

# AGRICULTURE AND ALLIED ACTIVITIES

## 5 Chapter

### AGRICULTURE

Expansion of farm incomes continues to be an effective weapon for reducing poverty as more than half of the State's population remains dependent on some form of farm activity for livelihoods. 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.

Andhra Pradesh over the decades has witnessed gradual transformation of the agricultural sector. The nature of the transformation itself has undergone change overtime. During 1980s, there was a shift in agriculture from traditional cereal-based system towards commercial commodities such as oilseeds, cotton and sugarcane. By 1990s, even though the crop sector witnessed high volatility due to consecutive droughts and decelerating crop yields, the transformation continued towards high-value commodities such as fruits, vegetables, milk, meat, poultry and fish. In fact, high-value commodities performed impressively and rescued the agriculture sector to a great extent.

Priority was accorded to the Agricultural sector during 11th Five Year Plan period with the objective of shifting the excess labour force from the sector to other non-farm rural sectors such as rural industry through skill development to improve productivity. Ensuring food security and provision of gainful employment continues to be the essential premise of socio economic development and employment guarantee schemes like Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and other Rural Livelihoods programmes.

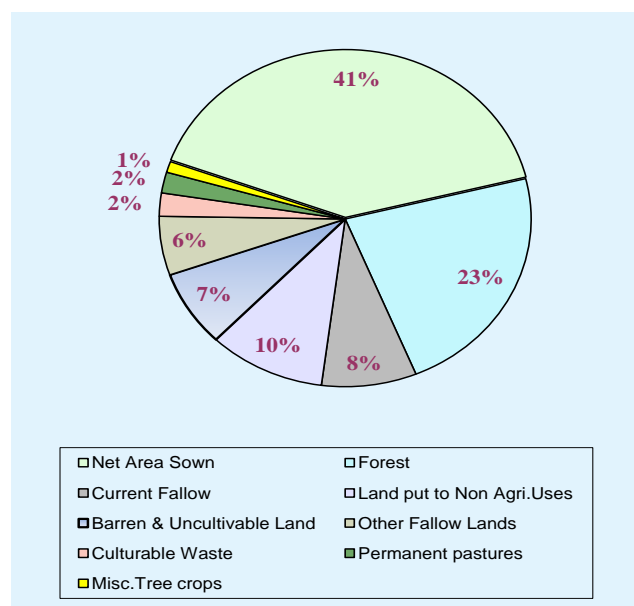
Improving farm incomes and ensuring sustainable growth in agriculture and allied sectors are of top priority for the state. In Agriculture, the priority accorded to irrigation on the one hand and the various farmer friendly initiatives put in place on the other, have helped the State achieve set growth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

The State enjoys pre-eminence in crop production. With renewed focus on micro irrigation, System of Rice Intensification (SRI) cultivation, micronutrient application, development of dry land agriculture, farm mechanization, increasing storage capacity and other agriculture related strategies. Andhra Pradesh is set to scale new heights in agriculture during the 12th Five Year Plan.

### Land Utilisation

Land Utilisation pattern in the state is shown chart 5.1

Chart 5.1 : Land Utilisation in Andhra Pradesh 2011-12



Source: Directorate of Economics & Statistics Department

The total geographical area of the State is 275.04 lakh hectares. Out of this, 40.58% is under Net Area Sown (111.60 lakh hectares), 22.65 % under Forest (62.30 lakh hectares), 8.26 % under current fallow lands(22.73 lakh hectares), 10.19% under Land put Non-Agricultural uses (28.03 lakh hectares), 7.36 % under Barren and uncultivable land (20.24 lakh hectares) and remaining 10.96% is under other fallow land, cultivable waste,

lands like permanent pastures and other grazing lands and land under miscellaneous tree crops and groves are not included in the Net Area Sown (30.14 lakh hectares). The Land Utilisation particulars from 1955-56 to 2011-12 are given in the Annexure 5.1.

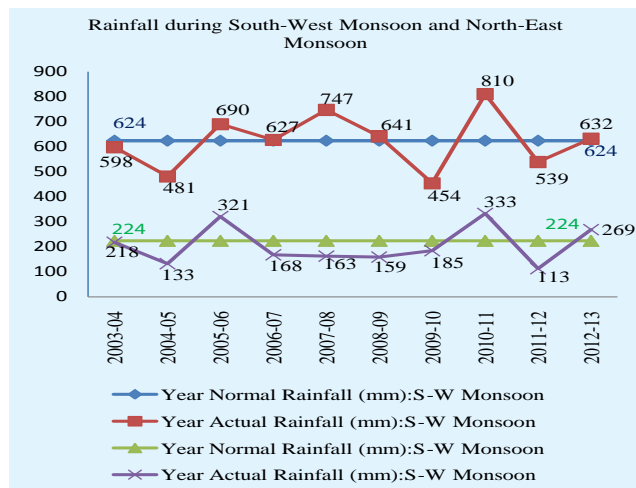
## Rainfall

The rainfall received during the North East monsoon period for 2012-13 was 269 mm as against the normal rainfall of 224 mm recording an excess of 20.1%.

Rainfall received during the South West Monsoon period for 2012-13 was 632 mm. as against the normal rainfall of 624 mm. recording an excess by 1.3 %.

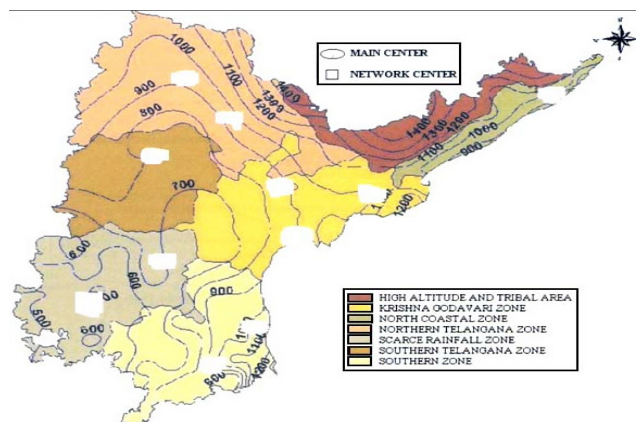
Season wise region wise rainfall details are given in the Annexure 5.2 and district wise rainfall is given in Annexure 5.3. Rainfall trend over the past 10 years is depicted in chart 5.2

**Chart 5.2 : Rainfall during South-West Monsoon and North-East Monsoon**



Source: Directorate of Economics & Statistics Department

## Rainfall distribution – Zonal mapping

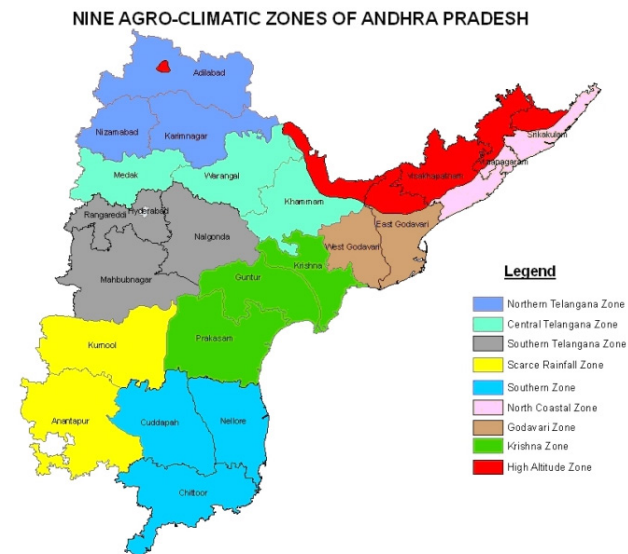


## Different Soil Types

Sand, silt, and clay are the basic types of soil. Most soils are made up of a combination of these three. The texture of the soil, how it looks and feels, depends upon the amount of each one in that particular soil. There are various types of soils and the formation of soil is primarily influenced by major factors such as climate, altitude and composition of bedrock etc. Disproportion in the annual distribution of rainfall in the country and excessive heat contribute special characters to the soils. In Andhra Pradesh, five different types of soils exist. The entire geographical area of the State can be divided into 5 categories of soils spread across 9 agro-climatic zones as follows:

1. Red Soils – 182 lakh hecets.(66%)
2. Black Soils – 68 lakh hecets.(25%)
3. Delta alluvial Soils-14 Lakh hecets (5%)
4. Coastal and Laterite soils – 8 Lakh hecets (3%)
5. Saline & Alkaline Soils -3 lakh hecets. (1%).

The map showing the 9 agro-climatic zones is given below



## Area and Production (Kharif and Rabi Season) - second advance estimates 2012-13

As per the second advance estimates, the area as well as production of food grains for the year 2012-13 are expected to show a decline in comparison with the previous year, viz, 2011-12. While the area under food grains is expected to be 66.32 lakh hectares in 2012-13 as against 72.89 lakh hectares in 2011-12, showing a decline

of 9.01%. The total production of food grains in 2012-13 is expected to be 170.78 lakh tonnes in 2012-13 while it was 184.02 lakh tonnes in 2011-12 - a decline of 13.2 lakh tonnes (7.19%)

## Kharif

The area under food grains in Kharif 2012-13 is expected to be 39.84 lakh hectares while it was 43.12 lakh hectares in 2011-12 - a decline of 7.6%. Similarly, the production estimate of food grains in Kharif 2012-13 is also expected to decline from 105.78 lakh tonnes in 2011-12 to 102.35 lakh tonnes in 2012-13, a decline of 3.2%.

The estimate of the area under rice in Kharif 2012-13 is expected to be 24.87 lakh hectares while it was 28.74 lakh hectares in 2011-12. Similarly, the production estimate of rice in Kharif 2012-13 is also expected to be 72.12 lakh tonnes while it was 85.64 lakh tonnes in 2011-12.

## Rabi

The estimate of the area under foodgrains in Rabi 2012-13 is expected to be 26.48 lakh hectares while it was 29.77 lakh hectares in 2011-12. Similarly, the production estimates under food grains in Rabi 2012-13 is also expected to be 68.43 lakh tonnes while it was 78.24 lakh tonnes in 2011-12.

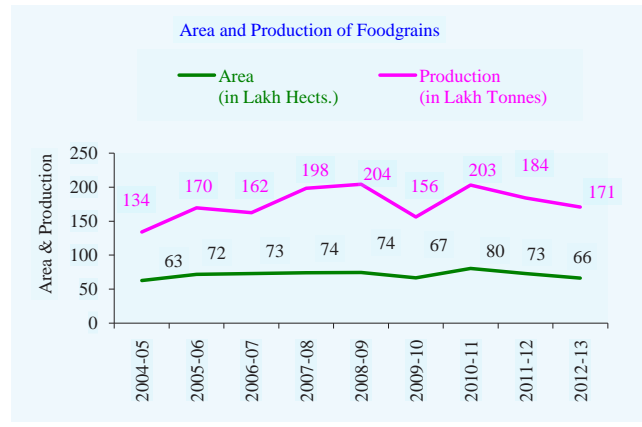
The estimate of the area under rice in Rabi 2012-13 is expected to be 9.10 lakh hectares while it was 12.22 lakh hectares in 2011-12. Similarly, the production estimates under rice in Rabi 2012-13 is also expected to be 32.76 lakh tonnes while it was 43.28 lakh tonnes in 2011-12.

Details about the area and production of Food grains from 1975-76 to 2012-13 are given in Annexure 5.4.

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 in the past decade led to fluctuations in the area and production of food grains. However, because of the use of high yielding varieties, improved seed and cultivation practices, the production of food grains registered steady increase. Area and production of foodgrains shown in chart 5.3.

**Chart 5.3 : Area and Production of Foodgrains**



Source: Directorate of Economics & Statistics Department

## Cropping Intensity

The cropping intensity (the ratio of gross cropped area to net cropped area) is one of the indices of assessing efficiency of agriculture sector. The cropping intensity for the year 2011-12 is 1.23.

## Gross and Net Area Irrigated

The gross area irrigated in the State decreased to 67.85 lakh hectares in 2011-12 from 71.53 lakh hectares in 2010-11.

The net area irrigated in the state increased to 50.89 lakh hectares in 2011-12 as against 50.34 lakh hectares in 2010-11 showing an increase of 1.09 percent. The source-wise Gross and Net area irrigated in the State from 1996-97 to 2011-12 are given in Annexure 5.8 and 5.9 respectively.

## Land Holdings

The data on land holdings in the state is being collected since 1970-71 through a quinquennial census of land holdings, the latest available data relates to 2010-11. The average size of land holdings in the state has marginally declined to 1.08 hectares during 2010-11 from 1.20 hectares in 2005-06. The number of holdings has increased from 1.20 crore in 2005-06 to 1.32 crore in 2010-11. Distribution of land holdings and area according to size classes are given in Annexure 5.10.

## Agriculture Extension Programmes Mission and Strategies

A major concern of the State is to improve farm income both in absolute terms and as percentage of GSDP. The

department of Agriculture is therefore working with a mission of attaining sustainable agricultural production with minimum cultivation cost which eventually will enhance return on investment to the farmer.

The following strategies are being adopted for making the mission a reality.

- Re-engineering extension approach for effective extension reach
- Empowering farmers with advanced 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 demands of World Market
- Correcting micronutrient zinc deficiency
- Reclamation of problematic soils to restore productivity
- Natural Resource Management through watershed approach for development of agricultural land 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 Agriculture Credit to farmers Women Empowerment and gender balance

- Provide day to day information to farmer on crop production, input supply, and marketing through internet(AGRISNET)

### Initiatives for increasing productivity levels

- Developing farming situation based production plans.
- Disseminating improved technologies through extension out-reach.
- Ensuring availability of quality Agricultural inputs.
- Reducing cost of production by educating 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 cost of cultivation.
- Crop diversification programme
- Assisting farmers in natural calamities like droughts, floods and cyclones by providing relief and inputs for alternate cropping programmes.
- Implementing National Watershed Development Project for Rainfed Areas (NWDPA) for development of Sustainable dry land agriculture
- 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 non-loanee farmers and tenant farmers.

### Extension Activities Rythu Chaitanya Yatra

Inspired by the success of previous Rythu Chaitanya Yatras, they were organized again in the year 2012 from 10.05.12 to 31.05.12 in 22 districts in the state. The objective of these Yatras is to educate farmers particularly small and marginal farmers at grass root level. The focus of these Yatras was on technology transfer, addressing the technology gaps identified in the village, creating awareness about Government programmes for welfare of farmers ensuring timely credit delivery, effective input planning for kharif, agriculture mechanization, crop diversification, water management etc. to increase

productivity and reduce cost of cultivation, improve quality and latest technology intervention in Agriculture and Allied activities.

- 40,687 habitations have been covered and 20.59 lakh farmers contacted
- 35,713 Adarsha Rythus participated in RCY.
- 1,48,897 non-loanee farmers were identified
- The financial allocation for Rythu Chaitanya Yatras 2012 is Rs.341.87 Lakh

## Rythu Bata

The Rythu Bata Programme was launched by the Agricultural Department on 15th August 2011.

## Objectives

- To take extension services to the doorstep of farmers.
- To create awareness about ongoing Government programmes.
- To understand the problems faced by the farmers.
- To understand prevailing local situations.
- To organize farmers into crop wise groups for major crops, so that in the long run, such groups become instrumental in tackling farmer's problems
- Mandal Agricultural Officer enlists all the Villages (Gram Panchayat) under his jurisdiction and conducts farmers meeting at a specified place, like Gram Panchayat Office or Community Hall, on a specified date in a month.
- As a part of Rythu Bata, Palle Nidra programme has been launched and all MAOs, ADAs, DDAs & JDAs are required to do a night halt once a fortnight.
- Adarsha Rythu acts as Convener for this Rythu Bata programme.
- This Programme is being done as per the Daily Visit Chart of the AOs/ADAs
- As of now,1643 crop groups have been formed for major crops
- These groups are proposed to be trained under RKVY funds

## Monthly Workshop

Monthly workshops are being held regularly at identified research stations of ANGRAU in all districts on first Saturdays. Departmental officers and scientists of ANGRAU discuss and formulate production recommendations for ensuing the month. The forenoon session of the workshop is allotted for discussion on problems and finalization of messages based on field visit conducted in concerned research station. An hour is set aside exclusively in the agenda for discussion of line Department's issues.

The information obtained in monthly workshops is displayed as black board messages in every village. Messages on important current issues relevant to farmers are communicated in various forms like supporting literature such as leaflets/ pamphlets /handouts /Radio /Television messages.

## Regional Pre-seasonal Work Shop

Workshops were conducted in Visakhapatnam, Eluru, Guntur, Khammam, Karimnagar and YSR Kadapa on issues like ongoing schemes of departments and finalizing strategies for Kharif 2012, involving bankers, officials from C&DA, DAATTC scientists and district level officials and senior dignitaries from Government and to up-gradation of knowledge of Extension functionaries.

## Zonal Research Extension Advisory Council Meeting

ZREAC were conducted in 9 Agro-climatic zones. During these meetings, research gaps for the zone as a whole and production recommendations for major crops were provided to departmental officers and research priorities finalized. Officers from the department were deputed and problems reviewed. The ZREAC for Rabi season was conducted in the months of August and September 2012 and were organized by ANGRAU.

## Staff Trainings

Trainings for senior and middle level officers have been organized in specialized areas in various Institutes of Government of India as well as in ANGRAU. Grass-root level extension workers like Agricultural officers are trained at State Government institutes like SAMEITI, DR.MCR HRD Institute, WALAMTARI etc. Officers are being deputed to National institutes like EEI,

MANAGE, CRIDA, IARI, IGMRI, ICAR, ICSR and other GOI Institutes.

### Training Programmes to Farmers

Under farmers training programmes, region and district specific trainings are being conducted to provide training and transfer of technology of ICM, INM, IWM SMSRI, Post Harvest Technology, Farm Mechanization, Rodent Management, Post Harvest Management, Seed Village Programme, Latest Agronomic practices, Drip Irrigation, Value addition to Agricultural Products and marketing. An amount of Rs.75.00Lakh has been allocated towards 1500 trainings to be conducted by DDA, FTCs during 2012-13.

### Padi Pantalu

The Telugu Monthly Magazine - Padi Pantalu is printed and distributed by the Department every month to farmers and Adarsha Rythus etc. Every month 1.00 lakh copies are printed and distributed.

### Quarterly Issue of World Trade Organisation News Digest

The WTO News Digest is a Quarterly Magazine printed once in three months ie., and distributed to agriculture and allied department officials to disseminate latest information on exports, imports and trade related issues to the farming community. Every Quarter, 1200 copies of the magazine were printed and distributed.

**Other Printing material:** To disseminate information about latest Agriculture Technology and schemes like Polambadi, AGRISNET, Rythu Bata, RTI, Extension activities, etc., being implemented are also printed in charts, leaflets, posters, booklets, Flexis etc., and distributed to the farming community.

### Soil Testing

Soil sampling and soil testing program is organized in a systematic manner to evaluate the fertility status and identify soil problems (Salinity/Sodality) and for facilitating optimal soil productivity, improving fertility and reclaiming problematic soils.

There are 27 District Soil Testing Labs (STLs) (22 labs in the 22 districts and 5 established under National Project in Mahaboobnagar, Kurnool, Vizianagaram, Nizamabad and Nellore), 2 Regional Soil Testing Labs, 5 Mobile Soil Testing Labs and 5 Mobile Soil Testing Labs and

58 Mini Soil Testing Labs located at Agricultural Market Committees (AMCs) in the State.

The departmental Soil Testing Laboratories are equipped to analyse Organic Carbon (OC-index of nitrogen content), 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 respective farmers in the form of soil health cards. The soil health cards contain information on soil fertility status showing the available nutrient contents. Based on available nutrient contents, fertilizer recommendations are given about the crop to be grown by the farmers.

The target and achievements in soil testing for the years 2011-12 and 2012-13 are shown in Table 5.1.

**Table 5.1 : Soil Testing**

Item	2011-12		2012-13	
	Annual Target	Achievement	Annual Target	Achievement April to Sep. '12
Macronutrients EC and pH	3,68,190	3,83,854	2,11,000	1,88,391
Micronutrients	6,03,215	3,83,090	2,11,000	41,898
Water samples	61,750	1,01,354	22,100	9,173

Source: Agriculture Department

During 2012-13, it is proposed to collect soil samples from the existing 240 farming situations at the rate of 15 soil samples from each farming situation approximately totaling to 3600 soil samples. Collected soil samples are to be analyzed for macronutrients and micronutrients (Fe, Cu, Zn, Mn & S) and monitored for 3 years.

### District Soil Testing Laboratories under Single Window Diagnostic Scheme

The Soil Testing Labs are strengthened for seed testing and fertilizers testing to analyse service samples in the STLs wherever notified labs are not available. 19 STLs for Seed Testing and 17 STLs for Fertilizer Testing are being strengthened. These labs take up analysis of seed and fertilizer samples other than law enforcement samples. Farmers, dealers, producers or any interested

person can get information about the status of seed lots and fertilizer. Single Window Diagnostic scheme achievements are shown in the Table 5.2.

**Table - 5.2 : Single Window Diagnostic Scheme**

Item	2011-12		2012-13	
	Annual Target	Achievement	Annual Target	Achmt (April to Sep. '12)
Seed Samples- No.	11,400	8,098	11,400	3,773
Fertilizer Samples (No.)	1,700	361	1700	28

Source: Agriculture Department

## National Project on Management of Soil Health & Fertility

The National Project on Management of Soil Health & Fertility is a Centrally Sponsored Scheme and implemented by the department of Agriculture & Cooperation (DAC), Ministry of Agriculture, GOI.

### Objectives

- Strengthening of Soil Testing facilities
- Promotion of Integrated Nutrient Management
- Strengthening of Fertilizer Quality Control Laboratories (FQCLs) and
- Upgradation of skills and knowledge of STL/ extension staff and farmers.

During 2012-13 the following activities were taken up under this scheme:

- Existing 10 Soil Testing Labs were strengthened through supply of Atomic Absorption Spectrophotometer (AAS) for analysis of micronutrients.
- Trainings to STL staff & Field functionaries for all the districts on 'Balanced use of Fertilizers' was organized at SAMETI for 20 officers per district.
- 220 trainings were organized by DDAs (FTC) throughout the State for 20 farmers per training programme
- 104 Field Demonstrations & 260 Frontline Field Demonstrations were organized during Kharif 2012 in all districts by ADAs (STL).

- Strengthening of 4 existing Fertilizer Quality Control Laboratories (FQCLs) is under process.
- Setting up of 1 new FQCL at Machilipatnam is under process.
- Promotion of organic manure covering 11000 ha through supply of both liquid & powder form of Bio Fertilizer.

## Agricultural Resources Information Systems Network - AGRISNET

The Government of India has launched a Central Sector Scheme titled "Strengthening/ Promoting Agricultural Informatics & Communications". AGRISNET is one component of the central scheme and was launched on February 11, 2009 for the benefit of the farming community. Andhra Pradesh AGRISNET portal with url <http://www.apagrisnet.gov.in> provides technical information and services to farmers.

### General Information available in Portal

The portal contains information and recommendations on practices of 18 important crops grown in AP, Schemes, subsidies of department and other important information on agriculture. It has been provided that wherever applicable the text is read out in Telugu for the convenience of farmers. Photos and videos are also included on important concepts for easy understanding.

### Newly added features

- Weather Reports and Weather based Agro-advisories including Satellite Images of daily cloud cover
- 'Vyavasaya Panchangam' of ANGRAU in the form of 142 PDF files.
- You Tube channel <http://youtube/apagriculturedept>
- Video Gallery & Video clips of pests & their natural enemies, IPM, Polambadi, Success stories of farmers etc.
- Detailed information of Registered Pesticides and Bio-pesticides
- Information Collection and updates from ANGRAU Agro Advisories and AMIC Price Forecast - ANGRAU
- Detailed information of Registered Pesticides and Bio-pesticides

- Information on crop damage due to natural calamities in the state

### Online Soil Health Card Application

Soil Health Card Application are upgraded to view Micronutrient Soil Test results along with Macronutrient analysis reports of the soil samples sent to Soil Testing Laboratories. Computerization of Water Analysis Reports of STLs is under progress. So far 13.72 lakh Macronutrient soil sample test results were made available online.

### SEEDNET Application

“SEEDNET” is developed to automate all 23 Seed Testing Laboratories (including DNA Finger Printing Lab at Hyderabad) in the State. The seed test results of samples of seed tested in labs are updated in the system and are made online day-to-day. Seed Testing Laboratories has been provided Internet connection from ATMA funds.

### ‘Nipunulanu Adigi Telusukondi’

This application facilitates farmers pose queries to scientists identified as experts from ANGRAU and concerned department officers, in Telugu. A facility is provided to add images/ files to the query and answer.

The System generates a unique Query ID when the query is posed along with SMS alert and an e-mail is sent to the farmer about the Query ID. The farmer with the help of this Query ID can either check in the portal, e-mail, or ask the call center to read out the answer or get information and printout from Rajiv Common Service Center. So far 2484 queries posed by farmers were answered and made available on the portal.

### SMS Alerts Application

An application to send SMS alerts to the farmers’ and departmental officers’ mobiles, on subjects like Seed Availability, Soil Test based fertilizer recommendation, pest alerts misbranded pesticide information, General Information was developed and launched in March 2011.

### Web Application for Product Market Identification Matrix (IIFT, Kolkatta)

This application can be used as a readymade guide for the agricultural exporters to obtain information pertaining to identification of right market, tariff rates

and food safety regulations for a product in a particular country, based on the past five year trends and present WTO parameters and is ready to be launched.

Online Input License Management System of Seeds, Fertilizers, Pesticides and their Stock Position in mandals is under progress. 44 officers at the rate of 2 per district are being trained as master trainers on Online Fertilizer License Management System who in turn will train other officers in the district.

Services such as internet connectivity, voice messaging - green SIM Cards of IKSL, are supplied to 5000 Adarsha Rythus to send five voice messages daily through M/s IKSL

### Delivery of AGRISNET Services through Rajiv Citizen Service Centers

Different services are to be made online through AGRISNET portal so that they can be delivered to farmers through these centers. The Government has made it mandatory for every department to identify two services to be delivered through these centers. The department has identified delivery of online Soil Health Card and Ask an Expert services to be delivered through RCSCs besides general services of AGRISNET.

### Mee Seva Services

Launched the delivery of Services through Common Service Centers in November, 2011. The department has proposed issuing of license of inputs, online Soil Health Results & information services available in AGRISNET portal to be delivered through Mee-seva centers.

### Kisan Call Center

The Agriculture component of Parishkaram – Farmers Call Centre (1100) of A.P. State was merged with the Kisan Call Centre from 1st May, 2012 to maintain uniformity across the state and popularize 1551 toll free number.

The agricultural department is involved in various activities of KCC such as answering escalated calls at Level-II of KCC, attending monthly review meetings, conducting sensitizing workshops at State and District levels, supervision of quality & speed of service delivery by the KCCs, provision of additional information to the KCCs by the State Department of Agriculture & allied sectors, coordination with the state IT Department to get schemes rolled out through the CSCs.



## Complaint Management System Software

The department launched an IVRS based round the clock toll free number 1800-425-3536 on 25-07-2012 to respond to farmers queries, establish wider reach and give solutions to farmers problems quickly. One officer from each district was trained on software application on 30-07-2012. Almost 2330 farmers' queries have been replied through this system till now.

## Subsidy Seed Distribution

11.36 lakh qtls. of seed was distributed at a subsidy of Rs.167.62 crore during Kharif 2011 and about 5.20 lakh qtls of seeds was distributed at a subsidy of Rs.85.69 crore during Rabi 2011-12. In total (Kharif + Rabi) 16.56 lakh quintals of seeds were distributed under different schemes involving a subsidy of Rs.253.31 crore.

**Kharif 2012:** About 15.18 lakh qtls of seed was planned for distribution under subsidy programme under different schemes like NFSM, RKVY, ISOPOM and NSP, out of which 10.47 lakh qtls of seed at a value of Rs. 159.80 crore was distributed during Kharif 2012. Details about the area covered under High Yielding Varieties are given in Annexure 5.11.

## Fertilizer Policy Initiatives

Fertilizer consumption during the year 2011-12 in terms of product was 70.83 LMTs (Kharif 34.28 LMTs and Rabi 36.55 LMTs).

The consumption in terms of nutrients (N, P, K) was 33.43 LMTs (16.13 LMTs during Kharif 2011 and 17.30 LMTS during Rabi). Details about fertilizer supplies during Kharif 2012 are shown in the Table 5.3.

**Table 5.3 : Fertilizer Consumption**

(in LMTs)

Product	Kharif 2012	
	Allotment	Consumption
Urea	16.50	14.54
DAP	7.30	3.33
MOP	3.25	1.57
SSP	2.00	1.04
Complexes	11.50	8.76
Others	1.00	0.80
Total	41.55	30.04

Source: Agriculture Department

Details about product-wise consumption of fertilizers and the nutrient wise fertilizer consumption are given in Annexures 5.12 and 5.13 respectively.

## Nutrient Based Fertilizer Policy

The Department of Fertilizers, Govt. of India implemented the Nutrient Based Subsidy Policy from 1-4-2010. Under this policy, fixed subsidy is extended on fertilizer products (DAP & Complexes except Urea) based on Nutrient content. The fertilizer companies are to decide MRPs based on the cost of the raw materials/ finished goods (FGs) in the international market. The Government of India communicated the subsidy fixed per kg on nutrients for the year 2012-13 w. e. f from 01-04-2012 viz: Nitrogen, Phosphorus, Potash and Sulphur are Rs. 24.00, Rs. 21.80, Rs. 24.00 and Rs. 1.68 respectively.

## Pesticides

The chemical pesticide consumption during the year 2011-12 is 5119 M.T.s of active ingredient during Kharif and 4170 of active ingredient during Rabi and the bio-pesticides consumption is 22.0 M.Ts of active ingredient during Kharif 2011. The pesticide consumption increased slightly compared to last year's consumption i.e.2010-11 due to an increase in area under I.D. crops specially cotton, soybean etc. Awareness was created among farmers on Integrated Pest Management practices by conducting Polambadi programmes in farmers' fields, introduction of Bt. Cotton seeds, usage of bio-pesticides etc., to reduce consumption of chemical pesticides. Pesticide consumption in the State was 2619 M.T.s of active ingredient during Kharif of 2012-13. The pesticide consumption particulars from 2007-08 to Sept-2012 over the years is shown in Table 5.4.

**Table 5.4 : Utilization of Pesticides**

(M.Ts)

Year	Pesticide Consumption (Active ingredient)
2008-09	8374
2009-10	8146
2010-11	8,869
2011-12	9,289
2012-13 (up to Sep,2012)	2,619

Source: Agriculture Department

## Farm Mechanization Scheme

Farm equipment like land preparatory, sowing equipment, plant protection equipment, self-propelled machinery, power tillers, tractors, inter cultivation equipment etc, which are used in farming operations and post-harvest equipment are being supplied under subsidy. It is proposed to facilitate supplies worth of Rs. 2500 crore in three years starting from 2012-13. Nearly Rs. 700 crore worth of farm equipment will be supplied during 2012-13. The total expenditure spent on Farm mechanization during 2011-12 was Rs.205.00 crore. The State was allocated funds through Rashtriya Krishi Vikas Yojana –Rs.190.00 Crore, FM scheme (MMA&NSP)-Rs. 143.00 Crore, National Food Security Mission- Rs.18.00 Crore during 2012-13.

Contrary to the previous implementation process, this year the Government introduced a new system of setting subsidy limits for each and every farm equipment being supplied under Subsidy scheme. The subsidy limit was enhanced from Rs.30,000/- to Rs. 50,000/-on rotovators the first of its kind in the country to promote modern farm equipment which can do more than two operations at a time. Rs.150.00 crore worth farm equipment (Rs.75.00 crore subsidy) was already supplied to the districts during 2012-13 so far.

The farmer is given the option to place purchase order in the name of chosen supplier duly enclosing non subsidy portion in the name of the supplier for the required farm equipment.

The quality of the equipment being supplied is monitored using quality control teams in the districts. It is proposed to introduce establishment of Custom Hiring Stations in mandals for major crops grown in AP like, Paddy, Maize, Groundnut, Cotton and other crops like Sugarcane and Tobacco to make high cost machinery available to small and marginal farmers. Almost Rs.90.00 crore will be spent for this purpose during the year.

Implement Service Station is proposed to be introduced in gram panchayat level to make commonly used farm equipment like cultivators, seed drills, and plant protection spraying equipment available to all farmers. About Rs. 25.00 crore will be spent on this component.

Implement Service Stations will serve as the nodal points to rent commonly used equipment to farmers on nominal hiring charges fixed by villagers. These shall be operated by the villagers themselves. This will reduce the financial burden on farmers for buying farm equipment which is used only for a few days in a year.

It is also proposed to introduce hiring of processing machinery for seeds purpose, post-harvest equipment like cleaners, graders, dryers, weighing machines, moisture meters, stitching machines, tarpaulins at the Gram panchayat level. Fiber body are introduced for direct sowing purpose to mitigate erratic rainfall, drum seeders.

Farm Machinery exhibitions are conducted in every district to bring awareness about use of mechanized equipment and to reduce cost of cultivation. permanent display centers are being established by Agros to make farmers understand the features of modern agricultural machines. The achievements under Farm Mechanization scheme are shown in Table 5.5.

**Table 5.5 : Farm Mechanization**

(Rs. Lakh)

Year	Beneficiaries (No)	Subsidy Expenditure
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	1,31,577	7,878.36
2010-11	1,76,000	7,945.00
2011-12	2,10,000	19,480.00
2012-13 (up to Sep12)	30,000	8861.54

Source: Agriculture Department.

## Crop Insurance National Agriculture Insurance Scheme

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

### Objectives

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

## Village as Insurance Unit Scheme

A.P is the only State to have 'Village as insurance Unit' in all districts of the state from 2008 season Kharif. The Village level insurance programme provides more benefits to farmers as local losses are more representative. 20 and 10 crops were covered during Kharif and Rabi respectively. An amount of approximately Rs.4535.39 crore has been paid as Crop Insurance claim since inception of the scheme (from 2000-01 to Kharif 2011) benefiting 70.05 Lakh farmers under crop Insurance Scheme, 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 were introduced in the state for the benefit of the farming community.

## Weather Based Crop Insurance Scheme

Weather based Crop Insurance Scheme (WBCIS) which was launched in Guntur District for Red Chilly crop during Kharif 2009 was extended to other crops like Cotton, Red chilly, Tomato, Groundnut, Sweet lime, Oil palm, Banana, Cashew, Mango etc., in other Districts every season in the interest of the farming community.

## Modified National Agriculture Insurance Scheme

Apart from NAIS, Modified National Agricultural Insurance Scheme was launched in the State during Rabi 2010-11 on pilot basis in 3 District of Prakasam, Nellore and Warangal. The scheme contains additional farmers-friendly features such as localized calamities such as Hailstorm and Post harvest losses for which farmer wise assessment is taken up for settlement of claims. As rice is a major crop in these districts it was notified for implementation under Village as Unit. The modified pilot scheme was continued in East Godavari, West Godavari and Krishna during Kharif and Prakasam, Nellore and Warangal during Rabi seasons for the benefit of farmers.

## Agricultural Credit

The Annual Credit Plan 2011-12 for the State was Rs.48,000 crore towards Agriculture Credit nearly almost Rs.58,511 crore (122%) was disbursed under Agricultural credit.

Rs.37313 crore (100.5%) crop loans were disbursed

against the target of Rs.37128 crore during 2012-13 (up to Dec 2012). Rs. 15,018 crore (94.79%) was disbursed against the target of Rs. 15,844 crore under Agriculture term loans including allied activities during 2012-13 (up to Dec 2012). Altogether Rs. 52,331 crore against the target of Rs.52,972 crore (98.79%) was disbursed during 2012-13 (up to Dec 2012). Details about Agricultural Credit disbursement are given in Annexure 5.15.

## Credit to New Non-loanee Farmers

4,71,590 new loanee farmers were extended credit of Rs.1325.36 crore during 2011-12.

About 1,60,721 new non loanee farmers have been enrolled and 51,166 new loanee farmers were extended credit of Rs. 96.00 crore during 2012-13.

## The Andhra Pradesh Land Licensed Cultivators Act, 2011

The Andhra Pradesh is the 1st state in the country to promulgate an act, "The Andhra Pradesh Land Licensed Cultivators Act, 2011 dt. 23.12.2011" to provide loan and other benefits eligibility cards to land licensed cultivators.

Loan Eligibility Cards were issued to 5,76,147 to Tenant farmers in the state and crop loans sanctioned to 1,97,747 LEC holders of Rs. 393.45 crore during 2011-12.

The Revenue Department issued Loan and Other Eligibility Cards (LECs) to 3,87,928 Land Licensed cultivators (Fresh- 1,56,872 and Renewed - 231056), and an amount of Rs. 196.85 crore under Crop loans to 95973 LEC holders during 2012-13.

## Pavala Vaddi Scheme on Crop Loans

The Government of Andhra Pradesh introduced Pavala Vaddi Scheme (at 3% interest) on Crop loans from 2008 to reduce the financial burden on farmers.

All loanee farmers who availed crop loans from Scheduled Commercial Banks/ Cooperatives/ RRBs and repaid the crop loan within the due date of 31st March for kharif loans and 30th June for Rabi loans benefited under this Scheme.

## Rythu Sri (Vaddileni Panta Runalu)

Interest free Crop loans to all farmers up to Rs.1.00 lakh and Pavala Vaddi for crop loans from Rs. 1.00 lakh to

3.00 Lakh if repaid in time beginning with Rabi season of 2011 was announced by the Government in Nov, 2011.

An amount of Rs. 375.00 crore was allocated under Interest Free loans for farmers (Vaddi Leni Runalu) for the year 2012-13. The Government also announced (June, 2012) the farmers upon prompt repayment can avail 0% interest facility on a 'front end basis' and not on 'back end/reimbursement basis' and the interest portion will be paid by the Government..

The State Government will pay the interest to the respective Banks as and when the farmers repay their principal amount promptly with affect from loans taken for Kharif 2012.

### Interest Waiver Scheme

Government issued orders in Feb, 2011 to extend interest waiver of 7% on crop loans to be disbursed during Kharif 2010 in flood affected notified mandals in 16 districts. to mitigate farmer's distress.

An amount of Rs. 330.10 crore was credited to 18.57 lakh farmers under Interest Waiver Scheme (16 flood effected districts) during 2011- 12.

### Adarsha Rythu

AP introduced the Adarsha Rythu system in the year 2007-08. The main objective behind the identification of Adarsha Rythus is to create a nodal functionary between the farmers and extension staff of agriculture and other line departments to help bridge the gap between the scientific know-how and field level do-how.

49,161 Adarsha Rythus were deployed as against the target of 50,000 in the state to strengthen extension services in the State. There are about 39,804 Adarsha Rythus working in the state presently.

Adarsha Rythus assist extension staff in implementation of schemes like Polam Badi, Seed Village Programme, Organic farming, Rashtriya Krishi Vikasa Yojana, National Food Security Mission etc.

Adarsha Rythus are involved in day to day actions with regard to schemes and technology subsidized input availability & procedures to avail the same, the broad regulatory mechanism for inputs and steps to be taken in case of failure of a particular input. Adarsha Rythus are actively involved in mobilizing farmers in special campaigns like Rythu Chaitanya Yatra, Rythu Sadassu,

Prajapatham and Saguku Samayattam. They are actively involved in identifying tenant farmers and in forming 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 Adarsha Rythus on the same day.

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

Adarsha Rythus maintain a list of 200-250 farmer's holdings allotted to him/her in the registers with 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 honorarium of Rs.1000/- per month is provided to each Adarsha Rythu.

### Polambadi Programme

Increased use of chemical pesticides for controlling pests and diseases is leading to increasing cost of cultivation and poor quality of produce, reducing market price and returns. Training is being provided to farmers through the FFS model to familiarize them about the hazards and disturbing impact of chemical pesticides on the natural ecosystem.

The trainings enables farmers to take economic decisions through adoption of practices like Integrated Crop Management (ICM) through incorporating principles of growing healthy crops, conserving natural enemies, conducting regular field observations and make them ICM experts. One Polambadi by the ADA (R) in each division, one by MAO and one by each AEO in the mandal is organized. The Polambadi programme is being done from seed to seed so that 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. The size of the Polambadi is 10 ha. with about 30 farmers. Field observation will be done on the polambadi day. A season long training programme on Cotton is also being organized in Warangal during Kharif-2012. Details about Polam badi programmes organized are shown in Table 5.6.

**Table 5.6 : Polam Badi Programmes**  
(Number)

Crop	2011-12			2012-13	
	Kh-arif	Rabi	Total	Kharif	
				Target	Achievement
Rice	1263	573	1836	1241	1181
Maize	130	289	419	164	167
Pulses	124	196	320	274	79
Oil seeds	331	678	1009	476	397
Cotton	276	0	276	345	315
Others	30	247	277	32	27
Total	2154	1983	4137	2532	2166
No.of farmers trained	63720	59490	123210	75960	64980

Source: Agriculture Department

**Monitoring:** A monitoring cell in JDAs office has been formed for effective monitoring at the district level. For the effective implementation of Polambadi, DDAs in the districts have been allotted sub-divisions to be monitored by periodic visits in the mandals in each month.

### Other Initiatives Yeruvaka Purnima

Yeruvaka Purnima is to gear up the farming community for starting agricultural operations in their farms with the onset of the south west monsoon and to inspire farmers harness higher productivity in agriculture in the ensuing season. Yeruvaka Purnima was organized on 4th June 2012 in 7 districts where elections were not being held and budget met from ATMA funds. Exhibition stalls on Agriculture were organized by the Staff members of FTC. Live demonstration like seed treatment, farm implements, soil sampling, precautions regarding handling of the pesticides, live models etc. were also organized to create awareness among the farmers.

### Extension Reforms Agriculture Technology Management Agency

Government of India has introduced the “Support to State Extension Programmes for Extension -Reforms” (ATMA) Scheme from 1st June 2005 in a phased manner which 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 Urban district of Hyderabad is covered under ATMA with Central and State financial sharing being 90:10.

### Objectives of the Programme

- To develop an efficient, effective, demand driven, research integrated and financially sustainable public extension system
- To revitalize Agricultural technology Generation Assessment refinement and Dissemination Systems
- Reforming Public Sector Extension. Promoting private sector to effectively complement, supplement and wherever possible substitute public extension.
- Mainstreaming Gender concerns in Extension.
- Capacity Building/ Skill up-gradation of farmers and extension functionaries.
- Enhance 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

The main scheme to operationalize agricultural extension reforms across the country is “Support to State Extension Programmes for Extension Reforms (ATMA)”. Funding support is 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 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 autonomous institution having membership of all key stakeholders involved in agricultural activities. It has the flexibility to receive funds directly (Government of India/States, Membership fees, beneficiary contribution etc). It has the key responsibility of disseminating all technology activities at the district level. It has linkages with all the line departments, research organizations, non-governmental organizations, agencies associated with agricultural development in the district and farmer organizations. Research and extension units within the district, such as KVKs, ZRSs, Department of Agriculture, Horticulture, Animal Husbandry, Fisheries, Sericulture, Marketing, etc, are its constituent members.

ATMA is supported by a Governing Board and a Management Committee. 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 under each ATMA. Commodity oriented Farmer Interest Groups (FIGs) are being 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 additional / new activities and enhanced costs in some cases. Few important / new components of ATMA are as follows:

1. Specialist & Functionary support at State level, District & Block level
2. Innovative support through Farmer Friends 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 for placement of 935 posts at various levels in the revised guidelines to the State. So far GOAP has given permission for placement of 932 posts and the placements of total sanctioned posts have been completed at various levels.

## Strategic Research and Extension Plan

One of the first tasks of ATMA is facilitation of the 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 stakeholders and farmers. The SREP contains detailed analysis of all information on existing farming systems in the district and research – extension gaps required to be filled-up. It also prioritizes 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 revisiting of the SREPs of ATMA districts whose stipulated time of 5 years was already completed.

## State Extension Work Plan

The block / district level plans for the year 2012-13 based on the research-extension strategies given in the SREPs, 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 2012-13 was developed at state level and submitted to the GOI with an out lay of Rs. 5879.74 Lakh. The District Action Plans developed under the scheme are to be consistent with Article 243 ZD of the Constitution.

GOI has given administrative approval for Rs 5876.69 Lakh for the year 2012-13 and released an amount of Rs 14.60 crore (50 %) of the tentative allocation of Rs 29.21crore and revalidated the balance amount of Rs 6.31 crore for implementation of the activities. Accordingly the districts are organizing need based activities like farmer trainings, demos, exposure visits, Kisan melas, field days, farmer scientist interaction etc. Nearly 0.48

lakh beneficiaries were covered under different farm oriented activities during the current year so far.

### Major Activities organized during 2011-12

- Initiated grounding of 60 FDs and 227 FLDs on Soil test based fertilizer application.
- Initiated grounding of 14718 Model farms in different districts.
- Organized 1162 trainings at mandal level for Model Farm farmers on the concept of Model farm, ICM, INM, IPM etc.
- Initiated demos on comparative performance of different BT Cotton hybrids at field level in 118 villages.
- Trainings on Organic Farming, Vermi Compost, oil palm and rejuvenation of Mango & Cashew, SRI cultivation, Bio fungicides, Vannamai culture in Brackish water, Post harvest technologies Fisheries, Calf rearing and management
- Organized 1982 Demos on Drum Seeder Technology, YMV resistant pulse variety PU-31, performance of Basmati Rice, Package of practices of Rajmah, Management of BPH with botanical extracts, Azolla Demos, Fodder Cultivation Bivoltine Cocoon Production, Control of Root rot in Mulberry etc.
- Initiated grounding of 64 Farm Schools in Agriculture and Allied sectors
- Organized 7 Kisan melas on Eruvaka at District level covering 3455 farmers.
- Capacity building of Extension functionaries in technical and managerial aspects.
- Organized -16 Interstate Exposure visits of farmers to Tamilnadu, Maharashtra, Bhopal, New Delhi, and Karnataka on Sustainable Agriculture, Organic Farming and Natural Farming, Dairy Management, Advanced techniques in mango.
- Capacity building of Extension functionaries in technical and managerial aspects.

### Monitoring & Evaluation

Regular monitoring and evaluation are being conducted through Farmer Advisory Committee and Block Technology Team at (Block Level) & ATMA GB at (District Level). The Chairman, IDWG and State Nodal Officer will continue with the day to day monitoring for ensuring that 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. Monitoring and Evaluation was conducted by PRDIS NGO (years 2006-07 and 2007-08) and ANGRAU, AP, Hyderabad (2008-09 and 2009-10).

### Government of India Initiatives Rashtriya Krishi Vikasa Yojana

RKVY one of the flagship programs of Govt. of India with 100% central aid, is being implemented with an objective to achieve annual growth rate in excess of 4% in Agriculture sector during the XI Plan. Govt. of India allocated an amount of Rs. 601.98 Cr. (Rs. 491.02crore under Normal RKVY and Rs. 110.96 Crore towards sub-schemes) for implementation of various projects under RKVY during the year 2012-13 out of which Rs.321.05 crore were allocated to Agriculture sector for normal and sub Schemes. Of the total Rs.321.05 crore an amount of Rs.114.58 crore was incurred by Agricultural Sector. Total expenditure by all the Sectors up to October, 2012 was Rs.192.35 Crore.

The Financial and Physical achievements under the two streams of RKVY relating to various components for the year 2012-13 (up to Oct.12) are furnished in Table-5.7.

**Table 5.7 : Achievements under RKVY during 2012-13**  
(up to Oct, 2012)

Name of the Project	Units	Physical	Exp. (Rs. Cr.)
Stream-I			104.32
1)Seed Management	Lakh Qtls.	2.54	37.50
2)Farm Mechanization		0	66.01
a. SMSRI Centres		83	16.60
b. Custom Hiring centres	Nos	42	12.00
c. Implement Service Stations	Nos	200	16.00
d. High Cost Machinery (RCF)	Nos	61	0.92
e. Inter cultivation & spraying equipment	Nos	9500	18.99
f. Drum Seeders	Nos		1.50
3)Organic Farming	Nos	296	0.81
Stream-II			4.09
Soil Testing			
Bhuchetana (Districts)	No	18	1.91
Interpretation of Soil analytical data and preparation of Maps	No of samples	22	0.18
Administration Exp			2.00
Initiatives for Nutritional Security through Intensive Millets Promotion			
Seed Minikits	No	15122	0.28
Input Kits	No	20000	5.77
Appointment of TAS under clusters	No	32	0.09
<b>Total</b>			<b>114.59</b>

Source: Agriculture Department.

## National Food Security Mission

The National Food Security Mission is under implementation in the state since Rabi-2007-08 with the following objectives.

### Objectives

- Increasing production of rice and pulses through area expansion and productivity enhancement in a sustainable manner in the identified Districts in the State.
- Restoring soil fertility and productivity at the individual farm level.
- Creation of employment opportunities Enhancing farm level economy i.e. farm profits to restore confidence in farmers.

The scheme is under implementation in 11 districts for Rice & 22 districts for pulses.

### National Food Security Mission-Rice

11 Districts: Srikakulam, Vizianagaram, Visakhapatnam, Krishna Guntur, Nellore, Medak, Mahabubnagar, Nalgonda, Khammam and Adilabad.

### National Food Security Mission -Pulses

22 Districts: Srikakulam, Vizianagaram, Visakhapatnam, East Godavari, West Godavari, Krishna, Guntur, Prakasam, Nellore, Kurnool, Anantapur, Kadapa, Chittoor, Ranga Reddy, Nizamabad, Medak, Mahabubnagar, Nalgonda, Warangal, Khammam, Karimnagar, Adilabad.

An amount of Rs.15099.63 Lakh was allotted based on proposals submitted for implementation of NFSM in AP during 2012-13. An amount of Rs. 7999.52 Lakh was released and so far an amount of Rs.4526.05 Lakh expenditure incurred up to September 2012.

### Accelerated Pulses Production Programme

The A3P seeks to demonstrate plant nutrients and plant protection centric improved technologies and management practices in compact blocks covering large area for four major pulse crops namely gram, urad (Blackgram), arhar (Redgram / pigeon pea) and moong (Greengram) for increasing production and productivity of these crops. Apart from increasing the production and productivity of pulse crops by participating farmers

another objective of A3P is to stimulate farmers in adjoining areas to adopt these technologies.

As far as the Action Plan for Rs.151 crore of 2012-13 is concerned, Rs. 80 crore was released and out of this Rs.45 crore released for the 19+ Million Tonnes Pulses Production Programme.

In mid Kharif 2012, the Government of India gave approval for implementation of a special plan to achieve 19+ million tonnes of pulse production during Kharif 2012-13 with a total allocation of Rs.1544.00 Lakh comprising Rs.10730.00 Lakh for activities to be undertaken under NFSM and Rs. 4624.00 Lakh for activities to be undertaken within Micro Irrigation Scheme.

The total allocation given by GoI for A.P. has been Rs.840.00 Lakh under NFSM Scheme and the same amount has been released to the State. The plan basically envisages utilization of new areas through intercropping, improving planting techniques and Irrigation use efficiency for inclusive water management and use of important critical but low cost inputs like Sulphur and Weedicides and productivity boosters. These include use of Drip & Sprinkler sets, intercropping of pulses with soybean, coarse cereals and Oil seeds.

### State Initiatives

#### System of Rice Intensification

Promotion of System of Rice Intensification (SRI) is an important intervention under NFSM for increasing production and productivity of rice in the State. The objective is to produce more rice with less water. SRI also has various other advantages. Intensive efforts are being made in the State for promotion of this system under tanks, wells, bore wells and tail end areas. Intensive trainings were organized for extension staff and farmers duly involving ANGRAU, ICRISAT, DRR and NGOs. Wide publicity was also done. An area of 153483 ha was covered under SRI cultivation during Kharif 2012. An area of 5.00 Lakh ha is targeted to be covered under SRI by direct seeding, line planting and drum seeder during 2012-13.

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## COOPERATION

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 and 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 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 38.74 lakh farmer members of the PACS. Relief to farmers affected by drought and other natural disasters has been provided. Based on the recommendations of the taskforce headed by Prof. A.Vaidyanathan constituted for suggesting the re-organization of co-operative societies the long pending re-organization of PACS has been completed for making them viable. The PACS have been re-organized from 4465 to 2949 in the State. The total financial assistance received so far under Revival Package for Rural Coop. Credit Structure is Rs.1868.69 crore including the State Government share of Rs. 261.02 crore.

### **Loaning Programme 2012-13**

A.P. State Co-operative Bank provided Rs5523.76 crore (Kharif – Rs.5384.04 crore and Rabi Rs. 79.67 crore) as production credit to the farmers through the Primaries and the District Co-operative Central Banks during the year 2012-13 (up to Oct. 2012). Out of the total Rs.5384.04 crore loans Rs.4893.14 crore loans under Seasonal Agricultural Operations (SAO), Rs.407.68 crore under Oil Seeds Production Programme (OPP) and 83.22 crore under Development of Tribal Programme (DTP) were disbursed during the kharif.

### **Short term (Crop) Loans**

An amount of Rs.5384.04 crore was disbursed by the DCCB's and GCC during Kharif 2012 season.

### **Long Term Loans**

APCOB has refinanced an amount of Rs.142.33 crore (up to October 2012) to the DCC Banks under Long Term Agricultural Credit to the extent as against the loaning programme of Rs. 405.00 crore allotted to all the 22 DCCBs during the year 2012-13.

### **Integrated Co-operative Development Projects**

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 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 eleven districts viz. East Godavari, Nizamabad Phase-I and Phase-II, Krishna, Kurnool, Nalgonda, Chittoor and Guntur Visakhapatnam, Nellore, Medak and Warangal with an expenditure of Rs. 94.13 crore. The project is now under implementation in 11 districts of Srikakulam, Vizianagaram, West Godavari, Kadapa, Mahabubnagar, Ananthapur, Adilabad, Karimnagar, Ranga Reddy, Khammam and Prakasam districts. The Government has released Rs.141.54 Crore, out of which Rs.119.95 Crore was utilized for 11 projects. 9 ICDPs are going to be completed by 31.03.2013 and the validity period of the remaining projects, i.e, Prakasam and Khammam is up to 31.12.2013.

### **Marketing Co-operative Societies**

There are 22 District Co-operative Marketing Societies (DCMSs), which undertake procurement of agricultural produce to enable farmers get minimum administered prices for their produce. The DCMSs procure seed on behalf of AP Seeds Development Corporation and also undertake procurement activities on behalf of MARKFED in addition to carrying on 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 up to Nov,2012**

(Rs. Lakh)

Share Capital Contribution	1000.21
Business Turn over	25949.4
Profit	152.73
Assets	12055.58
Liabilities	12666.38

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, other private run institutions and government hostels. Subsequent to introduction of single window system in the state in 1987, MARKFED offers 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. Depending upon the market situation it also procures other commodities under commercial account every year. During 2011-12, MARKFED achieved a business turnover of Rs. 1374.66 crore and during the year 2012-13 up to December it achieved a turnover of Rs.973.83 crore.

## AP State Co-operative Union

APSCU is an apex cooperative institution in Cooperative education and training. There are five Co-operative Training Centres (CTCs) working under APSCU offering Diploma in Co-operative Management and Computer Applications. APSCU mainly provides education to members, through short term cooperative trainings to Staff and member orientation programs to the needy elected Managing Committee members of Primary societies, DCCBs and other Cooperatives. The Union also publishes 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.

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. in Agricultural sector. Since 1995-96 the Corporation diversified its activities and started undertaking civil works. During the year 2011-12, the Corporation executed works to a tune of Rs. 22.88 Crore. The state Horticulture Mission / Horticulture Department has identified the APSCRIC Ltd. as the "Nodal Agency" for construction of Farm ponds in Horticulture fields for which an amount of Rs. 12.00 crore was provided during 2012-13 and works are under progress.

## Rural Electricity Supply Cooperative Societies

The key objective of the Rural Electric Supply Cooperative Societies 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 have over 5.45 lakh service connections covering 665 villages and 801 hamlets and assets worth of Rs.360.16 crore.

## The Hyderabad Agricultural Cooperative Association Ltd., Hyderabad.

The HACA was established with the main object of serving agricultural farmers through PACS. 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 2011-12 was Rs.17334.54 Lakh and it earned profit of Rs.160 Lakh up to Oct.12.

## Consumer Cooperative Societies

Consumer Cooperatives have been assigned an

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

### Weaker Section Cooperative Societies

Labour Contract Cooperative Societies and Cooperative Joint Farming societies etc are among others the main weaker sections Cooperatives in the State.

#### a) Labour Contract Cooperative Societies

Labour Contract Cooperative societies function in a 3-tire structure as shown below in Table 5.9.

**Table 5.9 : Status on Labour Contract Cooperative Societies**

Primary Level	6,714 LCCS with 3,99,321 members
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)

Source : Cooperative Department

### Cooperative Joint Farming Societies

Joint Farming Cooperatives also work in a three-tire structure as shown below in Table 5.10.

**Table 5.10 : Status on Joint Farming Cooperatives**

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)

Source: Cooperative Department

So far about 2,62,776 acres was covered under CJFS and 89,567 acres developed with 1,73,209 acres remaining to be developed.

### Co-operative 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 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. 1103 cases are pending in all the four Co-operative Tribunals for disposals as on 31-12-2012.

### Audit

A separate Audit wing headed by a Chief Auditor conducts 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 is completed within a period of six months from the closure of Cooperative year and an audit certificate issued before the end of succeeding Cooperative year. During 2012-13, 31,838 Cooperative Societies that were programmed for audit are nearing completion.

## HORTICULTURE

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

Technological innovations have helped Horticulture sector empower people not only by improving economic conditions of those subsisting on it but also catering to their nutritional security that eventually is transforming agrarian economy.

The fact that horticulture has moved from rural areas to commercial activity which has encouraged private investment is one of the most significant development in the last decade. Transition from traditional outlook to a trade oriented outlook has brought a perceptible

change in the concept of Horticulture development in the state.

The Government of Andhra Pradesh has emphasized Horticulture development in view of increased public investment in the sector.

The focus in recent years has been on increasing 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 the production of Citrus, Papaya, Oil Palm and Tomato 2nd in the production of Mango, Cashew, 3rd in production of loose flowers and 4th in the production of Banana. (NHB data base 2011).

## Growth of Horticulture

The area under Horticulture has increased from 3.70 lakh ha. in 1982 to 25.59 lakh ha. by 2011-12 and as per advance estimates it stands at 27.01 lakh ha. in 2012-13.

Details about the area and production of horticulture crops during 2011-12 and 2012-13 (A) are given in Annexure 5.16. Details about the principal horticultural crops area and production in 2011-12 are given in Table 5.11.

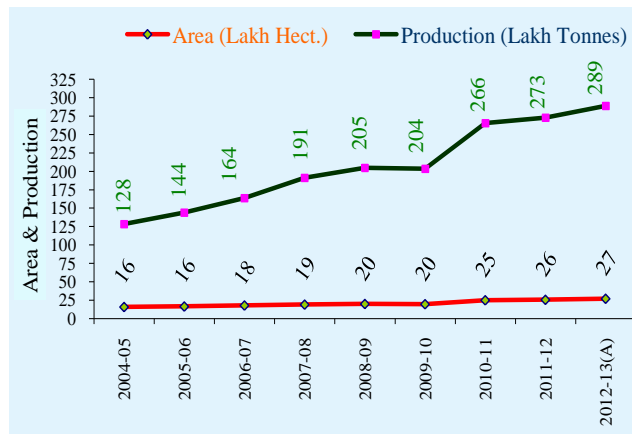
**Table 5.11 : Horticultural Crops – Area and Production during 2011-12**

Crop Category	Area (Lakh ha.)	Production (Lakh MTs)
Fruit Crops	6.72	98.41
Plantation Crops	3.21	13.70
Vegetables & Tuber crops	6.61	120.25
Spices	8.41	36.70
Cut Flowers	0.002	7092 (lakh No's)
Flowers (Loose Flowers)	0.616	2.70

Source: Horticulture Department.

The area under Horticulture crops grew on an average annually at the rate of 6.0% from 2001-02 to 2012-13(A), with the production growth being more impressive at 9.8%.

**Chart 5.4 : Horticulture Area & Production (Production excluding Coconut & Cut Flowers)**



Source: Horticulture Department

## Programmes

Several farmer oriented activities are being taken up to encourage adoption of modern technologies, evolving sustainable farming practices, provision of post-harvest infrastructure facilities and supplying knowledge inputs to the farming community.

Assistance is provided to farmers on plant material, seed and inputs, drip and sprinkler systems, pre & post Harvest infrastructure etc., through 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

AP Micro irrigation Project is a comprehensive and unique project being implemented in a big way in Andhra Pradesh. APMIP was launched in November' 2003 with an objective of enhancing crop productivity by improving water use efficiency through Micro-irrigation systems.

A total area of 8.95 lakh ha. has been covered with Micro irrigation system in all 22 districts of Andhra Pradesh from 3-11-2003 to 31-03-2012.

An area of 1.10 lakh hectares was brought under drip/sprinkler irrigation in 2011-12. While an area of 42264

ha. has been covered so far , it is proposed to bring 2 lakh hectares under Micro Irrigation in 2012-13.

### State Horticulture Mission

A Centrally Sponsored Scheme – the State Horticulture Mission, is being implemented in the State by the State Horticulture Mission. The Mission was launched on 3rd November 2005 to promote holistic growth of 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 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.

An amount of Rs. 114.71 crore 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. In 2012-13, an amount of Rs. 45.83 Crore was 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, which reduced the incidence of Mangu in Sweet Orange and Mango and BBD in Pomogranate the quality of produce increased. Use of bio-inputs like T.Viridae, Pseudomonas, Neem Oil etc. not only reduced pesticide residue and improved the quality of produce but also reduced the cost of cultivation and enhanced market price of the produce. .

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

Organic farming was taken up in an area of 7450 ha. under Horticulture Crops for encouraging adoption of organic farming in 2011-12. An area of 10,000 ha. of various fruits was covered under IPM/INM practices.

### Production of Quality Plant Material

Quality plant material plays a vital role in sustainability of gardens especially perennial fruit crops. Small and model nurseries were encouraged to produce quality plant material by providing assistance for infrastructure under NHM to cater to the requirement of plant material for bringing additional areas with improved varieties and rejuvenation programmes.

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

### Post-Harvest Management

Horticulture crops are highly perishable and require special attention on harvesting, handling, packaging, storage and processing operations. The focus was on providing pre-harvest tools and development of post harvest infrastructure facilities like Pack houses, Cold storages, Refer Vans, Ripening Chambers etc. During 2011-12, assistance was provided for 17 Cold storage units, 1 Ripening Chamber, 06 Primary Processing Units, and 3 Refer Vans.

Post-harvest management activities like reduction of losses and improvement of the quality of horticultural produce is important for enhancing the value of the produce.

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

Particularly, establishment of ripening chambers for Banana which helped realize 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.

### Rashtriya Krishi Vikasa Yojana

The Rashtriya Krishi Vikasa Yojana (RKVY) (Central Sector Scheme) which was launched in the State, in 2007-08 started implementation in 2008-09. This programme

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

The RKVY scheme in Andhra Pradesh is proposed to implement 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.

An amount of Rs. 3958 Lakh was utilized for implementation of RKVY programme under Fruits & Vegetable crops during 2011-12.

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

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

During 2012-13 an amount of Rs. 2839.00 Lakh has been allocated for implementation of RKVY programme under fruits and vegetable crops. An amount of Rs. 1700.00 Lakh was allocated under “Vegetable Initiatives for Urban Clusters in the same period. The total financial outlay of RKVY for 2012-13 is Rs. 4539.00 Lakh.

The salient features of the scheme are area expansion of vegetables through hybrid vegetable seeds, promotion of farmers associations through 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 to cater to the needs of seedlings for vegetable cultivation.

### **New initiative Quality Management Programme**

The main objective of the programme is facilitating integrated horticulture projects for organizing farmers in FPOs and integrating the horticulture supply chain, with financial assistance through RKVY. This represents a paradigm shift from productivity enhancement to quality production and value addition.

The Programme is to facilitate organize farmers into Farmers Producer Processors organizations (FPOs) with an objective to ensure supply of nutritive horticulture fresh produce through process certification

from production to marketing and establishment of Individual Quick Freezing Unit (IQF). Farmers will be given assistance for different activities at various stages like pre-harvest, harvest, post-harvest, marketing, transport and storage.

QMP 89 No of FPOs were proposed with financial outlay of 3041 Lakh under RKVY.

### **Strengthening Value chain of Mango**

Average sales per day are around 40 MTs of different varieties. A number of progressive farmers from various districts participated in the Mango Mela. Arrangements were also made for displaying and selling non-carbide Mangoes in 45 stalls at Exhibition grounds, in Hyderabad.

Mango Mela depends upon harvesting dates and is organized in three phases. The Department of Horticulture intends to promote the supply of quality fruits through better post harvest practices and ripening by use of Ethylene gas in the ripening chambers. Availability of Non Carbide, good quality mango fruit provides opportunities for exports to other states & countries and also represents brand promotion of our produce. 539.73 tones Mangos were ripened with ethylene and the farmers benefited by almost Rs.37,000 per tonne. The average price per tonne of ethylene treated mangoes was Rs.62,000 and non-ethylene treated was Rs.25,000.

Mango farmers of Andhra Pradesh realized an additional benefit of Rs. 1.99 crore by participating in the Mango Mela. Farmers got almost more than 150% extra than the regular price, by sale of mangoes in the Mango Mela.

### **Baseline Survey – 2010-11**

A Base Line Survey has been conducted by the Department to create a data base of Horticulture Growers in the state of Andhra Pradesh by utilizing the services of Government and Non-Government organizations. So far 38.72 lakh farmer's data has been recorded.

### **Oilpalm Development Programmes Rashtriya Krishi Vikasa Yojana**

The Government of India since 1992 under TMOP and from 2004 under ISOPOM, is promoting Oil Palm Development Programme because of its high oil yield nature and to augment domestic requirement.

During the year 2012-13 the Government of India launched a Special programme to bring additional area of oil palm under Rastriya Krishi Vikas Yojana (RKVY) with a target of 27,000 Ha and financial outlay of Rs.13093.88 Lakh to Andhra Pradesh with 100% central assistance. So far 5819 ha, has been achieved.

### **Oilpalm Programmes (ISOPOM)**

Two oil palm seed gardens one by department and another in private sector were established in the State. 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.

12 companies with a processing capacity of 209 MTs per hour are working with the Government under this program. The companies have a buy-back arrangements for purchase of Fresh Fruit Bunches (FFB's) from farmers in the factory zone at the rate fixed by the Government.

### **State Plan Programmes**

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 vermin compost, value addition etc, for sustainability of coconut gardens.

### **Root & Tuber Crops**

The need of the hour is effective transfer of technology to progressive farmers. The Department has supplied quality plant material and other post harvest infrastructure to reduce post-harvest losses. Assistance was provided for taking up 240.00 ha., under potato area expansion so far in 2012-13,.

### **Floriculture**

Floriculture sector has been identified as a key focus segment of horticulture. Flower cultivation is profitable for farmers because of the growing demand for flowers in domestic and export market.

Under Area Expansion an area of 306 ha., has been covered for the year 2012-13 so far under development of floriculture.

### **Landscape and Ornamental Gardening**

Revitalization of Public Gardens is being taken up to develop model landscape gardens and transform urban environment into pollution free and pleasant surroundings. Both hard and soft landscape works are being taken up as a part of beautification.

### **Exports**

The total value of exports of Horticulture commodities was Rs.709.62 crore during 2011-12. Details about exports in the 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 online data through dialup network from District Officers. The Department has taken up development of software packages for compiling data on area and production of Horticulture crops, Andhra Pradesh Micro Irrigation Project etc. The Department website [aphorticulture.nic.in](http://aphorticulture.nic.in) and a tele-conference facility are developed for effective communication and receiving progress report immediately.

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## **ANIMAL HUSBANDRY**

Andhra Pradesh has some of the richest livestock resources in the country and is one of the most advanced states in Animal Husbandry. Livestock plays a vital role in socio-economic and cultural life of people by providing gainful employment to a number of small and marginal farmers and enhancing their economic status.

Since more than 5 decades since formation of Andhra Pradesh, Animal Husbandry has achieved phenomenal growth in its different spheres. The Animal Husbandry activities were reoriented towards increasing production of livestock products like Milk, Meat and Eggs, besides providing adequate health care and control of diseases with the launching of the Five Year plans. The State attained a prominent position in the country in Livestock Sector over the years because of its increasing livestock resources, the gradual enlightenment of farmers and the dedicated and sustained efforts of the Government. From a humble beginning of backyard poultry it has grown into a dynamic industry. Milk and

Meat production has also made a quantum leap with the production increasing substantially.

Effective veterinary and animal husbandry services rendered have been the main instruments that achieved these production levels. Economic support programs like distribution of milch animals, sheep and poultry units helped the rural masses enormously in bridging income gaps. This besides conserving domestic biodiversity has become a means of producing food in dry lands without depleting ground water resources. The Livestock 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.

Animal Husbandry schemes have been formulated to pursue the well-laid National policies aimed at improving livestock production, fighting protein hunger, improving nutritional standards of human population and provision of technical support for the maintenance and improvement of livestock.

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

Category	No.in Lakh
Cattle	112.23
Buffaloes	132.72
Sheep	255.39
Goat	96.26
Pigs	4.39
Poultry	1239.85

The buffalo and sheep population has witnessed a steady growth over the years and the poultry growth has been rather steep especially since the 1999 census. Details about the livestock population over various census periods are given in Annexure - 5.18.

With increase in livestock population, the production and availability of nutritious food and supplemental income to farmers increased.

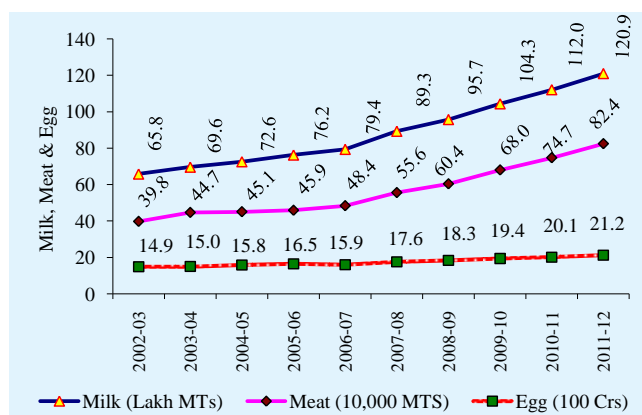
Livestock contributes 5.3% to the Gross State Domestic Product and formed 28.5% of the Agriculture sector in 2012-13(Advance Estimates). The production of Milk, Eggs and Meat is as shown in Table 5.12. and chart shown in 5.5.

**Table 5.12 : Production of Milk Eggs& Meat**

Item	Unit	2010-11	2011-12	Apr-Sep.12
Milk	000MTs	11204	12087	3444
Growth	%	7.4	7.9	
Eggs	Cr.Nos	2012.8	2121	573.6
Growth	%	3.8	5.4	
Meat	000MTs	747	824	226
Growth	%	9.8	10.3	

Source: Animal Husbandry Department.

**Chart 5.5 : Milk, Meat and Egg Production**



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 sanctioned “Prime Minister’s Package” for rehabilitation of farmers in 16 suicide prone districts of Andhra Pradesh to provide avenues of supplementary income through dairy farming. About 49,991 high pedigree milch animals and heifers from other States with the 50% subsidy equaling Rs.74.98 Crore have been inducted since 2007-08.
- The Government is implementing “Pasu Kranthi Pathakam” since 2007-08 and inducted 79,802 high pedigreed milch animals and heifers from other States with the 50% subsidy at the cost of Rs.114.10 Crore for the welfare of BPL families.
- Rashtriya Krishi Vikas Yojana is being implemented in the State since 2008-09 (11th Five Year Plan) with 100% Central Assistance to achieve 9% growth rate in Animal Husbandry Sector. About 48,591 high



pedigreed milch animals and heifers were induced from other States with (50%) a subsidy of Rs.68.67 Crore.

- Government of Andhra Pradesh has introduced a scheme “Jeeva Kranthi Padhakam” since 2007-08, by supplying Breeding Rams, Ram Lamb Units and Sheep and Goat Units under Chief Minister’s Package, to support BPL families and enhance the economic status of targeted families. Under this Scheme 48483 Breeding Rams, 2629 Ram Lamb Rearing Units and 2727 Sheep and Goat Unit have been 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 2012-13 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, since 2006-07. 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 2011-12. The Programme was extended to all Districts in the State in 2012-13 under ASCAD and RKVY.
- Deworming of Sheep belonging to shepherds of all categories of farmers twice in a year on free of cost basis reduced early lamb mortality and improved growth rate due to increased disease resistance in sheep and was continued in 2011-12.

## 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 of existing institutions to improve quality of Animal Health Services by providing facilities for surgery, disease investigation and treatment. Polyclinics were established at district headquarters to address this issue. Every mandal has been provided with a veterinary graduate to effectively organize Animal Health Services, support production program and for prevention and control of livestock diseases.

Five types of regular institutions viz., 20 Veterinary Polyclinics, 3 Super Specialty Veterinary Hospitals, 278 Veterinary Hospitals, 2202 Veterinary Dispensaries, 42 Mobile Veterinary Clinics and 2736 Rural Livestock Units are functioning to attend to animal health needs throughout the State. 299.83 Lakh cases were treated, 4.25 lakh castrations done and 514.99 Lakh vaccinations conducted by these institutions during the year 2012-13 (up to 30-9-2012). Proper diagnosis of disease is half the treatment. Towards this end, 22 Animal Disease Diagnostic Laboratories (ADDLs) were made functional. Details of Animal Husbandry institutions are given in Annexure 5.20.

## A. Veterinary Biological Research Institute, Hyderabad

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

### a) Biological Products Division

#### Objectives

- To prevent loss of valuable livestock due to various diseases, and to protect livestock, supply of vaccine to institutions is essential. The Veterinary Biological Research institute, is the main source of production of Viral and Biological Vaccines in the State and produces nine types of viral and bacterial vaccines.
- Production of different varieties and large quantities of safe and potent vaccines for protection of livestock and poultry against infectious & contagious diseases.
- Developing /adopting new techniques of manufacturing of Biologicals in bulk quantities
- Boosting economic conditions of farmers by generating mass preventive vaccinations for protection of livestock and poultry.

During the year 2011-12, 653.12 Lakh doses and during 2012-13 (up to 30-9-2012) 427.22 Lakh doses of various types of vaccines were 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 were produced under the license issued by the Director General of Drug Control Administration, India.

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

In conformity with the GMP standards, VBRI modernized the vaccine production facility in a phased manner to fulfill prescribed drug regulations with the funds provided under different schemes like NABARD, ASCAD and State plan at a cost of Rs. 14.00 crore.

### **b) Disease Investigation Wing**

Control and elimination of disease depends upon prompt and correct diagnosis of disease. A team of Disease Investigation Officers and subject matter specialists attend to this important issue.

Objectives of this wing are:

- i. Disease diagnosis and investigation of disease conditions among Livestock, sheep, goats, canines, pigs, poultry and captive wild animals by subjecting the diseased animals to laboratory diagnostic tests like cultural, biological, serological, histopathological tests including latest molecular biological techniques.
- ii. To collect and analyze epidemiological data of disease occurrences in the State and take measures for its control and eradication.
- iii. Issue of health certificates for livestock meant for export to foreign countries.
- iv. Field validation of diagnostic kits supplied by ADMAS/ ICAR/ GOI and any other research institute or veterinary colleges in the country.
- v. Impart training to field veterinarians on latest techniques in diagnosis of diseases.

### **C. Veterinary Biological Research Unit, Samalkot**

A Mini Vaccine Production unit at Samalkot, East Godavari district has been set up to meet demands of coastal districts. About 391.60 Lakh doses during the year 2011-2012, and 210.14 Lakh doses in 2012-13 (up to 30-9-2012), of various types of vaccines have been produced by this institute.

### **Government Livestock Farms**

The department has established cattle breeding farms at suitable places to support cattle development activities for producing pedigree bulls 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 515 Ongole breed during 2011-12 and 487 during 2012 -13 (up to Sep, 2012). Angola cattle are being maintained at Cattle Breeding Farm, Chadalawada in Prakasam district and composite Livestock farm, Chintaladevi in SPS Nellore District. 16 Deoni cattle were maintained at Deoni Cattle breed farm during 2011-12 and 22 in 201-13 (up to Sep, 2012) at Dudgepally in Medak district.

44 breeding bulls were supplied to Frozen Semen Bull Stations/ farmers in 2011-12.

### **A. Andhra Pradesh Livestock Development Agency**

The State Government has launched a massive programme of restructuring breeding operations in cattle under the National Project for Cattle and Buffalo Breeding (NPCBB) scheme. Andhra Pradesh Livestock Development Agency (APLDA) was established and started functioning from April, 2000 to implement this programme. The achievements of APLDA in the period April to September 2012 are as follows:

#### **a) Expansion of Artificial Insemination Activity**

The Artificial Insemination (AI) facility is available in 4960 Animal Husbandry Departmental Institutions in the State out of which 1269 centers are provided with Mobile AI facility. 4269 private AI centers (Gopalmitra Centers) have been established up to the year 2011-12 by training educated unemployed rural youth to provide doorstep AI facility to the farmers. 537 Private AI Centers apart from departmental and Gopalmitra Centres are being operated in the state by JK Trust, BAIF and Dairy Union etc. 4058 Gopalmitras were functioning in the state during the year 2012-13 (up to Sept, 2012).

#### **b) Performance of Artificial Insemination Centers and AI activity**

The AI centers in the State conducted 55.03 Lakh of

inseminations and 19.57 Lakh of improved progeny born during the year 2011-12.

23.96 Lakh Inseminations were conducted by all the AI Centers in the State and 10.16 Lakh improved progeny born during the year 2012-13 up to 30.09.2012. The Gopalmitras conducted 11.77 Lakh insemination and 4.65 Lakh improved progeny born as on September, 2012.

### c) Production, distribution and utilization of Frozen Semen

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

Four Frozen Semen Bull Stations produced 59.72 Lakh doses of Frozen Semen and distributed 75.50 Lakh doses in 2011-12. About 210 breeding bulls are stationed in the four semen stations. These four Frozen Semen Bull Stations produced 29.16 Lakh Frozen Semen doses and distributed 28.54 lakh doses in the year 2012-13 (up to September 2012).

An exclusive laboratory (Andrology laboratory) at Visakhapatnam will undertake Quality Control of Frozen Semen Produced at Frozen Semen Bull Stations. Bovine Breeding Complex, Nekarikallu has been utilized to rear young bulls to supply either Natural Service or Frozen Semen Production in the State. Presently there are 170 bulls under rearing.

### d) Organization of Fertility Camps- Pasu Vignana Sadassus

9517 fertility camps were organized and 3.91 Lakh infertility cases treated during the year 2011-12. 2875 fertility camps were organized and 1.15 lakh infertility cases were treated during 2012-13 (up to September, 2012).

### e) Implementation of Livestock Insurance Programme

Government of India has accorded permission to implement Livestock Insurance scheme in the state from 2010. A total of 1,15,738 milch cattle were insured, 8508 claims made and 7,819 claims settled during the year 2011-12. 36201 milch cattle were insured, and 3071 claims settled under the scheme during the year 2012-13 up to 30.9.2012.

### f) Prime Minister's Package

Providing of Cattle and Buffalo Breeding services has been implemented by APLDA in 16 identified districts with financial assistance of Government of India under the PM's Package. The scheme was started during the year 2006-07 and a total of 33.43 lakh doorstep inseminations were conducted up to March' 2012. 0.86 lakh Artificial Inseminations were conducted and 0.24 lakh improved progeny born under this package during 2011-12. This Package was stopped this year. Performance of Frozen Semen Bull Stations is shown in Table 5.13.

**Table 5.13 : Performance of Frozen Semen Bull Stations**

Sl.No	Item of Work	2011-12	2012-13 (up to 30-9-2012)
1	No. of Bulls Stationed		
	a) Exotic/ Crossbred	67	99
	b) Indigenous	11	10
	c) Murrah	132	148
	Total	210	257
2	Quantity of Frozen Semen Produced (Lakh Doses)		
	a) Exotic/ Crossbred	19.63	11.28
	b) Indigenous	4.33	2.02
	c) Murrah	35.75	15.82
	Total	59.71	29.12

Source: Animal Husbandry Department

Performance of district livestock development agencies is shown in Table 5.14.

**Table 5.14 : Performance of District Livestock Development Agencies**

Sl.No	ITEM OF WORK	2011-12	2012-13 (up to 30-9-2012)
Quantity of Frozen Semen Supplied (Lakh Doses)			
1`	a) Exotic	18.86	9.02
	b) Indigenous	4.28	2.47
	c) Murrah	33.93	12.80
	Total	57.07	24.29
No. of Artificial Inseminations Done (in Lakh)			
2	a) Exotic/ Crossbred	16.63	8.99
	b) Indigenous	3.81	2.27
	c) Murrah	34.56	12.70
	Total	55.00	23.96
Artificial Insemination Centers Covered (Nos.)			
3	a. Departmental A.I Centres	4960	4960
	b. Gopalamitras	4269	4058
	c. BAIF	107	107
	d. APDDC	131	131
	e. J.K. Trust	291	291
	f. Others	8	8
	Mobile AI centres	1269	1269
Total	11035	10824	

Source: Animal Husbandry Department.

## Feed and Fodder Development

High yielding and nutritious fodder are essential for scientific and economic management of livestock particularly 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 scientific feeding of livestock is essential for increased productivity of milk and mutton. To intensify the activity, fodder slips, improved varieties of fodder and pasture seeds have been supplied to farmers with

most encouraging results. 8.98 Lakh acres during 2011-12, and 4.96 Lakh acres during 2012-13 (upto 30-9-2012) were brought under fodder cultivation.

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

## Supply of Fodder Seed under Various Schemes under RKVY

Rs.3.70 crore has been allocated under RKVY 2011-12 for fodder development activities. A total of 2486 two HP chaff cutters were supplied to eligible farmers on 50% subsidy. The budget allotted for procurement and distribution of fodder seed on 75% subsidy during 1st and 2nd Quarter of 2012-13 is Rs.293 Lakh.

## Central Minikits Testing Programme

A total of 625 minikits were supplied (legumes & non legumes) free of cost during Kharif of 2012-13. 246 minikits comprising Maize, Jowar and Lucerne were distributed in Rabi.

## Centrally Sponsored Schemes for Fodder and Feed Development

The Govt. of India released Rs. 265.07 crore in two installments for Fodder & Feed development under Centrally Sponsored Schemes. The components are

## Grass land Development

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

## Power Driven Chaff Cutters

75% assistance from 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 will be provided under the scheme. The balance 25% funds are to be met by beneficiaries. It is proposed to supply about 550 cutters at a cost of with Rs. 82.50 Lakh.

## Silage making:

100% Grant-in aid by the Central Government is to be provided for establishment of new silage making Unit @ Rs. 1.05 Lakh (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 Lakh are allotted for Fodder seed procurement & distribution.

### **Azolla Cultivation and Demonstration**

Assistance under the scheme is to be provided @ of Rs.5000/- (50% of total cost of Rs. 10,000) per unit or 50% cost of the Azolla unit and training, whichever is lower. The balance 50% funds are to be met by beneficiaries. A total of 1852 Units are proposed.

### **Production of Fodder**

Distribution of improved varieties of fodder seed combining Legume & Non-Legume for 1 acre. It is proposed to cover 1,34,000 acres of land under fodder Development to cover 1,34,000 beneficiaries.

### **Adoption of Appropriate Technologies for Post -Harvest Management**

It is proposed to distribute 2200 power driven Chaff cutters on 50% subsidy to cover 2200 beneficiaries. It is also proposed to distribute 2200 Tractor mounted / operated chaff cutters to SHG / Unemployed Youth / Dairy Cooperatives at a subsidy of 50% to cover 2200 beneficiaries in coarse fodder available districts. A scheme of construction of 2200 Silage Making Units of 3.00 MT's capacity to cover 2200 beneficiaries with dairy units is also proposed and is in progress.

### **Watersheds**

Following components were included under Sheep & Goat Sector to increase livelihoods of Sheep Growers in water sheds clusters (IWMPs) under Animal Husbandry Sector. Organization of Sheep Health Camps, supply of mineral bricks for lambs, supply of breeding rams to sheep rearers, orientation training for sheep rearers and provision of stipend to sheep health workers (Jeevamitras) during 45 days training period were initiated during this current financial year.

### **Jeevamitra**

The Federation is to provide basic health services at doorsteps of shepherds in villages, where there is no network of AH functionaries. For this an educated youth is identified to be inducted as Jeevamitras at village level

and provided basic training at Departmental District Level training institutions on the lines Gopalamitra. So far 75 Jeevamitra candidates have been identified from the shepherd community and trained for 45 days.

### **Sheep Development**

Sheep rearing is an important livelihood in scanty, low rainfall areas and agriculturally backward areas. Scientific breeding is being advocated in sheep farms for 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 improving qualitative and quantitative productivity.

Three Sheep Farms are functioning to achieve the objective. Farm produced Pedigree rams are being distributed to 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 ranks eighth 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

1. Jeeva Kranthi Pathakam
2. Supply of breeding rams & establishment of market yards under RKVY
3. Sheep Insurance
4. Bhed Palak Bhima Yojana (Central Wool Development Board) and
5. 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 is 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

Government of A.P has taken up sheep insurance programme since 2006-07 to cushion the adverse impact upon livelihood of poor sections of families dependant on sheep rearing. Details of sheep insurance coverage are shown in Table 5.15.

**Table 5.15 : Sheep Insurance**

Year	Sheep insured (No. in Lakh)			Govt. Share Rs. In Lakh
	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
2011-12	0.02	0.00	0.02	2.61
2012-13(up to 30-9-12)	0.08	0.00	0.08	9.62

Source: Animal Husbandry Department

## Ex-gratia

In case of accidental death due to unavoidable life risk activity in rearing of sheep, Government has introduced ex-gratia of Rs. 1.00 lakh to be paid to the family of the sheep rearers. So far 10 Claims utilizing an amount of Rs.10 Lakh were settled from Sheep Insurance Funds.

## Rashtriya Krishi Vikasa Yojana Supply of Breeding Rams

In this scheme which was introduced in 2008-09, Rams are supplied on 50% subsidy adhering to the guidelines of JKP for breeding. A total of 15328 and 1172 Breeding Rams were supplied by utilizing Rs.2.50 crore as 50% subsidy from RKVY till the year 2011-12.

## Special Livestock and Fisheries Package for Suicide Prone Districts

Government of India sanctioned 100 Goat and 100 Sheep units for 16 suicide prone districts of Andhra Pradesh for creating livelihood for 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 Lakh for 100 sheep & 100 goat units has been released for implementation of the scheme. Out of which an amount of Rs. 4,12,000 was released for (8) Goat units and Rs.11,50,000 for (23) Sheep units to Warangal, Rs 6 Lakh for 15 Sheep units to Nalgonda and Rs 6.5 Lakh for 13 Sheep units to Kadapa districts, 49 sheep units & 77 Goat units to Adilabad district and 23 Goat units to Warangal district were also sanctioned.

## Central Wool Developmental Board Bhed Palak Bima Yojana

This is an insurance scheme for woolly sheep (Deccani Sheep) rearers that is implemented through LIC. Total annual premium is Rs. 330 out of which beneficiary pays Rs.80, CWDB contribution is Rs. 150 and LIC pays the remaining Rs. 100). Benefits of the scheme include payment of 0.60 Lakh, for normal deaths, 1.50 Lakh for accidental death, 1.50 Lakh for permanent disability due to accidents and Rs.0.75Lakh for partial disability due to accidents.

A total of 10228 Sheep breeders were insured and 24 claims settled out of 32 claims under Bhed Palak Bima Yojana till date,

## GOI/NABARD Schemes/Projects

### a. NCDC Assistance to Development of Small Ruminants by AP Sheep Federation

The NCDC, New Delhi has conveyed its 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. Details of the project cost are shown in Table 5.16.

**Table 5.16 : Project Component**

Project Component	Outlay (Rs. in Lakh)
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
<b>Total</b>	<b>9959</b>

Source: Animal Husbandry Department

## b. Strengthening of Sheep Breeding Farms under Integrated Small Ruminant Development

Government of India on consideration of the proposal conveyed administrative approval to the project amounting to Rs.1.27 crore 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. An amount of Rs.63.37 Lakh was released 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 demands of meat in rural as well as urban areas. To make Pork available at a reasonable price, Piggery development has been taken up in Andhra Pradesh under various programs like ITDA, DRDA and SC action plan etc. There are 4 pig breeding stations functioning in the state to make the required pedigree Male and Female breeding stock available to the beneficiaries under various schemes.

## Piggery Development Project, Visakhapatnam

This project renders necessary technical assistance to beneficiaries for the 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 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.

## Pig Fattening Scheme (Buy back system)

The District S.C. Society has established a Piggery Complex at Krishnapuram, a suburb in Visakhapatnam with permanent sheds to rehabilitate Scheduled Caste people through Pig Fattening Scheme. About 25 families were provided with L.W.Y weaners and fat pigs produced by them were taken back after attaining 70 to 80 kgs live weight with each beneficiary getting 4,500/- to 5,200/- p.m as remuneration which ensured gainful employment to the S.Cs.

## Piggery Development Scheme

Piggery Development Scheme Srikakulam acts as a liaison Office between District Rural Development Agency, District Scheduled Caste Society, Bankers, Piggery Development Project, Visakhapatnam and the Integrated Rural Development Agency for planning and implementing Piggery development scheme, marketing of cross breeds and for training Piggery beneficiaries.

## Poultry Development

Poultry farming in Andhra Pradesh is a dynamic and fastest growing segment of Agriculture Sector. The State occupies first position in the country in egg and broiler production with a production of 2121 crore of eggs and 22 Crore broilers.

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

### A. Assistance to State Poultry Farms

The scheme "Assistance to State Poultry Farms" is under implementation in Andhra Pradesh. This scheme was implemented in Government Livestock Farm, Mamnoon, Warangal district during the year 2008-09. Vanaraja/ Gramapriya Multiplication Farm and Hatchery has been established and chicks are being supplied. Necessary arrangements are also made for training of members on Vanaraja/ Gramapriya birds management and benefits

of the scheme. As on 30.09.2012, the farm had produced and supplied 15272 chicks in the field. 356 farmers have been trained in backyard poultry rearing.

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 similar farm is being developed at Utukuru village of Kadapa District.

## **B. Rural Backyard Poultry Development Programme**

The Government of India has sanctioned the Centrally Sponsored Scheme “Rural Backyard Poultry Development” in Andhra Pradesh with a total outlay of Rs. 355 Lakh and released Rs. 177.50 Lakh as grant during the year 2012-13.

The project includes distribution of 45 4 week old chicks to identified BPL beneficiary in 3 cycles at a gap of 16 weeks at the rate of 20, 15 and 10 chicks in each cycle. A subsidy of Rs. 30/- per bird for 45 birds (3-4 week old) is provided under this scheme. In addition an assistance to beneficiaries of BPL families for infrastructure like night shelters and other inputs (Rs.750/- per beneficiary) is also provided under this scheme. Further, intermediary structures called mother units with a subsidy of 20% each (i.e. 20,000/-) for rearing day-old-chicks to 4 weeks age, before distribution to beneficiaries are also being provided. The programme is under implementation and its budget has been released to concerned Joint Director (AH) for implementation of the scheme.

## **Human Resource Development**

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

The department has launched three tier training system

to meet 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. 2055 Veterinarians, 852 Para Veterinarians and 4197 other staff were trained in 2012-13(up to Sep, 2012).

## **Special Schemes**

### **A. Rashtriya Krishi Vikasa Yojana projects (Animal Husbandry Sector)**

Rashtriya Krishi Vikasa Yojana (RKVY) was implemented in all districts of AP state with central assistance in 2012-13. The objective of RKVY is to increase annual growth from livestock sector up to 8%. The Government of India sanctioned an amount of Rs.75.99 crore for implementation of RKVY during 2012-13 for 6 projects which include Accelerated Fodder Development Programme (AFDP).

#### **a. Augmentation of Milk Production**

It is proposed to provide a subsidy on milch animals up to 50%, transportation, feed supply, health and insurance totaling to Rs.71000/- on each unit.

It is planned to provide 1728 units with a financial out lay of Rs.12.27 Crore.

It is also proposed to promote Dairy Units with 20 milch animals to augment milk production by encouraging entrepreneurship in the state. A subsidy up to Rs.2.50 Lakh is provided on each Unit. The subsidy includes Rs.10,000/- per animal towards cost of milch animals and Rs.50000/- for construction of shed. It is proposed to induct 400 units with a financial out lay of Rs.10.02 Crore.

#### **b. Augmentation of Meat Production (Ram Lamb Rearing)**

It is proposed to provide Ram Lambs (Nellore or Deccani breed) at the age of 3-4 months to be reared till 9-12 months of age or till they attain the marketable body weight of 30-35 Kgs. It is proposed to provide Ram Lamb Units with unit size of 50 per unit. A subsidy of Rs.40,000/- (25% of unit cost) will be provided on each unit with the subsidy including cost of Ram Lambs, insurance, feed support, health support. It is proposed to provide 318 such units.



### **c. Livestock Health Care**

Healthcare measure for improving livestock health care includes mass deworming programme, mass de-ticking programme sheep health cum awareness programmes for sheep & goats. It is proposed to organize 20,000 Pasuvignana sadassus and fertility camps New innovative machines/ tools such as heat detectors, milking machines, dung scrappers, bush cutters, mechanical hay making, foggers and other have brought a revolution in Dairy industry, giving a wide scope to dairy/sheep farm mechanization. The project will be directed towards augmentation of milk and meat production. An amount of Rs.25.00 Crore is allocated to take up the above proposed activities for 353.25 lakh sheep & goat and 201.46 lakh health camps.

### **d. Vaccine Production & Disease Diagnosis**

It is proposed to provide vaccine production, and disease diagnostic kits to field staff to avoid production losses at the cost of Rs. 5.19 Crore

### **e. Capacity Building of Staff and Prospective Entrepreneurs**

It is proposed to organize training for farmers / entrepreneurs on livestock management to create awareness among staff and Dairy farmers/ shepherds and entrepreneurs. It is also proposed to take up publicity and extension activities through seminars, workshops, publication of manuals for 20900 farmers and 1100 entrepreneurs at a cost of 2.24 Crore.

### **f. Accelerated Fodder Development Programme**

#### **i. Fodder production through fodder seed supply**

It is proposed to cover 206150 acres of land under fodder Development with an amount of Rs. 13.40 Crore expected to generate 40.00 LMTs green fodder.

#### **ii. Silage making unit**

It is proposed to encourage establishment of Silage making unit of 9.00 MT's capacity on 100% grant along with the supply of individual power operated chaff cutters at 50% subsidy.

It is proposed to take up 2200 Units subsidized at Rs. 30,000/ per unit in the State with an amount of Rs.6.60 Crore.

### **National Mission on Protein Supplements under RKVY**

The National Mission for Protein Supplements (NMPS) will be implemented in AP State during financial year 2012-13 under Rashtriya Krishi Vikas Yojana (RKVY), at an outlay of Rs.5.80 (Rs.4 Cr Gotary and Rs1.80 Cr Piggery).

### **Supply of Milch animals**

The Government has approved the rates for procurement of milch animals and heifers and transportation for implementation of Pasu Kranthi Padhakam, Mini Dairy and State Milk Mission schemes for 2012-13.

It is proposed to provide milch animals at 50% subsidy in addition to provision of concentrated feed worth of Rs.2500/- and Rs.1000/- towards healthcare.

### **Calf Feed Subsidy (50%) Programme**

Under this programme, elite female calves born through A.I. are selected and provided with feed on 50 % subsidy and health care to protect the elite germ plasm and ensure that the calves grow into good milk yielders. This programme is implemented by the Animal Husbandry department under the Chairmanship of District Collectors in the state. Unit cost of Rs.10,000 and subsidy of Rs.5000/- per calf is provided and the rest of amount may be met from bank loans or beneficiary contributions.

### **Pavala Vaddi scheme for Milch Animal / Broiler (Poultry) / Sheep and Goat Rearing under CM's Special Package**

Under this scheme, 90 Lakh 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 details on the number of animals inducted, subsidy utilized under Prime Minister's Package, Chief Minister's Special Package and RKVY from 2007-08 to 2011-12 is shown in Annexure 5.21.

### **Chief Minister's Jeeva Kranthi Pathakam**

Govt. of Andhra Pradesh has introduced the "Jeeva Kranthi Pathakam" scheme in 2007-08, to support BPL families by supplying Breeding Rams, Ram Lamb Units, Sheep and Goat Units, under CM package, to enhance

the economic status of targeted families. The scheme is continued with 50% subsidy. Details of the grounded units with 50% subsidy since the beginning of the scheme till Sept. 2012 are shown in Table 5.17.

**Table 5.17 : Jeeva Kranthi Pathakam**

Year	Total amount Utilized (Rs Lakh)	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	154.12	2649	489	167	3305
2012-13 (upto Sept. 12)	149.40	240	81	0	321

Source Animal Husbandry Department

## FISHERIES

Sustainable development of Fisheries can only be achieved through improvement of the quality, technical skills and management of human resource in the State. 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 Lakh of people. It is a significant employment generator and a source of nutritious food and foreign exchange earner for the State. About 1.4 million people are directly or indirectly employed in the State in this sector and records faster growth than 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 contributes about Rs.3,000 Crore by way of marine exports, which is nearly 40% of the country's marine exports. The objectives set for the development of the sector are:

- Ensuring sustainable development

- Promotion of welfare of fishermen
- Promotion of investment to create infrastructure
- Promotion of fisheries value chain and boost exports.
- Setting institutions to build and multiply skills.

## Fish/Prawn Production

16.03 Lakh tones of fish and prawn was produced in Andhra Pradesh in 2011-12. The Fisheries sector contributes 2.9 % to the GSDP 2012-13(A). Target for Fish and Prawn production was 18.00 Lakh tones and 8.70 Lakh tones was achieved up to September, 2012 in the year 2012-13. Details of Fish and Prawn production are shown in Table 5.18 and given in Annexure 5.22.

**Table 5.18 : 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	20.65
2011-12	3.79	11.68	0.56	16.03	2.76
2012-13 Aht. Up to Sep 12	1.26	6.95	0.49	8.70	

Source: Fisheries Department

Production of fish/prawn in the state has increased constantly from 10.56 lakh tonnes in 2007-08 to 16.03 lakh tonnes in 2011-12, registering an average annual growth rate of 11.5%. This became possible because of the large scale involvement of farmers who driven by the robust market especially in Kolkata and North-Eastern states took up intensive pisciculture in the delta areas of the state.

## Important Schemes/Programmes Registration of Coastal Aquaculture

As per the Government of India Coastal Aquaculture Authority Act and rules 2005, land within a distance of two kilometers from high tide line (HTL) of seas,

rivers, creeks, and back waters comes under the purview of Coastal Aquaculture Authority (CAA).

The district level committee recommends the applications directly to the CAA for consideration of registration under intimation to the State level committee for Farms up to 2 ha. water spread area. DLC has to recommend applications for farms above 2 ha water spread area, to State Level Committee for further recommendation to CAA for consideration of registrations. As of now, CAA has issued registrations of certificates to 18,972.64 ha or 22,854 farmers in 22 districts which includes farms both below and above 2 ha area up to Sep.2012.

### **Registration of Fresh Water Aquaculture**

Fresh water aquaculture can be taken up by interested farmers by duly obtaining permission from the department of Fisheries. Registration certificates were issued to 56,387 ha area of Fresh water aquaculture in the state up to Sep.12.

### **Housing Scheme For Fishermen**

(CSS- 50:50) The Housing Programme for fishermen has been converged with INDIRAMMA. The Government of AP sanctions houses under INDIRAMMA Housing Programme to cover all eligible families of weaker sections at a unit cost of Rs. 54,250/- including ISL. The Government decided to pay Rs. 20,000/- as subsidy to the GOI in lieu of bridge loan to fishermen eligible under the scheme of GOI. The State share is being met from the Budget Provisions of the Housing Department. Rs. 500.00 Lakh was provided as assistance to 2500 beneficiaries by the budget estimates for 2012-13. Government of India sanctioned Rs. 200.00 Lakh in 2011-12. The amount is drawn and placed with the Housing Corporation to assist 500 beneficiaries. Proposals for sanction of Rs. 500.00 Lakh were submitted to Govt. of India in 2012-13.

### **Construction of Fish Landing Centers**

It is proposed to construct Fish landing center at 1) Antrenvedipallipalem, in East Godavari 2) Biyyaputhippa in West Godavari 3) Nizampatnam phase II development of fishing harbour and additional shore based facilities at the rate of 40.00 Lakh for 22 centres. The Central share of the Budget Estimate for 2012-13 was Rs.3697.50 Lakh. Proposals for sanction of Rs.657.25 Lakh for 12 Shore based facilities in East Godavari, Krishna, and Prakasam Districts were submitted to the Government.

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

The annual premium under the scheme is Rs.29/- per person and shared equally by Central and State Governments. The Government of India release 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 provides an ex-gratia of Rs. 1.00 Lakh to the families of deceased fishermen. The Budget Estimate for insuring the lives of 505155 fishers was 200.00 Lakh in 2012-13.

The insurance of 505155 fishers was renewed through remitting subscription of Rs. 73.80 Lakh in 2011-12. Govt. of AP sanctioned Rs. 200.00 Lakh in 2012-13. The amount is being drawn and insurance policy covering 505155 fishers will be renewed and ex-gratia paid to 126 families of deceased fishermen whose claims are settled by Insurance companies.

### **Relief-cum-Savings Scheme (CSS-50:50)**

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

### **Motorization of Traditional Crafts (CSS-50:50)**

Motorization of traditional crafts by fixing outboard/ in board motors is taken up to reduce manual effort of marine fishermen. A subsidy of 50% of cost not exceeding Rs 30,000/ per craft towards the cost of out board / in board motor is provided. The Budget Estimates for 2012-13 is Rs. 3000.00 Lakh to motorize 10,000 traditional crafts. About 84.00 Lakh were drawn in March, 2011 and distributed to DFOs in 2011-12. The Govt. of India has not released the 2011-12 funds as there was under-utilization of the funds released for 2010-11. .

## Supply of Fish Seed to Fishermen Cooperative Societies

Under this scheme, 50% subsidy on the cost (unit cost 25,000 per tank and 50% subsidy of this is 12,500 per tank) of fish seed stocked in tanks is provided for ensuring adequate seed stocking and increase in inland fish production. Budget estimates of 100.00 Lakh for stocking fish seed in 800 minor irrigation/gram panchayat tanks was provided in 2012-13. The stocking of fish seed in 29 tanks was taken by releasing subsidy assistance of Rs.11.50 in 2011-12. The Govt. released 50.00 Lakh for covering 400 tanks in 2012-13, out of which subsidy assistance of Rs. 28.75 Lakh was released for stocking of 230 tanks up to September 2012.

## Exemption of Sales Tax on HSD Oil

This scheme meets 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 litres 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. The budget estimates for 2012-13 is 1400.00 Lakh for providing exemption of sales tax on 23217 K. Litres at 6.03 per Litre.

## Supply of Ice-Boxes

The scheme of supply of ice boxes was taken up previously with assistance from the Ministry of Food Processing as there is great demand for supply of iceboxes. A subsidy not exceeding Rs.2000/- per box is being provided. There are 1511 Self Help Groups (Matsya Mitra Groups) organized in the state. An amount of 200.00 Lakh was provided to supply 10,000 Ice boxes during the year 2012-13 to the members of MMGs/fish vendors etc.. The Government released Rs.2.48 Lakh out of which Rs.1.24 Lakh were spent for supply of 62 ice boxes in 2011-12. During the year 2012-13 Government released 100.00 Lakh for supply of 5000 ice boxes. An amount of 38.88 Lakh has been spent for supply of 1944 ice boxes until September 2012.

## Special Component Plan for Scheduled Castes

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. 50% subsidy (5000) for the unit cost is Rs.10,000/ is provided.

545 beneficiaries benefited with financial assistance of Rs.27.25 Lakh in 2011-12. The Government released Rs.500.00 Lakh to benefit 10,000 SC fishermen in 2012-13 (up to September 2012).

## Fish Retail Outlets

Scheduled caste unemployed fishermen youth are encouraged to set up fish retail outlets / Fish Fast food centers in urban areas and major Gram Panchayats by providing a subsidy of Rs.2.00 Lakh per unit. 1.50 Lakh is provided as 100% grant for construction of outlet and 50% subsidy provided on purchase of equipments at a total cost of Rs. 1.00 Lakh per unit. The scheme was not implemented in 2011-12. In 2012-13, Rs. 325.00 Lakh have been released for assisting 325 SC fishermen.

## 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. 50% subsidy of 5000 for unit cost of 10,000 is given. 26.50 Lakh was spent to benefit 530 ST beneficiaries in the year 2011-12. 530.00 Lakh were provided to assist 10,600 ST fishermen in 2012-13. The Government has released Rs. 265.00 Lakh to assist 5,300 ST fishermen up to September, 2012.

## Relief to Fishermen during Ban Period (Supply of Rice)

Government of Andhra Pradesh has extended relief measure for affected fishermen families in the form of supply of rice to prevent hardships to fishermen during fishing ban period at sea in the months of April-May. 31 Kgs. of Rice for each of the 66,183 affected fishermen families (Mechanized and Motorized Boat owners and crew) free of cost, for the 47 days when marine fishing is banned is being supplied under this scheme.

The Government released 350.00 Lakh to Coastal Districts for the distribution of 31Kgs. of Rice free of cost to 61,860 identified fishermen families affected by ban on fishing in the sea in 2012-13.

## Fisheries Development (New scheme)

Under this scheme Rs. 4752.50 Lakh were provided for infrastructure schemes like construction of community halls for Inland and Marine fishermen, fish landing centers, district training centers, and beneficiary oriented schemes like supply of boats and nets to reservoir

fishermen, supply of mopeds / cycles and other accessories to fishermen, supply of FRP boats, supply of water analysis kits, revolving fund to fisherwomen, additional infrastructure for SPF Vannamei culture, assistance to PTG Chenchus and other tribal and ST Fishermen Coop. Societies etc.

### Rashtriya Krishi Vikasa Yojana

Under the project of RKVY the Government approved 5 projects at the cost of Rs. 1037.00 Lakh with the funds allocated by Government of India. The projects are

- Strengthening of Government Fish Seed Farms (10)
- Construction of fish markets in Municipalities and Gram Panchayats (10)
- Supply of Sea safety/navigational equipment to marine fishers (9830).
- Captive Fish Seed Rearing for Stocking Minor Irrigation Tanks (30)
- Skill up-gradation Training to fishermen and setting up of demo units & display items at SIFT Kakinada (340)

The Commissioner of Agriculture released Rs. 1433.00 Lakh for five components ie., stocking of fingerlings in tanks below 40 hectares, training, strengthening of Government fish seed farms, construction of fish markets, supply of sea safety equipment in 2011-12. The implementation of these projects is under progress during the current year 2012-13.

Under National Mission for Protein Supplements (NMPS) which is a Subproject of RKVY, the Government of India allocated 918.00 Lakh for implementation of Reservoir Aquaculture and Open Sea cage culture.

### National Fisheries Development Board Scheme

An action plan for subsidy assistance of Rs. 3953.78 Lakh was submitted to National Fisheries Development Board (NFDB) for the year 2012-13.

During the year 2012-13 the NFDB sanctioned Rs. 373.10 Lakh for stocking of 80-100 mm fingerlings in 28 reservoirs under Reservoir Fisheries Development scheme on 100% grant. The NFDB also issued sanction orders for the following activities under Domestic marketing:

- Wholesale fish market at Ponnuru Road, Guntur for Rs. 205.20 Lakh 90% grant.

- Fish Retail Outlet to Sri Nadakuditi Nagababu, Podu village, Kruthivenu Mandal, Krishna District Rs. 1.04 Lakh 25% subsidy.

Implementation of the programmes is under progress.

### Organization of Fishermen Cooperative Societies

The Government of Andhra Pradesh has given great importance to cooperative societies in fisheries sector to empower fishermen manage their own affairs. As a matter of policy, tanks are given on 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.

While so far 4,90,975 fishermen have been organized into societies, a large number of fishermen still remain to be brought under the fold. This is a continuous process and wherever fishermen are coming forward to form cooperative societies, they are being registered immediately. details are shown in Table 5.19.

**Table 5.19 : Fishermen Co-operative Societies**

Type of Societies	Nos	Membership
Inland Fishermen Coop.Societies	4668	3,43,861
Marine Fishermen Coop. Societies	424	81,321
Brackish water Fishermen Coop. Societies	12	766
Fisherwomen Coop. Societies	866	61,625
Fishermen marketing Coop. Societies	8	3,402
<b>TOTAL</b>	<b>5978</b>	<b>4,90,975</b>
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. The department has organized fisherwomen into SHGs called 'Matsya Mitra Groups' (MMGs) taking advantage of the prevailing favourable conditions. There are 866 fisherwomen Co-operative societies with a total membership of 61625. The MMGs are organized within fisherwomen Co-operative Societies. So far 1539 MMGs covering 18,000 fisherwomen were organized.

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

### **Assistance to States for Developing Export Infrastructure and other allied activities**

The Government has sanctioned Rs. 1409.68 Lakh for construction of 4 Fish Landing Centers under Assistance to States for Developing Export Infrastructure and other allied activities (ASIDE) funds, viz.,

- (i) Vodalarevu, East Godavari District,
- (ii) Laxmipurampalle palem, Krishna District
- (iii) Gundaipalem, Prakasam District,
- (iv) Uppalanka, East Godavari District. The Government released 1206.40 Lakh in two installments, out of which an amount of Rs. 202.45 Lakh was released to District Collector, East Godavari District for execution of work.

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## **FORESTS**

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 directed essentially towards reinforcing capacity of States to undertake the National Policy mandates towards conservation and sustainable use of resources. The core objective of forest sector development strategy is to enhance 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 not quantified but are of great significance.

Andhra Pradesh is the second largest State in forest area in India. As per the records of the Forest department

63.814 lakh ha of forest area constituting 23.20 percent of the total geographical area of the State. Out of the total forest area, Reserved Forest area accounts for 50,478 Sq. Kms. Protected forest forms 12,365 Sq. Kms and the rest 971 Sq. Kms are unclassified.

As per goals and directives set in the National Forest Policy 1988, the 1993 and the revised 2002 State Forest Policy, Vision 2020 of Andhra Pradesh, the Forest Department implements various development schemes to protect and develop existing forests, to improve its productivity and economic value. The main objectives of programmes like 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 are enriching existing low density forests and alleviating rural poverty.

The scheme for soil conservation in River Valley Project was taken up in the Machkhand/Sileru basin in Visakhapatnam District and up to 1975 over 7850 Hectares of badly eroded area were afforested and 43120 Hectares of agricultural land 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 from 1965 to 1975 and most of the important forest zones of the state were covered under schemes sponsored either by the Government of India or by the 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 help recharge ground water, and improve forest vegetation besides stabilizing the status of agriculture in adjoining fields.

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

26.96 Lakh hectares of additional non-forest land is to

be brought under tree cover by taking up tree plantation both inside and outside forest under Green India Mission programme to achieve the target of (33%) area under tree cover by the end of XI Five Year Plan (2007-12).

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

Almost all 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 Number of VSS/EDCs in each scheme are as follows:

APCFM	–	5250 VSS
FDA	–	2332 VSS
NABARD / RIDF	–	2161 VSS
W.L.I	–	115 EDCs

## Forest Produce

The Abnus leaves trade in Andhra Pradesh (Telangana Region to begin with) was nationalized in 1971 season eliminating contractor's agency. In april 2006, the Government decided to distribute the net revenue to 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 in 2011-12 was 3,49,272 S.B.s with a net revenue of Rs.19.67 crore. The quantity of leaf collected during 2012 season was 3,97,091 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 was introduced from the year 1976-77, after disbanding the existing contractor system.

At present there is a moratorium on extraction of timber from natural forests except for bamboo from 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 bamboo coupes as per prescriptions of working plan of respective divisions. The State Government to implement this scheme 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-5.20.

**Table 5. 20 Forest Produce extraction**

*(up to Sep.2012)*

Species	Target	Achievement
Timber(cmt)	25072.07	4043.29
Fuel (cmt)	21285.63	3902.91
Poles (Nos)	49,686	3,784
Bamboo (lakh Nos)	145.09	32.43

Source: Forests Department

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. 87.19 crore in 2008-09, Rs.103.37 crore in 2009-10, Rs.128.74 crore in 2010-11 and Rs.148.86 crore in 2011-12 and Rs.72.37(upto September 2012). Details of the value of forest produce in the State are given in Annexure-5.23

## Forest Development Authority

Forest Development Agencies are federations of all VSS within a Territorial / Wildlife Forest Divisions under the Societies Registration Act. It operates in a 3-Tier system with the State Forest Development Agency (SFDA) at the State Level, Forest Development Agency (FDA) at Divisional Level and Vana Samrakshana Samithi (VSS) at Village Level.

At State Level the SFDA functions as a federation of FDA and was registered on 15-04-2010 with 100% grant from Government of India. The schemes are implemented are Central Sponsored like National Afforestation Programme, Fodder & Feed Development Programme, National Bamboo Mission and 13th Finance Commission (FDA Components). This year it is also implementing Additional Central Assistants (ACA) programme for “Accelerated Programme of Restoration and Regeneration of Forest Cover” subject to release of funds by Finance Department of Andhra Pradesh in addition to regular schemes.

So far, 47 FDA projects have been sanctioned by the Government of India to the State. The Total Outlay of all projects was Rs. 1515.68 Lakh in 2011-12 and 2332 VSSs/EDCs were involved in implementing these

projects. An area of 4053 Ha was treated during the project period and 4032 Ha planted by spending Rs. 1324.17 Lakh.

While there are 8 major wood based industries in the state, there is no supply of raw material from the Forest department to the major wood based industries. Forests are looked as “Green Capital” and are no more valued as raw material resources for the industries. Industrial requirements are met from other sources like imported pulp, agricultural wastage and plantations raised by farmer with buy-back arrangements.

Forest Department is supplying Bamboo Industrial Cuts to Paper Mills in Andhra Pradesh. The approved rate for supply of BIC to Paper Mills was Rs.1000/- per MT in 2010-11 and was Rs.1050/- per M.T for the Year 2011-12. Details about 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 reserve Forests to improve Environment and to provide gainful employment to thousands of unemployed youth. These efforts continued in the XI th Five Year Plan period also. Public distribution of seedlings, raising community land plantations/ avenue/ shelter belt plantations; and raising of institutional plantations have been done under Social Forestry programme.

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

## Vanamahotsava (Two Million Tree Plantation)

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

- Rs.16.14 Lakh saplings were planted in 668 locations in the State in a Single Day on 31-7-2012 throughout the state in 2012-13.
- Vanamahotsava celebrations were simultaneously conducted at all District Head Quarters, throughout the state, on 31st July 2012.
- An amount of Rs. 60.00 Lakh was allocated to

all Social Forestry concerned Divisional Forest Officers from the interest amount of CAMPA on reimbursement basis under 63rd Vanamahotsava celebration programme in 2012-13. Details of Progress on Seedlings and plantations under Social Forestry are shown in Table 5.21.

**Table 5.21 : Progress on Seedlings and plantations under Social Forestry**

Seedlings raised	7312.16 Lakh
Seedlings distributed	5250.78 Lakh
Block plantation raised	3179.25 Hectares
Avenue plantation raised	3705.52 KM

Source: Forest Department.

Details about species wise Tall and Very Tall seedlings raised by all agencies for the planting season 2011-12 are given in Annexure 5.25.

## Mahatma Gandhi National Rural Employment Guarantee Scheme

Forest Department is taking up forestry operations both within Reserved Forest area and outside 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 farmer’s lands, Institutions and Community lands, Avenue plantations etc., are being taken up by the Social Forestry wing outside Reserved Forest areas.

Large number of nurseries are 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 preferred by people and which are suitable to the agro climatic conditions of the districts concerned. 1293 MGVN nurseries were established in the state at the rate of 2-3 nurseries in each mandal by the Forest Department under MGNREGS. About 70000 to 80000 plants of forest species will be raised each year for next 3 years and handed over to Rural Development Department for planting in farmers lands in each MGVN nursery. 8.15 Crore seedlings were raised during 2011-12. Details of Progress on Mahatma Gandhi Vana Nursery Program 2012-13 are shown Table 5.22.



**Table 5.22 : Progress on Mahatma Gandhi Vana Nursery Program 2012-13**

Annual Work Plan	Rs.139.54 Crore
Expenditure up to (Up to Sep.2012)	Rs.48.39 Crore
Wage employment generated (Up to Sep.2012)	21.22 lakh person days
Block Plantations raised	1607 Ha
Avenue Plantations raised	745.22 Kms

Source: Forest Department.

### Compensatory Afforestation fund Management and Planning Authority

Government of India, Ministry of Environment & Forests has constituted an authority 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 being implemented in Andhra Pradesh since 2009-10 onwards. The main components of APO of CAMPA are:

1. Compensatory Afforestation (CA) in compensatory areas
2. Natural Forest Management through treatment of natural forest area and regeneration of degraded areas.
3. Forest & Wildlife Protection through establishment of base camps, strike forces, check posts to check illicit smuggling and transportation of timber and poaching of wildlife.
4. Forest Fire Management to improve 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 skills and knowledge of frontline staff.
8. Information and Communication Technology for monitoring implementation and progress of the APO
9. Infrastructure Development and Maintenance to ensure frontline staff stay in their head quarter and protect forests and wildlife efficiently.

### Achievements 2011-12

- APO – 2011-12 was approved for an outlay of Rs. 228.00 crore by the Executive Committee in its 3rd meeting held on 31.03.2011. The same was approved by the Steering Committee in its 3rd meeting held on 03.05.2011.
- The 4th Executive Committee revised APO 2011-12 to Rs.169.80 Crore
- An Amount of Rs.153.18 Crore was incurred as expenditure for 2011-12
- 202 Nos. Base Camps, 89 Strike Forces, 159 Check Posts, 11 Police Parties were established and maintained to assist forest officials for protection of valuable forests in A.P.
- An area of 4604 Ha was planted during 2011 season under Natural Forest Management component.
- An area of 3824.35 Ha was planted during 2011 season under Compensatory Afforestation component.

### Proposals for 2012-13

- APO 2012-13 was approved for an Outlay of Rs. 205.00 crore by the Executive Committee in its 4th meeting held on 19-03-2012. The same was approved by the Steering Committee in its 4th meeting held on 28-04-2012
- 240 Number Base Camps, 90 Strike Forces, 160 Check Posts, 12 Police Parties were established and maintained to assist the forest officials for protection of forests in Andhra Pradesh
- An area of 11033.5 Ha was planted against the Target of 11470.5 Ha during 2012 season under NFM and an area of 1340 Ha planted against the Target of 1585 Ha under CA.

- Rs.3420.93 Lakh expenditure was incurred up to September, 2012 for 2012-13 under CAMPA

## 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 2012-13

### Centrally Sponsored Schemes

#### Integrated Development of Wildlife Habitats

High priority Protected Areas with rich biological diversity are funded through 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 regions of 5 districts of Kurnool, Prakasam, Guntur, Nalgonda and Mahaboobnagar. Gundla Brahmeswaram Wildlife Sanctuary 1194 Sq.Kms is now notified as extended core, and a Buffer of 1175 Sq.kms has also been notified for NSTR.

The mixed dry deciduous forests of this sanctuary is rich in biodiversity of flora and fauna. There are about 353 species of medicinal plants 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.

Tiger with its co-predators like Panther, Wild dog, Sloth Bear are found in this Sanctuary. It has large and sufficient prey base ranging from spotted deer, sambar, four horned antelope, chinkara, wild boar etc. Rare and endangered species like Mouse Deer, Honey Badger, Giant Squirrel are also found in the Sanctuary. This

project represents and protects the Biodiversity of (6d & 6e) of biogeography of the country. As seen from the population estimation now, tigers are increasing and have increased from 34 in the year 1994 to 70+ in 2011. It is all because of good management practices and protection of the habitat and animals from poaching. Increase in wild animal population became possible with the help of 115 Eco-Development Committees.

## Strengths of the Project

- This project is located in one of the rich biodiversity hot spot in the country having a contiguous landscape of a good forest eco-system of unfragmented Nallamalais of the Eastern Ghats.
- Many undiscovered flora and fauna area still exist in this area of which a few new species have been discovered by the Forest Department.
- The project is running on sound principles of conservation and management.
- Most of the project is now manned by professionally trained officers.
- The Habitat is well protected and good browsing and grazing material is available to sustain large number of herbivore population for sustaining the highly endangered top predatory species - the Tiger.
- The Primitive Tribal Group Chenchus have been involved in the management of NSTR and at present nearly 300 of them are engaged as protection watchers and animal trackers

## Achievements

- People's participation through 115 EDCs has been made mandatory which has mitigated most of the people's problems
- Up-gradation of skills of Stakeholders
- About 1140 trainings & workshops were organized involving 700 staff, 434 representatives of N.G.Os, 130 employees of Govt. Departments, 7580 villagers, and 4836 EDC members
- Employment generation through regeneration of Forests 2000 Ha. Every year regeneration of forests generates about 3,20,000 man days employment at the rate of Rs.120 Lakh.
- Good habitat management practices have resulted

in increase of Tigers, co-predators and their prey species.

## Declaration of Kawal Tiger Reserve

Kawal Tiger Reserve with core area of (892.13) Sq. Kms. and buffer area of (1123.0) Sq.Kms was notified on 10-04-2012. The Government of India allotted an amount of Rs. 269.00 Lakh for development of this Tiger Reserve and released the 1st installment of 196.00 Lakh, on activities like enhancing livelihood of local people, habitat development etc., during 2012-13. Apart from the GOI funds, State Government is also funding various developmental activities under CAMPA, BIOSAP, State Wildlife Plan Schemes in this area.

## Measures Taken for Improvement

The following steps were taken for strengthening protection of forest and wildlife from 2008-09 onwards. It is observed that these measures have greatly helped in curbing forest and wildlife offences.

- 16 Base camps have been established at key locations to patrol interior areas.
- Two Strike Forces with fast moving vehicle have been made functional in the sanctuary area in Jannaram and Nirmal Divisions
- Twelve Wild animal trackers have been deployed to monitor movement of wild animals on daily basis
- Three Check-posts function at key locations to check offences and restrict movement of vehicles in the Sanctuary at night.
- Habitat improvement works have been taken up improving wildlife population
- Sanctuaries and National Park including Nagarjunasagar Srisailam Tiger Reserve under Project Tiger are being developed under the State and Centrally Sponsored schemes.
- The Rayala Elephant Reserve including Koundinya Wildlife Sanctuary being developed under Project Elephant for Elephants which migrate from adjoining States
- State Board for Wildlife and the Zoo Authority of Andhra Pradesh were constituted for advising Government on protection and conservation of wildlife in the State.

## Restoration in Kolleru Lake Eco-System

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

## BIOSAP

Biodiversity Conservation Society of Andhra Pradesh has been constituted to take care of conservation measures of Wildlife Sanctuaries of Andhra Pradesh.

## 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 mangroves under Tsunami Mitigation activity through the World Bank aided A.P. Community Forest Management Project. So far mangrove plantations were raised in 3042 hectares.

## Special Measures for Tiger Conservation

The Kawal Wildlife Sanctuary in Adilabad district is under notification as the 2nd Tiger Reserve in the State. This measure will boost Tiger conservation efforts in the State. GBM Wildlife Sanctuary with an area of 1194 Sq. Kms. has been notified by the Government as an extended core of Nagarjunasagar Srisailam Tiger Reserve and buffer of 1175 Sq.Kms has been notified by Government around NSTR. As per the provisions of Wildlife (P) Amendment Act, 2006 and 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.

## Research Activities

The Bio-diversity conservation laboratory has been setup at Nagarjunasagar, Srisailam Tiger Reserve, Srisailam which takes up various research activities. This includes preparing an inventory of Biodiversity of Nagarjunasagar - Srisailam Tiger Reserve and other P.As. Ecological Knowledge Park, Environmental Education Centre are also renovated with the theme of Biodiversity Conservation

## Environmental Education

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

## Forest Protection Schemes

### Intensification of Forest Management Scheme

The objectives of forest protection scheme include 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 13th Finance Commission

It was envisaged to create infrastructure for protection of forests and wildlife by providing mobility to the staff, engaging Tribal Helpers as striking force, and base camps, dog squad maintenance, survey and demarcation of forest land, construction of internal roads in the Forests, building and information network etc under this forest protection scheme. The main objective of the scheme is to ensure protection of forests and wildlife.

The government of India allocated Rs.26864.00 Crore for Forestry sector of Andhra Pradesh for five years commencing from 2010-11 to 2014-15.

The Government has released an amount of Rs. 429.62 Lakh in 2011-12,. Out of this Rs. 355.92 Lakh was utilized. An amount of Rs185.59 Lakh as revalidated amount was released out of which Rs 177.95 Lakh were utilized.

The Budget provision for 2011-12 was Rs. 149.25 Lakh. Out of this an expenditure amount of Rs. 111.96 Lakh was released and Rs.127.41 Lakh incurred towards expenditure.

The revised Action Plan 2012-13 was submitted to the Government for Rs. 1302.81 Lakh including the revalidated amount of Rs. 82.70 Lakh. The Budget provided by the State Government under Forest Protection Scheme is utilized mainly for vigilance wing of forest department for effective protection of forests to meet expenditure towards Salaries, Secret Service Fund, Motor Vehicle Maintenances, POL etc.

The budget provision for 2012-13 is Rs. 211.25 Lakh, out of which an amount of Rs. 103.31 Lakh was released and an expenditure of Rs. 40.66 Lakh incurred up to September, 2012.

## Implementation of Scheduled Tribes & other traditional forest dwellers (ROFR) Act-2006

The Government of India enacted "The Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006" and the "Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Rules, 2008. As per the Act, Forest rights have to be given to tribals, if they are in possession of any forest land as individuals or as community as on 13-12-2005. Other Traditional Forest Dwellers can be given rights if they are in possession since last 75 years. 3,23,765 individual claims were received for 9,50,351 acres against which Title certificates to 1,65,691 individuals involving 4,72,016 acres were issued in the State. 6,714 Community claims were received for 10,16,307 acres against which 2,106 Community Title certificates involving 9,79,207 acres issued.

## Information Technology (Geomatics)

The Andhra Pradesh forest department has taken initiatives to make use of modern tools of geomatics, as envisaged in national forest policy 1988, to aid planning & decision making process and also effectively monitor & evaluate. AP is ahead of all other states in use of geomatics technology.

The major activities initiated under this are creation of spatial (geographic) database on various scales, vegetation cover mapping and monitoring, survey and verification of notified forest boundary using DGPS, DGPS survey of FCA areas, enumeration of trees outside the forests and developing web-enabled forest management information system.

## Projects Completed Within the Department

- Creation of Geo-Spatial database at various scales.
- Vegetation Cover mapping and monitoring using IRS P6 LISS III Data 2007-08, 2008, 2008-09 and 2009-10
- Forest Inventory and generation of Andhra Pradesh Forest Inventory 2010.

- Generation of State of Forest Report - 2010 and 2011
- Forest Fire Risk Zonation and mapping for entire State
- Wildlife Habitat mapping and Bio-Diversity characterization for one District.
- Selection of suitable sites for Eco-Tourism.
- Andhra Pradesh Hazard mitigation Project for entire Coastal area.
- Selection of suitable sites for raising plantations.
- Micro level Watershed Planning using DGPS for selected watersheds like KBR Park, Chilkur Park, Dulapally RF etc.
- site suitability for construction of Water Harvesting Structures for entire state.
- Change detection analysis and monitoring of Kolleru Lake.
- Online Nursery Information System.
- Mapping of High Tide Line for analysis of plantations falling within HTL and its 50 m buffer.

### Awards and Rewards

Forest fire risk zonation mapping is an unique project carried out by IT wing of the department in A.P in the entire country using latest technology. These maps are of immense utility to all forest staff in adopting counter fire measures and also for taking preventive measures like creation of fire lines, erection of watch towers etc. This work has been awarded “silver icon” by the department of administrative reforms and public grievances, personal, public grievances and pensions, government of India, for 2004 under trail blazing application category. IT wing of this department carried out site suitability analysis for construction of water harvesting structures. This project was adjudged the best IT project by department of administrative reforms and public grievances, ministry of personal, public grievances and pensions, government of India, for the year 2005 and awarded “golden icon” under the category “Innovative Operations and Best Practices”.

The Department was awarded “award of appreciation” by CSI-Nihilent in 2011 under departmental category for the IC&T initiative in the department. The Core Officers were awarded with Uttam Samarakshana Pathakam and other incentives to sustain interest.

### Forest Research & Development

A Research and Development circle was created in 1971-72 with headquarters at Hyderabad to ensure effective co-ordination of various research activities taken up in research centers and document research findings and disseminate information for practical application in the field.

There are 18 research centers under the control of 4 research divisions located at Hyderabad, Warangal, Tirupathi and Rajahmundry. The main objectives of the divisions are to attend to forestry problems in their respective divisions and conduct experimental plots, improved nursery technology, seed collection, vermi-compost/organic compost production and casurina breeding programmes.

Six research schemes incurred an expenditure of Rs.620 Crore forming 98% of budget released in 2011-12. An expenditure of Rs.236 crore was incurred in the above schemes from April to September, 2012.

### AP Forest Academy Dulapally

A major objective of the academy is to transform participants through innovative training programmes. A P Forest Academy organized 56 in-campus training programmes & 7 workshops/ seminars covering 1163 & 489 participants respectively during 2011-12 under CAMPA.

Training programmes were organized under CAMPA as well as under 13th Finance Commission at Andhra Pradesh Forest Academy, Dulapally in 2012-13. 30 trainings were conducted under CAMPA from April to September, 2012. 8 in-campus & 4 off-campus trainings have been conducted up-to September-2012 through CEFNARM, Dulapally under the 13th Finance Commission. 3 Government of India trainings were also conducted up-to September, 2012.

### Andhra Pradesh State Bio-Diversity Board

The Andhra Pradesh State Biodiversity Board was established in 2006.

### Objectives

Conservation and sustainable utilization of biological diversity and fair and equitable sharing of usufructs of biological resources among all stake- holders.

## Activities

Maintaining Agri-Biodiversity, Animal and Fish Biodiversity, wildlife conservation and protection and traditional knowledge associated with medicinal plants, conservation and Bio-prospecting.

## Heritage Sites

As per the Biological Diversity Act 2002 the board shall in consultation with local bodies and other key stakeholders, take necessary steps to facilitate setting up of areas of significant biodiversity values as heritage sites.

## Biodiversity Parks

Ex-situ Conservation Initiatives; Biodiversity park established by Dolphin conservation society in Visakhapatnam is recognized as the first Ex-situ biodiversity park of A.P.

## Bio- Piracy

Bio piracy is controlled by apprehending and producing culprits before the court of law. The forest department staff is doing commendable work in this matter. The following species are involved in bio piracy. Red Sand Boa (Snake), Star Tortoise, Tarantula (Spider), Red Sander

## Bio-Diversity Day

The A.P. State Biodiversity Board conducts International day of Biodiversity on 22nd May every year.

## National Agriculture Innovative Project

Indian council of agriculture research (ICAR) has sanctioned a national agricultural innovative project (NAIP) titled harmonizing biodiversity conservation and agricultural intensification through integration of plant, animal and fish genetic resources for livelihood security in fragile ecosystem for implementation in Adilabad district.

1000 villagers were selected as beneficiaries in 20 villages of 4 mandals and provided free fish seeds for rearing fish in fish pond under this project. They were also provided with integrated fish farming tips such as integration of fish production with paddy, with poultry etc. Beneficiaries also benefited through vermi-compost production.

## Andhra Pradesh Forest Development Corporation

The Andhra Pradesh Forest Development Corporation was established in 1975 on the recommendations of the National Commission on Agriculture, 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 in species such as eucalyptus, bamboo, coffee, cashew etc.
- To generate gainful employment for landless poor, particularly in remote and agency areas.
- To undertake consultancy services for industries to raise and maintain plantations in their vicinity.

Details about plantations raised by APFDC up to 30th September, 2012 are shown in Table 5.23.

**Table 5.23 : Area Planted by APFDC**

*(Area in Hectares)*

Species	Upto Sep, 2012
Eucalyptus (Seed origin)	12734.20
Eucalyptus (Clonal)	44354.29
Bamboo	10559.47
Cashew	8950.86
Coffee	4010.00
Teak	929.32
Medicinal plants	524.80
Casuarina, Pines and other	
Misc. species	317.78
<b>Total</b>	<b>82380.72</b>

Source: Forest Department

## Various Plantation Activities

### Eucalyptus Plantations

The APFDC has been raising Eucalyptus Clonal Plantations in 44000 Hectares. It is the single largest grower among PSUs in India. There are proposals to raise another 12000 hectares in the next 3 to 4 years. Optimum yields are intended to be obtained from plantations because of improved site preparation, use of quality planting material and management practices.

### Bamboo Plantations

Apart from the 6,359 Hectares of Bamboo plantations raised, in period 1976-1983 over 4,200 hectares new

plantations were raised in the period 1999-2012 with intensive site management practices. Due to better management practices, 2 years rotation has been adopted as against the normal rotation of 3 years increasing revenues.

The Corporation is intending to expand Bamboo plantations over 500 Hectares under National Bamboo Mission in the next 3 to 4 years to ensure supply of more raw material per annum to Paper Industries besides raw material to artisans.

### Coffee Plantations

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

### Pepper Cultivation

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

### Cashew Plantations

The corporation raised cashew plantations over an area of 8950 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.

### Eco -Tourism

APFDC has entered into development of Eco-Tourism in Andhra Pradesh, through investment from private entrepreneurs for development of infrastructure and tourist amenities. The Hyderabad Botanical Garden near the Hi-tech City and Mahavir Nischal Van projects have already opened to the public. These projects are attracting many visitors. Other Eco-Tourism Projects like Night Safari, Bird Park, Mrugavani National Park and Chilkur will come up in due course.

### Other Activities

the Corporation has diversified its activities with several

schemes such as providing consultancy services in afforestation to industries such as NTPC, HPCL etc. and supplying high quality Eucalyptus clones to public and institutions. It is also acting as an agent to the Government for carrying out Trade of Beedi Leaves and for disposal of Red Sanders Wood.

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## SERICULTURE

Sericulture in A.P. is a sustainable farm-based economic enterprise positively benefiting rural poor and the unemployed youth. It yields 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 almost 60%women. Realizing the importance of the activity the Government has earmarked adequate outlay for Sericulture sector for implementation of various schemes.

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

### Initiatives

#### A. Linkages to Farm Sector

State Government has recently announced the following incentives for 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. The BVH cocoon increased from 665.82 Mts to 906.10Mts in the cocoon markets of AP with the introduction of incentives to BVH Cocoons farmers.

#### B. Linkages to Non Farm Sector

- Providing incentives on silk production
- Rs.130/- per kg for bivoltine silk produced on multi-end silk reeling units.

- Rs.80/- per kg for Multi-voltine silk produced on multi-end silk reeling units.
- Rs.30/- per kg for motorized charka, backend Italian model charka & cottage basin silk in the State.
- An incentive of Rs.185.05 Lakh was disbursed to an allowed quantity of 325.552 Mts of silk produced on Charkas, Cottage Basin, Multiend, and Automatic reeling unit
- 50% subsidy on the cost of 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.
- One Chinese Automatic Reeling Unit under Private Sector was established with an annual production capacity of 24 Metric Tonnes of Bivoltine Raw Silk at Janagaon of Warangal District to encourage post cocoon activity and bridge the gap between on farm and non-farm sectors to the maximum extent. Out of the unit cost of Rs.2.67 crore, Rs.1.00 cr. subsidy was contributed equally by GOI & GOAP. The unit is functioning well and has produced 18,490 Metric Tonnes of Bivoltine Silk of International Standards during 2011-12.
- 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 requirements of the state
- Promotion of Multi-end silk reeling, twisting, processing units and looms.

## Schemes implemented

### A. Mulberry sector

Central Silk Board Schemes (CDP Schemes) are implemented by providing associated facilities with subsidy on unit cost shared by CSB and State.

#### a. Supply of Saplings

To procure saplings of High Yielding Mulberry varieties from Kissan Nurseries raised by farmers for supply to new farmers & Sericulturists who want to replant their mulberry plantations with improved varieties and to increase productivity and quality of leaf which in turn leads to increase in production of cocoons, at low / marginal cost. The pattern of assistance under the scheme is 50:25:25 = CSB: State Government:Beneficiary contribution for raising one acre with High Yield Variety Mulberry. The farmers will be provided Rs.6750/- as subsidy against the unit cost of Rs.9,000/-, which is basic help to the farmers who come under the fold of mulberry. About 30163 acres of mulberry has been covered with saplings up to the end of March,2012 under CDP.

#### b. Irrigation and other water conservation and usage techniques

Focus is on conservation of available water resources to the extent of maximum utility. the department is implementing the scheme “Irrigation and other water conservation and usage techniques” under Catalytic Development Programme with a unit cost of Rs.50,000/- per Hectare of which Rs. 25,000/- subsidy is to be provided by the CSB and Rs. 12,500/- subsidy to be provided by the State and the balance Rs. 12,500/- is beneficiary contribution. About 7366 acres of mulberry has been covered with irrigation facility including drip up to the end of March, 2012 under CDP.

## Impact of Initiatives

The BVH cocoon arrivals increased from 665.82 MTs to 906.10 MTs in the cocoon markets of Andhra Pradesh through 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 Government initiatives, a quantity of 3464.800 MTs of cocoons was consumed by the local reeling units in the State out of the total quantity of 4039.000 MTs transacted in the cocoon markets, constituting about 85.78%, in 2011-12.

## Promotion of New Technologies at Field Level for Increasing Productivity

- Plantation with high yielding varieties.
- Maintenance of exclusive chawkie gardens for supply of Silkworm seed to the farmers for assured crops.
- Promotion of controlled irrigation system like “DRIP”



### c. Construction of rearing sheds

Construction of separate pucca silk worm rearing houses are essential to ensure hygienic conditions and prevent contamination during silk worm rearing,. Therefore a scheme for construction of rearing shed was sanctioned under CDP for 2012-13 for 3 types of rearing sheds with an assistance pattern of 25:25:50 to be shared by Central Silk Board, State Government & Beneficiary contributions respectively. Details of Status of Rearing sheds under CDP are shown in table 5.24

**Table 5.24 : Status of Rearing sheds under CDP**

Type of Rearing shed	Unit cost (Rs.in lakh)	Subsidy (Rs.in lakh)	Beneficiary contribution. (Rs.in lakh)
Type-I (50' X20')	2.00	1.00	1.00
Type-II (30' X20')	1.50	0.75	0.75
Type-III (15' X15')	0.75	0.375	0.375

Source: Sericulture Department.

So far 16,097 rearing sheds were constructed of which 10,861 sheds were equipped with shoot feeding stands under this scheme.

### d. Rearing equipments

It is important to assist farmers in purchasing modern tools and equipments which make mulberry cultivation and rearing more efficient and viable. With this farmers will be encouraged to take up Bivoltine Sericulture successfully. The pattern of assistance under the scheme is 50:25:25 i.e., CSB: State Government: Beneficiary contribution. Farmers will be assisted in procurement of shoot rearing equipment and supply of Plastic Trays & Montages for conducting Bivoltine Silkworm Rearing. Farmers will be provided with a subsidy of Rs.37,500/- against a unit cost of Rs.50,000/- which will encourage them farmer to take up Bivoltine Sericulture and harvest successful crops with the help of modern tools and equipment. A total number of 10894 farmers were provided with rearing equipments under the scheme up to the end March, 2012.

### Normal State Plan Schemes

- Supply of disinfectants worth Rs. 1,500/- per shed to sericulture farmers to increase productivity.
- Procurement of Tussarcocoons for production of DFSL and supply to tribal Tussar rearers.

- Supply of high yielding variety saplings with a subsidy of Rs 6,750/- per acre
- Subsidy of Rs. 100/- to farmers for supply of 100 Bivoltine layings.

### Farm Mechanisation

Farm Mechanisation equipment such as Brush cutters at subsidised cost is supplied to reduce labour costs in shoot harvesting of mulberry shoots in silk worm rearing. It is proposed to provide 50% subsidy on cost of equipment or Rs. 10000/- whichever is less.

### Integration of Reeling Unit

Profit margin of Charka reeling units will double, if it is integrated by providing small capacity twisting units. Entrepreneurs will continue charka activity for meeting requirement of weft silk yarn demand from the state weavers. It is proposed to implement the scheme on an experimental basis with one unit in each district of Anantapur and Chittoor with 50% subsidy on unit cost of Rs.1.35 Lakh amounting to Rs 2.70 Lakh.

To encourage post cocoon activity and also to accept defective cocoons and low quality reeling cocoons an Automatic dupion silk unit was established at Janagaon of Warangal District in the Private Sector under CDP for production of quality dupion silk. The unit is functioning with its full capacity of 20 basins since 01.10.2012.

## B. Non-Mulberry Sector

### a. Tasar Culture

3000 tribal families are engaged in rearing of Tasar silk worms on food plants available in forest areas of Adilabad, Karimnagar, Warangal and Khammam & Nellore Districts. The department produced 200 Lakh of Tasar cocoons in the tribal belt of northern Telangana region covering 2803 beneficiaries. About 1.586 Lakh of Tasar cocoons were produced by tribal farmers in 2011-12.

### b. Ericulture

Andhra Pradesh has Tapioca plantations particularly in East Godavari District. The farmers can utilise 30% of the Tapioca leaf for rearing of Eri silk worms without any deterioration in the yield of Tapioca tuber, to get additional income of Rs. 2000 to 4000. The department in co-ordination with the Central Silk Board under Catalytic Developmental programme implements an Eri

project to create additional income to Tapoica growers through rearing of Eri silkworms in East Godavari District. 8.628 MTs of eri cocoons were produced by the Tapoica farmers in 2011-12.

## Research and Development

Andhra Pradesh State Sericulture Research and Development Institute, Hindupur was established in 1995 with the main intention of evolving new races, capable of producing International grade cocoons / silk. A new project called 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. 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 Abhya etc that were released in the fields by farmers, increased production of cocoons from 5 Kgs to 10 Kgs. Details about the progress under Sericulture are given in Annexure 5.26 and achievements during 2012-13 are shown in the Table 5.25.

**Table 5.25 : Sericulture - Achievement during 2012-13**  
(up to Sept. 2012)

Area under Mulberry- Acres	100727
DFLs production including private & Govt. (Lakh Nos.)	31.911
Cocoon Production (MTs)	24062
Tussar cocoon Production (lakh Nos.)	2.73

Source: Sericulture Department

## AGRICULTURAL MARKETING

Well-functioning markets are essential for driving up growth in the agriculture sector and for generating employment & 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 agriculture markets are regulated under respective State Agriculture Produce Marketing yards all over the country. In Andhra Pradesh, comprehensive market legislation covering the entire state came into force in 1966 called the Andhra Pradesh (Agricultural Produce and Livestock) Markets Act 1966,

after the integration of 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 persons intending to trade in notified agricultural market area
- To levy and collect market fee
- To construct and develop market yards for regulation
- To prohibit collection of all unauthorized charges in 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 use of farmers and traders

There are 333 Agricultural Market Committees 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 representatives of local bodies and Government departments. The Committee is headed by a Chairman from grower members. All members are nominated by the Government. Every Market Committee has a Secretary who is the executive authority of the Market Committee. All the 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 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 Market Committees for effective implementation of the Act, the Rules and Bye-laws and report to the Government about the working of Market Committees. The Market Committees levy and collect market fee at the rate of 1% Ad-Valorem on sale and purchase of

notified agricultural produce payable by purchasers of produce. Market fee is the only source of income for 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 development of markets and creation of facilities to users of markets i.e., growers and traders and other functionaries and for other allied purposes specified by the Government from time to time. The Market Committees collected Rs. 543.53 crore towards market fee during 2011-12 and Rs. 277.89 crore during 2012-13 (up to Oct. 2012).

The Market Committees 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 used to mainly provide loans to Market Committees besides grant-in-aid to 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 these 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 installed computers at 334 Market Yards for regular inflow of information on prices. It 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 farmers every day. NIC established a website: market.ap.nic.in for the display of prevailing market prices and departmental information. Administrative measures have been taken for tracking farmers at major market yards under 'help the farmer' programme. Under this, market yards have been divided into segments. Each segment has been entrusted to a responsible officer. This Officer shall, during 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 weightment and also make sure of prompt payment. This system has paid rich dividends in winning goodwill of farmers.

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

### **Rythu Bandhu Pathakam**

Under the Rythu Bandhu Pathakam, the department spent Rs.3.93 crore during 2012-13 for providing pledge loan to farmers to help them avoid distress sale of their produce. 840 farmers in 2012-13 (up to Oct.) benefited as against 3024 farmers in 2010-11 under Rythu Bandhu Pathakam. No interest is charged for the first 3 months. There are no budgetary restrictions for sanction of loans under this scheme.

### **Rythu Bazars**

There is a network of 107 Rythu Bazars in the State. On an average about 45,000 farmers sell over 1.90 Lakh quintals of vegetables, 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 successful. (A separate website was created exclusively for Rythu Bazars for arrivals and price information. ([www.rythubazars.com](http://www.rythubazars.com) or 121.243.139.68/rbz).

### **Farmer and Animal health camps**

The department conducts farmer and animal health camps with Rs 60,000 and Rs 40,000 respectively provided in the Budget 2012-13. 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 crore for 95 Works with 50% loan from banks and 25% contribution from AMC's and 25% backend subsidy.
- Terminal markets are proposed at Hyderabad, Visakhapatnam, Tirupati and Guntur to deal with perishable commodities (fruits and vegetables). Action has to be initiated as per the recently revised guidelines.