markets has increased manifold especially where perishable commodities are brought for sale. Currently all over the country, agriculture markets are regulated under respective State Agriculture Produce Marketing yards. In Andhra Pradesh, comprehensive market legislation came into force in 1966 covering the entire state called the Andhra Pradesh (Agricultural Produce and Livestock) Markets Act 1966, after integration of the Hyderabad Agricultural Produce and Livestock Markets Act, 1930 and the Madras Commercial Crops Act, 1933. The salient features of the Act are:

- To regulate sale and purchase of Agricultural produce
- To declare notified areas and notified markets for regulation
- To constitute market committees for each notified area for regulation
- To license all the persons intending to trade in the notified agricultural market area
- To levy and collect the market fee

- To construct and develop market yards for regulation
- To prohibit collection of all unauthorized charges in the sale and purchase of agricultural produce
- To arrange sale and purchase of agricultural produce in the market by open auction or tender system
- To collect and disseminate market information for the use of farmers and traders.

There are 330 Agricultural Market Committees in the State under which 906 market yards are notified in the State. Each Market Committee consists of 18 members viz., 11 members from growers, 3 from traders and the other four from the representatives of local bodies and Government Departments. The Committee is headed by a Chairman from grower members. All the members are nominated by the Government. Every Market Committee has a Secretary who is the executive authority of the Market Committee. All staff of the Market Committee are appointed by the Market Committee / Director of Marketing /Government as per AP (AP & LS) Markets Rules, 1969. Market Committee is responsible for the effective implementation of the Markets Act and the AP (Agricultural and Livestock) Market Rules, 1969 and the Bye-laws of the Market Committee. Every Market Committee is a corporate body having perpetual succession.

The Commissioner& Director of Agricultural Marketing is the authority at State level to supervise and control all the Market Committees for effective implementation of the Act, Rules and the Bye-laws and report to the Government about the working of the Market Committees. The Market Committees levy and collect market fee at the rate of 1% advolerum on the sale and purchase of notified agricultural produce payable by the purchasers of the produce. The market fee is the only source of income for the Market Committee, which is self generating and is called Market Committee Fund deposited in a scheduled bank operated through treasury. The market fee is utilized mainly for the development of markets and creation of facilities to the users of the markets i.e., growers and traders and other functionaries and for other allied purposes specified by Government from time to time. The Market Committees have collected Rs.472.28 crores towards market fee during 2010-11 and Rs.248.98 crores during 2011-12 (upto Oct. 2011).

The Market Committees shall remit 10% of the annual income to a separate fund called Central Market Fund (CMF). This fund is under the control and operation of the Commissioner & Director of Agricultural Marketing. The Central Market Fund is expended mainly to provide loans to Market Committees besides grant-in-aid to the financially weak Market Committees. Government is empowered to spend the CMF by special or general order for any purpose for the development of agricultural marketing and its allied activities.

Keeping in view of the objectives, the Department has envisaged a Farmers' Charter for implementation. The charter provides for:

1. Right of information regarding prices
2. Ensuring fair value for the produce
3. Ensuring accurate weighing
4. Freedom from unscrupulous traders and trade practices
5. Ensuring payment on the same day
6. Providing human and animal health care
7. Providing quality inputs.

The Department has installed computers at 334 Market Yards for regular inflow of information on prices. It has also installed Audio Video Display systems(AVDS) at 50 market yards so far. Prices of all major commodities are displayed through these video systems for the benefit of the farmers everyday. The Department has also established Interactive Voice Response System (IVRS) through which anyone from anywhere can dial the dedicated telephone number and find out the prevailing prices of all major agricultural commodities at all major market yards. The prices are updated everyday. (IVR No.23260100)

Administrative measures have been taken for tracking the farmers at major market yards under 'help the farmer' programme. Under

this, the market yards have been divided into segments. Each segment has been entrusted to a responsible officer. This Officer shall, during the arrivals, take notice of every farmer who comes with his produce into his segment. He will help the farmer to get a fair price, for accurate weighment and also make sure of prompt payment. This system has paid rich dividends in winning the goodwill of the farmer.

Electronic Weighing machines have been introduced in important market yards for ensuring accurate weighment of the farmers' produce. The Market Rules have been amended for use of Electronic weighing machines only.

Rythu Bandhu Pathakam

Under the Rythu Bandhu Pathakam, the Department has spent Rs.12.97 crores during 2011-12 for providing pledge loan to the farmers to help them to avoid distress sale of their produce. During the year 2011-12(Upto Nov.) 643 farmers as against 3024 farmers in 2010-11 have been benefited under Rythu Bandhu Pathakam. No interest is charged for first 3 months. There are no budgetary restrictions for sanction of loans under this scheme.

Rythu Bazars

There is a network of 106 Rythu Bazars in the State. About 45,000 farmers are selling over 1.75 Lakh quintals of vegetables, on an average, every week through these Rythu Bazars directly to the consumers. Mobile Rythu Bazars are operating in Hyderabad and Vijayawada cities for selling graded vegetables. This has proved to be a good success. (A separate website has been created exclusively for Rythu Bazars for Arrivals and Prices information. (www.rythubazars.com) or 121.243.139.68/rbz.

Farmer Awareness Programmes and Health Camps

5% of Market Committee Income has been earmarked for farmer Awareness programmes. Free medical camps for farmers and their cattle are conducted every Quarter with the funds of Agricultural Market Committees, by spending Rs.40,000/- each quarter.

In addition to the above, modernization and development of market yards has been taken up with the Government of India assistance as detailed below:

- 6-Markets, viz., Suryapet, Miryalaguda, Devarakadra, Gadwal, Pargi and Mulugu, have been identified for Modernization under the scheme with an outlay of Rs.22.93 crores for 95 Works with 50% loan from Bank and 25% contribution from AMC's and 25% backend subsidy.
- Strengthening of 1 Jute market under the scheme Mini Mission III of JTM, GOI involving an amount of Rs.1.00 crore with 60% grant from GOI and 40% AMC share is under process with Jute Corporation of India, Kolkata to benefit North-Costal Andhra Districts.
- Terminal markets are proposed at Hyderabad, Visakhapatnam Tirupati and Guntur to deal with perishable commodities (Fruits and vegetables). Recently Government of India revised the Guidelines. Action has to be initiated as per the revised Guidelines.

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