

CHAPTER

5

AGRICULTURE  
AND ALLIED  
ACITIVITES

## AGRICULTURE AND ALLIED ACTIVITIES

## Agriculture

### Withstanding the Covid-19 Pandemic impact

COVID-19 pandemic has affected the lives of people across the globe and India also suffered huge losses. Agriculture sector remained a single solace amidst all sectors which got adversely impacted by the Covid-19 global pandemic during this year. The farming activities also experienced the impact of this pandemic as the COVID induced lockdowns influenced the movement of farm inputs including farm machinery from one location to other. The strengths of fundamentals of the economy are evident from the remarkable resilience of the sector, which in the recent past is registering a decent growth path.

Sustainable growth in Agriculture sector is recognized as the major strength both for the State of Andhra Pradesh and for the Country as well. With Agriculture remained as the primary source of livelihood for about 60 per cent of India's population, country's emphasis on production of food grains assumed greater prominence. At sub-national level, the focus on productivity enhancement is gaining acceleration. Agricultural yield, regarded as the most important element after crop production, is found to be lower in the case of most crops, as compared to other top producing countries such as China, Brazil and the United States. Andhra Pradesh is giving focus on productivity enhancement.

The agriculture sector in India is expected to generate better momentum in the next few years due to increased investments in agricultural infrastructure such as irrigation facilities, warehousing and cold storage and the country is planning to double the farm income by 2022. India is expected to be self-sufficient in pulses in the coming few years due to concerted efforts of

scientists to get early-maturing varieties of pulses and the increase in minimum support price. In sync with the national agenda, Andhra Pradesh is also aiming to doubling the farmer's income.

While the difficulties created by COVID induced lockdowns adversely affected the performance of the non-agricultural sectors, the agriculture sector came up with a robust growth rate as per the first advance estimates at the National level. The sector has got renewed thrust due to various measures on credit, market reforms and food processing under the AtmaNirbhar Bharat announcements. The reforms in agriculture markets at the National and State level are expected to enable creation of 'One India one market' for agri-products, create innumerable opportunities for farmers to move up the value chain in food processing - from farm to fork, create jobs and increase incomes. In the recent years, the focus has shifted from production to processing, packaging and marketing through a strengthened supply chain.

### Agricultural transformation – focused approach

Andhra Pradesh endeavors to provide agricultural extension services to farmers and to transfer the latest knowledge to the farming community. Under the Agriculture Sector, the government is determined to focus on Productivity enhancement, mitigating the impact of droughts through water conservation and micro-irrigation; Post-harvest management to reduce wastage and to strengthen the processing, value addition capacity and supply chain.

### Land Utilization

The percent share of the different segments of land use of the total geographical area 162.97 lakh hectares of the state in the year 2019-20 is as shown in Table 5.1

Table 5.1

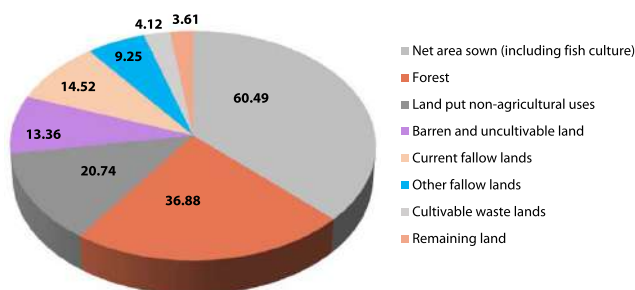
Land Utilization :

S.No	Area Classification	Area in Lakh Hect.	Percentage to Total Geographical Area
1	Net area sown (including fish culture)	60.49	37.11
2	Forest	36.88	22.63
3	Land put non-agricultural uses	20.74	12.73
4	Barren and uncultivable land	13.36	8.20
5	Current fallow lands	14.52	8.91
6	Other fallow lands	9.25	5.68
7	Cultivable waste lands	4.12	2.53
8	Remaining land	3.61	2.21

Source: Directorate of Economics & Statistics

The Land utilization particulars from 2008-09 to 2019-20 are given in the Annexure 5.1 and district wise land utilization particulars during 2019-20 are given in Annexure 5.2 The following Chart. 5.1 depict Land utilization details for 2019-20.

Chart 5.1: Land Utilization in Andhra Pradesh 2019-20



### Soil Types

There are various types of soils and the formation of a soil is primarily influenced by factors like climate, altitude and composition of bedrock etc. Disproportion in the distribution of rainfall in the country and excessive heat contribute special characters to the soils. Most of soils in the State are made up of a combination of three basic types, namely, sand, silt, and clay. Category-wise soils are given in Annexure 5.3. Of the 22 categories of soils adding to the total geographical area of the state, ten types are predominant and together account for over 88% of the area.

### Agro Climatic Zones

The following are the Six Agro climatic zones in the State

Table 5.2

### Agro Climatic Zones

S.No.	Name of the Zone	Districts
1	North coastal zone	Srikakulam, Vizianagaram, Visakhapatnam
2	Godavari zone	East Godavari, West Godavari
3	Krishna zone	Krishna, Guntur, Prakasam
4	Southern zone	Chittoor, YSR, SPS Nellore
5	Scarce rainfall zone	Kurnool, Anantapuramu
6	High altitude & tribal areas zone	High Altitude & Tribal areas of Srikakulam, Visakhapatnam, East Godavari districts

### Land Holdings

Data on land holdings is being collected since 1970-71 through a quinquennial census of land holdings, the latest available data relates to 2015-16. The average size of land holdings in the state showed a decline from 1.06 hectares in 2010-11 to 0.94 hectares during 2015-16. The number of holdings increased from 76.21 lakh in 2010-11 to 85.24 lakh in 2015-16. Distribution of landholdings and area according to size classes are given in Annexure 5.4 and District - wise distribution of land holdings and area according to size classes are given in Annexure 5.5.

### Rainfall scenario

The State received rainfall of 704.8 mm during the South West Monsoon period in 2020-21 as against the normal rainfall of 556.0 mm, indicating an excess of 26.8%. All the districts in the state except Srikakulam and Vizianagaram received excess rainfall. In Rayalaseema region, 65% of excess rainfall is recoded. During the North East monsoon period of 2020-21 (October to December), excess rainfall of 25.1% was recorded. The rainfall received during this period was 370.3 mm as against the normal rainfall of 296.0 mm.

Season wise rainfall details are given in the Annexure 5.6 and district wise and Region wise rainfall is given in Annexure 5.7. Rainfall trend over the past 10 years is depicted in chart 5.2

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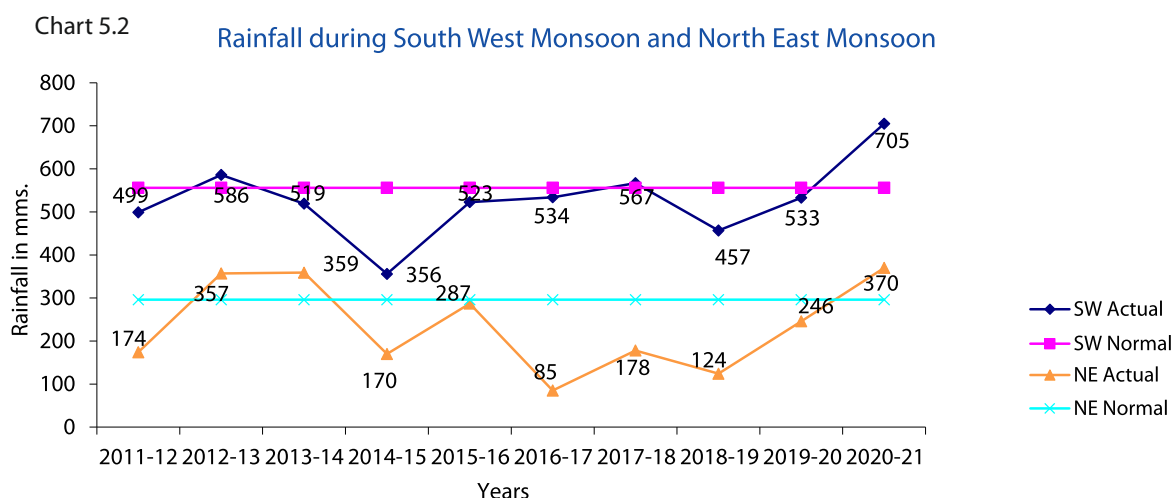


Table: 5.3 (Rainfall in mm)

Year	South West Monsoon			North East Monsoon			Total (June to May)		
	Normal	Actual	% of Deviation	Normal	Actual	% of Deviation	Normal	Actual	% of Deviation
Normal	556.0	532.9	-4.2	296.0	245.8	-17.0	966.0	874.5	-9.5
2020-21 (Up to March 2021)	556.0	704.8	26.8	296.0	370.3	25.1	878.9	1096.1	24.7

## Trends in Area and Production of food grains and paddy

As per the 3rd Advance estimates, the area as well as production of food grains for the year 2020-21 are estimated and compared with the previous year

achievements viz, 2019-20. While the area under food grains is 43.08 lakh hectares in 2020-21 as against 41.45 lakh hectares in 2019-20, showing an increase of 3.9%. The total production of food grains in 2020-21 is 168.31 lakh tonnes while it was 175.12 lakh tonnes in 2019-20 showing a decrease of 3.9%.

Table: 5.4

Area and Production under Food Grains and Paddy

Year	FOOD GRAINS						PADDY					
	Area (Lakh hec)			Production (Lakh tonnes)			Area (Lakh hec)			Production (Lakh tonnes)		
	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	Total
2019-20	20.82	20.63	41.45	87.77	87.35	175.12	15.26	8.30	23.56	80.13	56.97	137.10
2020-21%	21.49	21.59	43.08	78.21	90.10	168.31	16.90	8.81	25.71	71.37	61.89	133.26
Change	3.2	4.7	3.9	-10.9	3.1	-3.9	10.7	6.1	9.1	-10.9	8.6	-2.8

## Kharif

The area under food grains in Kharif 2020-21 is 21.49 lakh hectares while it was 20.82 lakh hectares in 2019-20 showing an increase of 3.2%. Similarly, the production of food grains in Kharif 2020-21 is 78.21 lakh tonnes while it was 87.77 lakh tonnes in 2019-20, showing a decrease of 10.9%.

The area under Paddy in Kharif 2020-21 is 16.90 lakh hectares while it was 15.26 lakh hectares in 2019-20, showing an increase of 10.7%. Similarly, the production of Paddy in Kharif 2020-21 is 71.37 lakh tonnes while it was 80.13 lakh tonnes in 2019-20, showing a decrease of 10.9%.

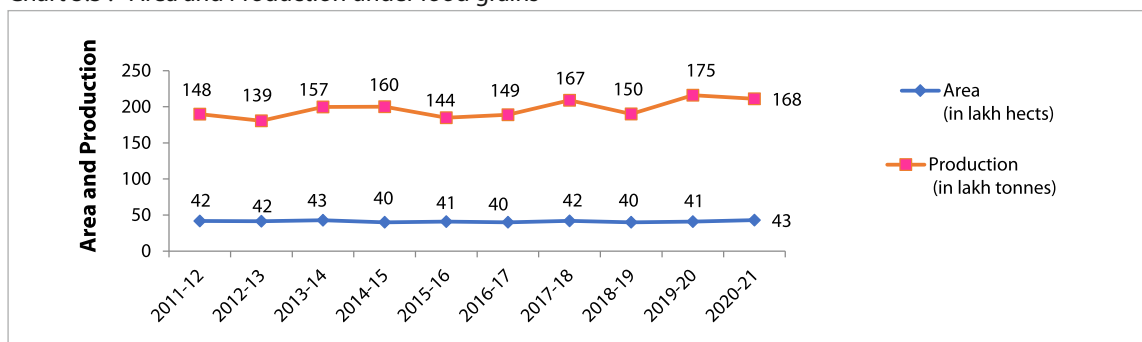
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## Rabi

The estimate of the area under food grains in Rabi 2020-21 is 21.59 lakh hectares while it was 20.63 lakh hectares in 2019-20 showing an increase of 4.7%. Similarly, the production of food grains in Rabi 2020-21 is 90.10 lakh tonnes while it was 87.35 lakh tonnes in 2019-20 showing an increase of 3.1%.

The area under Paddy in Rabi 2020-21 is 8.81 lakh hectares while it was 8.30 lakh hectares in 2019-20, showing an increase of 6.1%. Similarly, the production under Paddy in Rabi 2020-21 is 61.89 lakh tonnes while it was 56.97 lakh tonnes in 2019-20 showing an increase of 8.6%.

Chart 5.3 : Area and Production under food grains



Source : Directorate of Economics & Statistics

The time series trends in area and production of food grains and the Season wise area, production and productivity of selected crops are presented in Annexures 5.8, 5.9, 5.10 and 5.11 respectively

### Cropping Intensity

The cropping intensity - the ratio of gross cropped area to net cropped area, is one indicator useful for assessing efficiency of agriculture sector. This parameter has not undergone much change in the recent past and for the year 2019-20, the cropping intensity was 1.24.

### Gross and Net Area Irrigated

The gross area irrigated in the State increased to 38.13 lakh hectares in 2019-20 from 36.35 lakh hectares in 2018-19. The net area irrigated in the state in 2019-20 stands at 28.78 lakh hectares. The source-wise district wise Gross and Net area irrigated in the State from 2009-10 to 2019-20 are given in Annexure 5.12, 5.13 and 5.14, 5.15 respectively.

### Key Strategies and interventions to make Agriculture Profitable

- ♦ Extending financial assistance of Rs. 13500/- per farmer family per year (including Rs.6000/- from PM-KISAN) under 'Dr.YSRRythuBharosa-PM KISAN' as an investment support to the farmers started from Rabi, 2019.

- ♦ The tenant farmers are also made eligible for Navaratnalu, i.e., Crop Insurance, Interest Free Loans, 9 Hours free power, guaranteed support price to the produce and also an amount of Rs 7 lakhs from YSR Bima to the accidental or Suicide victims' in addition to YSR RythuBharosa.
- ♦ Government of Andhra Pradesh has established 10778 nos. of Dr.YSR Rythu Bharosa Kendralu (Dr.YSR RBKs) & 154 Hubs, with an integration of Agri Input Shop and Farmer Knowledge Centre in coterminous with Village Secretariats /Gram Panchayats for rendering all services of Agriculture and Allied sectors at village itself.
- ♦ Agri Input Shop ensures the availability of Certified & quality multi-branded Agri inputs to farmers at their village.
- ♦ Farmer Knowledge Centre provides scientific Advisories pertaining to Agriculture & Allied sectors to the farmers timely.
- ♦ e-Crop booking is done to create farmer's database through e-Crop Application. This data base is made mandatory for usage in implementation of Crop Insurance, providing Input subsidy, Sunna VaddiPanta Runalu and Procurement of Agriculture produce.
- ♦ Encouraging the farmers to go for market driven cropping system based on market intelligence

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system by establishing the Agri. Advisory Boards right from RBK level to Mandal, District and finally at State level duly placing farmers taking decisions.

- ♦ Extending free crop insurance scheme to all the farmers.
- ♦ Extending Sunna Vaddi PantaRunalu to all the eligible farmers
- ♦ Providing Exgratia to the farmer families in the event of death by Suicides (Agrarian Reasons)/ Accidents @ Rs. 7 lakhs per family.
- ♦ Andhra Pradesh State Agriculture Mission, established as a policy making & advisory body to:
  - o address the challenges in delivering quality and timely services to the farming community
  - o look into all aspects of production, marketing and pricing of Agriculture and Horticultural commodities to mitigate the agrarian issues with an objective to provide a policy level platform that works towards providing resilience among farmers and their empowerment.
- ♦ Organization of Dr.YSR Polambadi (Farmer Field Schools) to empower the farmers to take economically viable decisions by adopting eco-friendly practices of Integrated Crop Management in a scientific manner and also to reduce the cost of cultivation and enhance the productivity
- ♦ Dr.YSR Agri Testing Labs are being established to test the Agri inputs like Seed, Fertilizer & Pesticides to ensure the availability of quality agricultural inputs to the Farmers at RBK level at their villages.
- ♦ Promotion of Millets to improve nutritional status among public.
- ♦ Sensitizing Farmers on soil test based fertilizer application.
- ♦ Supply of 100% Neem Coated Urea to Farmers.
- ♦ Sensitizing farmers on customized fertilizers, which are Crop specific, Crop stage specific & location specific which are efficient and provide required nutrients in optimum quantities and at right stage to the crops. This reduces excessive

usage of fertilizers.

- ♦ Encourage farmers to use Micronutrients for correction of Micronutrient deficiencies and also Soil Amendments for correction of Soil Salinity and Alkalinity.
- ♦ Encourage farmers to go for Micro Irrigation and Fertigation.
- ♦ Supply of certified seed on subsidy.
- ♦ High cost farm implements are made available to farmers through custom hiring centers.
- ♦ Promotion of intercropping, poly cropping and mixed cropping.
- ♦ Promotion of diversified farming systems.
- ♦ Encouraging Organic farming / AP Community managed Natural Farming.
- ♦ Extending crop loans to maximum no. of tenant farmers individually by issuing Crop Cultivator Rights Cards (CCRCs) (or) by forming them into Joint Liability Groups (JLGs).
- ♦ Promotion of integrating farming systems in rain-fed areas of Rayalaseema districts and Prakasam district and strengthening their resilience to drought through soil and water conservation methods through Andhra Pradesh Drought Mitigation Project (APDMP).
- ♦ Conducting field diagnostic visits and human resource development in the form of training programmes to the VAAs as well as framers through District Resource Centres established in each and every district.
- ♦ Integrated Call Centre – strengthened with technically qualified persons duly having a MOU with the scientists from ANGRAU, Dr.YSRHU and SVV University for answering the calls received through Toll free number No. 155251.
- ♦ Pest control by monitoring pest forecast and adopting appropriate control measures.
- ♦ Special focus on promotion of Green Manure crops and Organic Fertilizers.
- ♦ Periodical crop advisories to the farmers through IT applications.



### YSR RythuBharosa-PM-KISAN

YSR RythuBharosa scheme is one of the prestigious Government Flagship programmes and also a key promise among the 9 assurances of the Navaratnalu designed for farmers welfare by providing financial assistance to farmers and making farming a remunerative profession. The scheme was launched on 15th October, 2019

farm families. During 2020-21, 51.59 lakh farmer families including 1.54 lakh landless SC, ST, BC and Minority farmer families including ROFR cultivators were provided with a benefit of Rs. 6928 Cr. including Rs. 2966 Cr. through PM KISAN. District wise number of Farmer families benefitted under YSR RythuBharosa is enclosed in Annexure-5.16.



The Government initially had promised an amount of Rs. 50,000/- in four annual installments of Rs. 12,500/- each, but extending instalment amount up to Rs. 13,500/- per year to be paid for five years, thereby bringing the total up to Rs. 67,500/-. Under the scheme, financial assistance is being provided to land owning farmer families @ of Rs. 13,500/- per year per family duly including Rs. 6000/- from the GOI under PM KISAN. Financial assistance is also being provided to SC, ST, BC, Minority category landless tenant farmers & ROFR cultivators @ of Rs. 13,500/- per year per family from the State budget. The benefit of Rs. 13,500/- will be extended to the eligible land owner farmers in 3 installments as detailed below;

- 1st installment @ Rs. 7500/- in the month of May (including Rs. 2000/- from PM-KISAN)
- 2nd installment @ Rs. 4000/- during the October (including Rs. 2000/- from PM-KISAN)
- 3rd Installment @ Rs. 2000/- during the Jan. month (Exclusively of PM-KISAN scheme).

During 2019-20 an amount of Rs. 6173 Cr. was credited directly through Aadhar linked payments to 46.69 Lakh

Social Audit has also taken place for the scheme duly displaying YSR RB beneficiary lists in all the villages including rejected farmers list with due reasons.

### YSR Rythu Bharosa to Farmers Cultivating in ROFR Lands

During 2020-21, along with other farmers, 84272 landless ROFR farmer families were extended with the benefit of YSR RythuBharosa across the State with an amount of Rs. 113.77 crores @ Rs. 13,500/- per farmer family. (1st, 2nd & 3rd installments). Visakhapatnam, Vizianagaram, Srikakulam, East Godavari and Prakasam are the major districts under ROFR cultivation. RythuBharosa is not only reducing the burden of debts of the farmers, but also enabling them to obtain reasonable price for their produce in the open market. It is also helping to get higher production through application of critical inputs at right time.

The YSR RythuBharosa scheme has created a stress-free and fearless condition in the ROFR farmers to start their seasonal crop cultivation activities and filled a hope of higher income levels.

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### Dr.YSR Rythu Bharosa Kendralu

Availability of quality farm inputs and right advisories at right time are very critical in improving the crop productivity and in reducing the cost of cultivation. Government of AP has initiated esteemed project of Dr.YSR. Rythu Bharosa Kendralu coterminous with village secretariat by integrating Agri. Input Shop and Farmer Knowledge Centers to augment income of farmer by ensuring the availability of certified quality inputs & dissemination of latest technology and crop specific MSPs, more so "One Stop Shop" so that farmers could not be fleeced. To contain the Pandemic COVID – 19, Government had put strenuous efforts and taken measures to salvage the situation, intervened through counterpart of State Governments, lifted the restrictions on the movement of goods in order to bring all RBKs functional along with required infrastructures, viz., Kiosks, Smart TVs etc by 30th May, 2020. This helped to procure the farmer produce in the village level itself to ensure that there are no impediments to farmers while selling their produce and obtaining remunerative price..

### Implementation Strategy

To decentralize the farming services, the state government has established 10778 Dr.YSR Rythu Bharosa Kendralu (Dr.YSR RBKs) & 154 Hubs, with an integrated platform of Agri. Input Shop and Farmer Knowledge Centre coterminous with Village Secretariats/ Gram Panchayats for rendering all services of Agriculture and Allied sectors at village itself.

**Agri Input Shop:** It is a Virtual Shop with a Digital Kiosk for taking orders from farmers based on their choices. Model products will be on display in these shops. The objective is to make available quality Agri inputs, farm implements, fish feed, cattle feed, fodder seed etc. to

farmers at right price, right time at their villages backed by integrated advisory through Farmer Knowledge Center

**Farmer Knowledge Center:** It is basically a training center equipped with Audio Visual Aids, Mini Soil testing Lab, Method demonstrations, Library etc and is a part of Village Knowledge Center. Libraries are fully equipped with Polambadi & Crop Diagnostic module books, latest literature, magazines and offline videos on various crops of Agri & Allied sectors. The main objectives are to build capacity of farmers through classroom and field trainings and demonstrations on best practices and new technologies for adoption, create farmers interface with Scientists and Extension Staff of Agriculture & Allied Departments, to act as single point of contact for information about latest technologies, Government Schemes etc.

**District Resource Centers:** The Integrated district level training center is named as RBKs District Resource Centre (DRC). The DRC officials with scientists of ARS, KVK, DAATT centers jointly conduct plant diagnostic visits to provide immediate solutions to the farmers and also catering the training needs of farmers. DRCs officials are conducting Virtual training programmes and interacting with farmers through Phone in programmes.

**Integrated Call Center (ICC):** A Call Center is established at state level with a toll free number of 155251. Thirty (30) technically qualified call center executives with 5-6 years of field experience & Six (6) Scientists of Agri & Allied sector are entrusted to ICC to attend the calls from farmers, diagnose the field problems and to provide immediate solutions over phone.

### Infrastructure

The state had utilized the funds from various schemes of RKVY, SHM along with its own contribution for establishment of Dr.YSR RBKs and brought them functional. RBKs are being operated by qualified staff viz., Village Agriculture Assistants/Village Horticulture Assistant/Village Sericulture Assistants & Village Animal Husbandry/Village Fisheries Assistant with Diploma / Graduation / Post Graduation certification in their respective fields. To ensure hassle free operations at Dr.YSR RBKs & Hubs, the required infrastructure is provided to RBKs.



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Government has entered an MOU with the 9 Knowledge partners on 10th Feb 2020 to utilize their services for betterment of the farmers.

The project is implemented in two stages, RBK 1.0 & RBK 2.0. Government has entrusted the onus of RBK 1.0 to AP AGROs for supply of inputs (Seed / Fertilizer / Pesticide / Mineral mixtures / Cattle feed/Fish feed) to farmers based on the indents received through Kiosks (online). The products of multi brand companies of Agri & Allied Inputs are displayed in the kiosks for supplying to farmers at RBK level. With an aim to provide permanent structure to RBKs at village level, the Panchayat department has taken up construction of new RBK buildings under MGNREGS.

RBK 2.0: With a view to overcome the logistic issue faced in RBK 1.0, increase sale of input, their timely supply and reach out large number of farmers, Government has appointed "The AP State Co-operative Marketing Federation Ltd (A.P. Markfed)" as Nodal agency for Fertilizers, Micronutrients & Bulk Feeds and "The A.P.State Agro Industries Development Corporation Ltd (A.P.Agro)" as Nodal agency for Seeds and Pesticides.

### Assistance to unfortunate diseased farmer families

Financial Assistance of Rs. 7.00 Lakhs is being released directly to the family members of the deceased farmer for supporting the family. The Government has provided Rs. 1 Cr each to the District Collectors as Corpus fund for providing immediate assistance to the family members of the suicide victim families. Budget amount of Rs. 20.00 Crores was allocated for Exgratia to farmers during 2020-21. Out of this, Rs. 18.24 Crores was spent towards payment of Exgratia. As per the instructions of the Government, out of 773 re-verified farmer suicide cases (for the period from 2014 to 31st May 2019), 462 farmer suicide cases were found eligible for Ex-gratia. For all these cases, Exgratia of Rs.23.10 Crores was paid @ Rs.5.00 Lakhs per family. During the year 2020-21, as per the preliminary reports from different districts, 296 no. of farmer suicides occurred. The Government has paid an amount of Rs.20.72 Crores Exgratia @ Rs.7.00 Lakhs per farmer family.

- During the year 01.01.2020 to 01.03.2021, 141 farmers suicides were reported and the Government has paid an amount of Rs.9.87 Crores Exgratia @ Rs.7.00 Lakhs per farmer family.

### Agricultural Credit

The Annual Credit Plan for the year 2020-21 is Rs.1,28,660 crores towards Agriculture Credit which is 11.88% increase over previous year. An amount of Rs. 1,08,800 Cr (85%) was disbursed during 2020-21.

During Kharif, 2020 an amount of Rs.57,575 crores (99%) was disbursed under crop loans (short term loans) against the target of Rs. 58,222 crores and an amount of Rs. 16,580 crores (97%) was disbursed against the target of Rs. 17,015 crores under Agriculture Term Loans including allied activities.

During Rabi 2020-21, an amount of Rs.28,762 Crores (79%) was disbursed under crop loans (short term loans) against the target of Rs. 36,407 crores and an amount of Rs.13,130 crores (77%) was disbursed against the target of Rs. 17,016 crores under Agriculture Term Loans including allied activities.

Details of Agricultural Credit disbursement during Kharif and Rabi, 2020-21 (up to November, 2020) are given in Annexure-5.17.

The Annual Credit Plan 2019-20 for the State was Rs.1,15,000 crores towards Agriculture Credit. Rs.1,13,998 crores (99%) was disbursed under Agricultural credit. An amount of Rs. 89,273 crores (106%) was disbursed under crop loans as against the target of Rs. 84,000 crores and an amount of Rs. 24,725 crores (80%) was disbursed as against the target of Rs. 31,000 crores under Agriculture Term Loans including Allied activities.

The Annual Credit Plan proposed for the year 2021-22 is Rs.1,44,927 crores towards Agriculture Credit which is 12.64% increase over previous year.

### Financing to Tenant Farmers

Andhra Pradesh is pioneer in tenant farmer finance and highest tenant farmer finance represents that large number of "actual cultivators" belong to tenant category. On analysis of sociological profile of tenant farmers, it is observed that most of them are marginal farmers particularly from under privileged sections who are in dire need of institutional finance. The tenant farmer finance has been extended in the form of RMG, JLG and through Certificate of Cultivation (CoC) (or) Loan Eligibility Cards (LEC). The Govt. of Andhra Pradesh has

Came in to Force from 17-08-2019. Crop Cultivators Rights Cards (CCRC) were issued to tenant farmers to the Tenant farmers on 2nd October, 2019. According to the Act, Crop Cultivator Rights Cards (CCRC) will be issued with the mutual agreement of land owner and cultivator for a period of 11 months, which entitles the tenant farmer to avail bank finance. During 2020-21, CCRCs were issued to 4,14,795 actual cultivators in the state. An amount of Rs.324.41 crores was given to 60667 CCRC holders.

The Department has proposed to form Joint Liability Groups (JLG) with Telugu name as Swayam Sahayaka Saagudarula Sanghaalu (SSSS) with land less tenant farmers and also with small and marginal farmers who are owning small extents and doing tenancy. During 2019-20, an amount of Rs.433.45 crores was given to 16,356 JLGs covering 87,966 Tenant farmers. During 2020-21, an amount of Rs.182.89 crores was given to 10909 JLGs covering 54,545 Tenant farmers. Details are given in Annexure-5.18.

During 2019-20, Loan Eligibility Cards (LECs) were issued to 5,99,735 Land Licensed Cultivators (Tenant farmers) in the state. An amount of Rs.548.70 crores was given to 1,33,414 LEC holders. 1,68,389 Certificate of Cultivation (COC) were issued to the tenant farmers and an amount of Rs.148 Crores was disbursed to 36,581 COC farmers during 2019-20.



The State Government is implementing the “YSR – Sunna Vaddi PantaRunalu (SVPR)” Scheme w.e.f. Kharif 2019. Interest subsidy for the crop loans up to Rs.1.00 lakh will be transferred directly to the accounts of farmers who have repaid their loans in time (maximum period of one year from date of disbursement of crop loan).

directly to farmers. Pending claims worth Rs.688 Cr. were settled to farmers' accounts during 2020-21.

The Government is committed to revamp delivery system in the State with an aim to improve living standards of the people through the concept of 'NAVARATHNALU' as core theme of governance. To achieve this, the government has established a system of 'Village Secretariats' consisting 6,758 Functional Assistants from Agriculture to strengthen the extension services at village secretariat level. Accordingly, the Government has so far appointed 6442 Village Agriculture Assistants. The recruitment is under process to place the balance 316 posts.

### Free Crop Insurance Scheme

The State Government has launched "Free Crop Insurance" under Navaratnalu scheme from Kharif, 2019 onwards. The total farmer's share of premium is being paid by the State Government on behalf of farmers. During Kharif, 2019, 16.77 lakh farmers are enrolled with an insured area of 20.06 lakh hect. for a sum of Rs.15275 cr. Nearly 1/3rd of the total notified area was not covered under crop insurance during Kharif, 2019. Government, therefore for achieving 100% coverage of Crop Insurance has necessitated to modify the existing procedure to cover each and every acre of notified crop under Crop Insurance.

From Rabi 2019-20 onwards, state government is implementing its own Dr. YSR Free Crop Insurance scheme without even payment of Rs.1/- by the farmer and purely based on e-crop registration. The State Government issued orders to implement the scheme as a 100% State scheme for all cultivators, who are cultivating notified crops in the notified areas based on registration through e-crop. Crop Insurance protection is provided in a saturation mode covering all genuine and eligible cultivators. The enrolment of cultivators is Hassle free and transparent because of social audit. 33 Lakh farmers with 23.17 Lakh Ha area covered through e-panta. The sum insured is Rs.14,600 Cr.

During Kharif, 2020, Notification of Crops and areas was issued by Govt. to implement Free Crop Insurance Scheme by way of continuing the existing model of Rabi 2019-20, where enrolment is based on e-crop. 21 crops were notified under Yield based scheme and 9 crops under Weather based scheme. The State Govt. have been issued orders for formation of Andhra Pradesh General Insurance Corporation Ltd. (APGICL) to establish under

Companies Act, 2013, with an authorized share capital of Rs.101 Crores, as a 100% state scheme vide G.O.Ms.No.84, dt.3.11.2020 of A&C Dept., AP.

The Government have taken a revolutionary decision to settle the crop insurance claim of Kharif -2020 by finalizing the Crop Cutting Experiments by Feb -2021 and process the claim in the month of March and finally payment of claim to the farmers by April-2021 which is an history in claim settlement of crop Insurance.

### Dr. YSR Polambadi

The excess use of chemical pesticides by farmers pose many challenges not only to crop yields in agriculture, but also in terms of increase in cost of cultivation, insect pests developing resistance to chemical pesticides and causing the environmental pollution. Aiming to nullify these adverse impacts and to transform agriculture into a more prosperous occupation, the department of Agriculture has introduced the concept of Polambadi (Farmer Field School), and ambitiously launched the program of 'Dr. YSR Polambadi' in 2019.

Dr YSR Polambadi is a field oriented training program organized to 30 farmers for a period of 14 weeks, holding one session per week on a fixed day in the row in a week. The farmers are trained on diagnostic procedures to study and evaluate the field conditions in respect of the incidence of pests and diseases in relation to the ecological factors, and to take suitable decisions that warrant zero or minimum use of chemicals adopting IPM technologies to enhance the crop yields.

The Polambadi lays focus on growing a healthy crop, Conserve natural enemies, conduct regular (weekly) field observations, Farmers understand ecology to become experts in their own field. During 2020-21 (up to 31st March 2021) 10,790 Polambadi training programmes were conducted covering 3.23 lakh farmers in different crops like Rice, Maize, Millets, Pulses, and Oil seeds commercial crops like Cotton with a total annual financial outlay of Rs 5538 Lakhs under this program. Similarly, it is proposed to organize 19000 Polambadi programs during 2021-22 with a proposed out lay of 5646 Lakhs to organize the program



## AGRICULTURE AND ALLIED ACTIVITIES

### Soil Testing (Soil Health Card Scheme/Soil Health Management)

Soil Sampling and Soil testing programme is organized in a systematic manner to evaluate the fertility status and to identify the problems (Alkalinity/Salinity) and deficiency of nutrients if any. The objectives of the scheme include evaluation of the fertility status and nutrient deficiency, identify and reclaim problematic soils, promote soil test based fertilizer usage, adopt balanced and integrated use of fertilizers and thereby reduce cost of cultivation and improve soil health.

There are 16 district level Soil Testing Labs, 1 Regional Soil Testing Lab at Bapatla, Guntur district, 13 Mobile Soil Testing Labs in all the districts and 30 Soil Testing Labs in AMCs in the state. The soil samples are testing for 12 parameters duly registering the farmers' details in Soil Health Card portal by the field functionaries. The staff of STLs in the district are conducting trainings at RBKs to sensitize the farmers, testing soil samples and explains the importance of soil in crop production and trains the farmers in improving the soil health and its maintenance. During 2020-21, it is planned to conduct 5000 Demo-cum Trainings during Rabi 2020-21 with a specific objective of use of fertilizers based on SHC. Promotion of micronutrients are also to be taken up in the farmers' fields at RBK level in 10,463 RBKs @ Rs 500/- per each RBK under SHM Scheme during 2020-21.

The Govt. of AP has decided to provide the quality and certified fertilizers to the farmers at RBKs so the (3) existing Fertilizer Quality Control Laboratories (FQCLs) and also one Bio fertilizer testing lab in the State will be strengthened under SHM Scheme during 2020-21.

### Subsidy Seed Distribution

During Kharif, 2020, a quantity of 6,97,163 Qtl. of various crop seed was distributed to 13.93 Lakh farmers with a subsidy value of Rs. 17,896 lakhs in co-ordination with the seed supplying nodal agency APSSDC Ltd, to the farmers in Andhra Pradesh. In East & West Godavari districts 2014 Qtls. of Paddy seed was distributed to 3311 farmers on 80 % subsidy (Fields damaged due to Heavy Rains) incurring Rs.53.51 lakhs towards subsidy.

A quantity of 1,68,492 Qtl. of various crop seed has been

indented for distribution to farmers on subsidy during Rabi-2020-21 and so far 1,41,311 quintals of seed have been distributed to 2.18 Lakh farmers with a subsidy value of 3633 Lakhs in co-ordination with the seed supplying nodal agency APSSDC Ltd, Vijayawada.

### Nivar cyclone-Seed distribution.

During 2020-21, Crop damage occurred due to heavy rains received during the months from August to November 2020 in some mandals of West Godavari districts and 786.30 qtls of Paddy seed with a subsidy of Rs 20.81 Lakhs were distributed on 80% subsidy to 1123 farmers through D krishi App.

### Seed Village Programme (SVP)

The Seed Village scheme ensures supply of quality certified seed of notified varieties to the farmers in time at their places at affordable prices besides ensuring quick multiplication of new seed varieties in a shorter time in that mandal /district based on the crop situation. Compact area approach needs to be followed under this scheme. The number of farmers for a unit of 10 Ha. may be minimum of 25 subject to a maximum of 150. Funding Pattern is 60% Central share and 40% State share. Foundation seed will be supplied on 50% subsidy for cereals and 60% subsidy for oilseeds and pulses and 3 one day trainings are conducted to the farmers on seed technology.

During Kharif, 2020 under this scheme, 11,778 Qtls of Foundation seed was distributed benefitting 28325 farmers covering 11,330 Ha with a certified seed production of 5.76 lakhs Qtls. During Rabi, 2020-21, 4015 Qtls of FS-II Groundnut crop was procured and distributed to farmers for multiplication. 24394 Qtls of Foundation seed was distributed benefitting 32,775 farmers covering 13,110 ha with an expected certified seed production of 2.66 lakhs Qtls. In Groundnut crop, the expected Certified seed of 1.74 lakhs will be procured and distributed to farmers during Kharif, 2021 under Subsidy Seed Distribution Programme.



## Fertilizers

### Fertilizer Policy Initiatives

The Fertilizer consumption during Kharif and Rabi, 2020-21 in terms of product was 42.35 LMT and in terms of Nutrient (NPK), it was 20.29 LMT.

### Nutrient Based Subsidy (NBS) Policy

Under the NBS Policy, a fixed rate of subsidy (in Rs. per Kg basis) is announced on nutrients namely Nitrogen (N), Phosphate (P), Potash (K) and Sulphur (S) by the Government on annual basis. The fertilizer companies will decide MRPs based on the prices of the raw materials in the international market and cost of production of finished goods, based on demand and supply. The per kg subsidy fixed by the Central government on nutrients for the year 2020-21 is as mentioned in Table 5.5 and 5.6:

### Nutrient Based Subsidy (NBS)

Table :5.5

Sl.No	Nutrients	NBS per (Rs. Per Kg of Nutrient)
1	N	18.789
2	P	14.888
3	K	10.116
4	S	2.374

### Fertilizer Consumption:

Table :5.6

YEAR	NBS per (Rs. Per Kg of Nutrient)
2013-14	38.11
2014-15	37.25
2015-16	35.88
2016-17	35.31
2017-18	32.91
2018-19	33.24
2019-20	35.38
2020-21	42.35

## Pesticides

In Andhra Pradesh, there was 456.09MT (Active Ingredient) higher Pesticide Consumption during Kharif-2020 (2342.86 MTs of Active Ingredient) compared to the last year's Kharif- 2019-20 (1886.77 MTs of Active Ingredient). The increase in consumption of chemical pesticides was attributed due to increase in net sown area over the previous year and also due to periodical distribution of adequate rain fall. Farmers are also sensitized by the Agriculture Department by promoting the activities like Integrated Pest Management practices, Organization of Polambadi programmes, Usage of bio-pesticides, change in cropping pattern, Organic Farming etc. through the extension functionaries for reduction in consumption of pesticides. The pesticide consumption has been showing definite decline during the recent past with the consumption falling from 4050 MTs in 2014-15 to 1886.77 MTs in 2019-20. The pesticide consumption during 2020-21 up to Kharif is 1388.48 MTs.

### Strategies and Action plan 2021-22

In Andhra Pradesh, majority of the farmers are using Agro Inputs like Seeds, Micro nutrients, Fertilizers and Pesticides to get higher yields. To protect the crop from pests & diseases, farmers are applying insecticides as per the recommendation of the Agricultural Extension Functionaries. Chemical Pesticides are contributing to higher cost of cultivation in addition to hidden hazards to human beings and animals. The state government has been educating the farmers to adopt Good Agricultural Practices to get higher returns with minimum cost of cultivation towards pesticides for achieving the vision for next five years as detailed below.

It is proposed /projected to reduce 7.51 % of pesticide consumption during 2020-21 and 12.89% during 2021-22. Department of Agriculture is committed to achieve the goal of reducing the usage and cost of pesticides for next five years on mission mode by effective utilization of services through Extension functionaries and Research Institutions.

## AGRICULTURE AND ALLIED ACTIVITIES

### Drought Proofing Measures

#### Andhra Pradesh Drought Mitigation Project (APDMP)

The main objective of Andhra Pradesh Drought Mitigation Project (APDMP) is to improve the income and strengthen the drought resilience of 90,000 farm households in 315 Grama Panchayats of 105 clusters in 105 mandals. The Programme Development Objective (PDO) is to strengthen the adaptive capacity and productivity of Agriculture in the rain-fed areas of five districts in southern AP i.e., Ananthapuramu, Chittoor, Kurnool, Kadapa & Prakasam districts. The three major components of the project are: 1) Climate resilient production systems, 2) Drought proofing through NRM & governance and 3) Management and lesson learning.

The Climate resilient production systems aim to increase the resilience of crop and livestock production systems to climate change (drought). Under the Drought proofing through NRM & governance, issues relating to ground water management in the project area are addressed and under the 3rd component 'Management and Lesson', the framework of best practice would be introduced in all districts and the adoption would take place based on local demographics and priority. The following are the important activities under APDMP project.

#### Community Managed Seed System (CMSS)

Groundnut is the predominant crop in the project area which requires more seed rate. Every year farmers are facing problems in getting seed from Government or private trade in time. To get rid of this problem CMSS will play vital role in seed production. Community Managed Seed Systems (CMSS) is seed production owned by farmers of Farmer Producers Organizations (FPO) established at cluster level to ensure timely supply of quality seeds at affordable prices in rain-fed areas. A total of 105 Farmer Producer Organizations have been setup under the aegis of the APDMP and are running successfully with a numerous project & GoAP activities being implemented at root level. Community Managed Seed System (CMSS) is one such initiative that aims at institutionalizing the process of seed production, processing and procurement system within cluster and distribution of subsidized seeds to eligible farmers.

By proactively estimating a requirement of more than 5 lakh quintals of Groundnut seed for Kharif 2020, GoAP has taken a new initiative to procure Groundnut (Truthful Label) K-6 variety seed directly from farmers being FPOs, MVKs (Mana Vittana Kendras), APSSDC Ltd. as major stakeholders thereby saving time and money.

The procurement of groundnut seed was slated to begin during harvest period from mid-March to mid-May 2020. A total of 42,000 quintals of Groundnut (Truthful Label) seed worth around Rs.25.62 Cr. is procured from 1960 small and marginal farmers through 72 FPOs creating employment and income to about 1000 agri-labours, coolies and poor etc. directly and indirectly during COVID-19 lockdown enabling them to meet their livelihood.

#### Mobile Seed Processing Units and Custom Hiring Centers (CHC)

74 Mobile seed processing units were supplied during 2019-2020 with a value of Rs.3.48 Cr. Through CHCs all machines will be provided on custom hiring basis for timely operations during labour shortage, high labour cost situations and for timely sowing of crops before soil moisture depletes. Farm machinery worth Rs.10.14 crores was supplied in 105 clusters in the FY 2019-2020.

#### Farmer Producers Organization (FPO)

Farmer Producer Organization (FPO) is built on the basis of social capital communities, participation in water and soil conservation activities, management of common property rangelands for livestock, supply of seeds, fertilizer and machinery hiring, seed multiplications, market linkages, networking, financial and technical advices etc. The FPO will intervene in the areas of support for Ground Water Governance, Service to Producer, Agriculture and Livestock, Community management seed system, Machinery hiring centers and Credit Linkages. 105 FPOs formed & registered under MACS ACT in the entire project districts of Ananthapuramu, Chittoor, Kadapa, Kurnool and Prakasam..

#### Major achievements in the project area:

- APDMP is mobilizing 73,240 households organizing them into 105 FPOs, facilitating their share capital contribution of Rs.5.38 crores, and orienting them on the project activities,



- ♦ 51,611 farmers are benefitted from project activities,
- ♦ Established 105 Bio Resource centers (BRC) and Custom hiring centers. Rs 659 Lakhs revenue generated so far.
- ♦ 677 Polambadi programs organized by covering 20310 farmers.
- ♦ Extended protective irrigation for 10,502 ha covering 10,702 beneficiaries.
- ♦ 5291 farm ponds were constructed so far for extending protective irrigation.
- ♦ Organized 3548 Rearers Field Schools (RFS) covering 14,976 shepherds,
- ♦ Established 127 Breeder farm units for chick (Native breed) production, constructed 6351 number of night shelters for backyard poultry, 376 water troughs constructed for providing drinking water to small ruminants,
- ♦ Supplied 850 MTs of feed to 42,536 pregnant ewes & does, 15,000 ha of Common land regeneration is under progress.

### Disruptions due to the outbreak of COVID – 19

The sudden outbreak of pandemic COVID-19 has not only wrecked economic base but also disclosed vulnerabilities in Indian agricultural marketing and supply chain management system. Especially, the small and marginal farmers who constitute about 80% of all farmers in India face a challenging situation to sale their produce overcoming major intricacies in processing, conditioned storage, packing, logistics of transporting and trading their goods in uncertain market conditions raised due to COVID-19 lockdown. Also, due to massive reverse migration of agriculture workforce to their home lands, coupled with social distancing and mobility restrictions imposed by Indian Government during lockdown as a precautionary measure, Agriculture sector has witnessed emerging shortage of agricultural labour for post-harvesting processes.

### The lockdown - activities under taken up by the project during the COVID-19

- ♦ Successfully procured 42,000 quintals Groundnut seeds for APSSDCL from farmers at best market prices, processed, packed, labelled locally through agricultural workforce within the village thereby creating employability.
- ♦ FPOs assisted by the project has supplied safe drinking water to nearly 8000 families living in drought villages through Water Tankers
- ♦ Also, few FPOs setup mobile Janata Bazaars and sold hygienically packed vegetables at nominal prices at door steps of general public. FPOs lead the community volunteerism distributing rice, edible oil and other provisions, sanitizers and hand-made masks to migrants, daily wagers, and poor thereby setting a good example of collective effort in response to COVID-19.

### National Mission for Sustainable Agriculture (NMSA)-Rain-Fed Area Development (RAD)

Under this mission, Rain-Fed Area Development (RAD) component is being taken up in convergence with other schemes to promote integrated farming system and to provide value added developmental activities to the Rain-Fed farmers to improve their economic status, despite failure of crop due to insufficient rains or drought.

Implementation Strategy: To identify cluster areas in rain-fed areas to promote Agriculture based, Horticulture Based, Livestock based and Agroforestry based Farming systems and value addition and developmental activities. The financial pattern for implementation of RAD program is shared at 60:40 between Central and State Government.

## AGRICULTURE AND ALLIED ACTIVITIES

### Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) – Other Interventions

Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) – Other Interventions, a Centrally Assisted State Program is being implemented in the state since 2016-17 for improving the water use efficiency (Per Drop More Crop). PMKSY is implemented for undertaking water conservation works, drought proofing measures of watershed interventions undertaken through MGNREGS and IWMP for water conservation/ Management related works and ground water recharge.

The objective of the scheme is to provide assured irrigation to each and every cultivable land to increase the productivity through convergence of funds earmarked by various Ministries involved in Water resources development and to increase assured irrigated area and thereby improve the farmers' income.

### Farm Mechanization

To increase productivity, various schemes are being implemented in the state to promote the usage of farm mechanization and increase the ratio of farm power to cultivable unit area up to 2.5 kW/ha. Government Provides financial assistance to establish Farm machinery hiring centers with machinery and implements under various schemes as per the Government norms prevailing at the time of sanction of financial assistance to increase the reach of farm mechanization to small and marginal farmers and to the regions where availability of farm power is low; and promotes establishment of 'Custom Hiring Centers' to offset the adverse economies of scale arising due to small landholding and high cost of individual ownership.

During 2020- 21, the scheme is being implemented with total allocation of Rs 582.56 Crores. Government issued orders to establish Custom Hiring Centers (CHCs) at RBK level operated by farmers groups with farm machinery worth of Rs. 12 to 15 Lakhs in all the RBK villages and to establish Hito-Tech high value Machinery Hubs worth Rs. 120 to 130 Lakhs at each constituency in all the districts.

To assist the groups and agencies and to achieve transparency in grounding the units Bank Loan is made mandate. Dept. of Agriculture entered into MoU with APCOB for extending loan to the identified Farmer Groups and Agencies for establishing CHCs and Hubs respectively.

### Rashtriya Krishi Vikas Yojana (RKVY-RAFTAAR)

Rashtriya Krishi Vikas Yojana (RKVY) is one of the flagship programmes of Government of India with Central and State sharing 60:40. The scheme is renamed as RKVY-RAFTAAR (Rashtriya Krishi Vikas Yojana –Remunerative Approaches for Agriculture and Allied Sector Rejuvenation) from 2017-18 onwards. Main objective is making farming a remunerative economic activity through strengthening the farmer's efforts, risk mitigation and promoting agri - business entrepreneurship. Agriculture and Allied sectors will implement the programme.

Govt. of India allocated an amount of Rs. 298.01 Crores (Central: Rs. 178.81Cr. + State share: Rs.119.20 Crores) for implementation of RKVY-RAFTAAR during 2020-21. Of this, Rs. 195.46 Crores have been allocated to Agriculture sector. In addition, Rs. 104.81 Crores were allocated as additional funds for the financial year 2019-20, which were released during the year 2020-21, of which Rs. 68.79 crores were released for strengthening of RBKs.

### State Initiatives

RythuBharosa Kendralu: During 2020-21, an amount of Rs.32.72 Cr. was released for strengthening of RythuBharosaKendralu and supply of quality inputs to the farmers.

**Polambadi :** An amount of Rs.11.39 Cr. was released during the year 2020-21 to Dr.YSR Polambadi Programme to empower the farmers to take economical decisions by adopting the practices of integrated crop management. Under RKVY Budget allocated during 2020-21 is:

- Distribution of alternate crop seed under Drought contingency Programme –Rs. 2.28 Cr,
- Creation of seed testing facilities at RBKs – Rs.3.91Cr,
- Establishment of Integrated Agri. Labs –Rs.2.28 Cr,
- Biological control laboratories – Rs.1.37 Cr and
- Rodent control –Rs.0.32 Cr.

### National Food Security Mission (NFSM)

National Food Security Mission (NFSM) is a centrally sponsored scheme launched in October 2007 based on

## AGRICULTURE AND ALLIED ACTIVITIES

recommendation of National Development Council and continued till to date.

### The Aim, Objectives and Outcome of the scheme are

- Increasing production of rice, wheat, pulses, Coarse cereals, Nutri-cereals, Cotton and Oilseeds through area expansion and productivity enhancement in a sustainable manner in the identified districts of the State

- Restoring soil fertility and productivity at the individual farm level and
- Enhancing farm level economy (i.e. farm profits) to restore confidence amongst the farmers.

#### Funding Pattern:

Funding Pattern is 60:40 percent sharing between Central Govt. and State Govt. respectively.

Table: 5.7 Funds allocations during, 2020-21: (Rs. in Lakhs)

Sl.No.	Scheme	Central Share	State Share	Total
1	NFSM-Rice	1069.116	712.744	1781.86
2	NFSM-Pulses	3727.440	2484.960	6212.40
3	NFSM-CC (Maize)	179.280	119.520	298.80
4	NFSM-Nutricereals	477.906	318.604	796.51
5	NFSM- Commercial crops	114.080	76.060	190.14
6	SAP on Nutri cereals	72.096	48.064	120.16
7	NFSM-OS	1000.000	666.670	1666.67
8	TRFA-OS	770.000	513.330	1283.33
	<b>Total</b>	<b>7409.918</b>	<b>4939.952</b>	<b>12349.87</b>

#### Interventions:

- ♦ During the year 2020-21, main emphasis was given on organization of cluster demos (CDs) in various crops with a contiguous area of 20 Ha at RBK level.
- ♦ In these cluster demos all critical inputs like seed, bio fertilizers, PP chemicals, need based farm implements are distributed to the farmers on 50% subsidy. 4565 cluster demos were planned to organize during 2020-21.
- ♦ During Kharif- 2020, 1741 CDs were organized in Rice, Pulses, Maize, Nutri-cereals, Cotton & Oilseed crops and remaining 2824 CDs are organizing in Rabi-2020-21.

organization of cluster demos in 13 districts covering an area of 8200 acres. For these clusters companies are supplied new molecules of PP chemicals, Weedicides, micro nutrients on free of cost with a worth of Rs.5.0 Cr and created awareness on new technologies among the farming community.

- ♦ 2804 Farmer Field Schools were organized in Pulse crops with an expenditure of 9.05 Cr to empower the farmers in their own field from seed to seed through practical learning.
- ♦ Trainings are organized for adoption of new technologies on various crops in all the districts through District Resource Centers (DRC) duly utilizing the funds of NFSM schemes.

### Cluster Demos under Corporate Social Responsibility:

- ♦ 66 multinational companies are participated in

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 AGRICULTURE AND ALLIED ACTIVITIES
 

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### Sub Mission on Agricultural Extension (Agriculture Technology Management Agency-ATMA)

Under the scheme of "Support to State Extension Programmes for Extension Reforms" (ATMA) the entire state of Andhra Pradesh (13 districts) is covered with 60:40 central and state share. The Extension Reforms (ATMA) has been included in the National Mission on Agricultural Extension & Technology (NMAET) as Sub Mission on Agricultural Extension (SMAE).

#### Objectives of the programme:

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

#### Benefits of the programme:

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

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. 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 and agencies associated with agricultural development in the district and farmer organizations. Research and extension units within the district, such as KVKs, Department of Agriculture, Horticulture, Animal Husbandry, Fisheries, Sericulture, Marketing, etc. are its constituent members.

**Strategic Research and Extension Plan (SREP):** 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 the stakeholders and farmers. The SREP contains detailed analysis of all the information on existing farming systems in the district and research – extension gaps required to be filled-up. It also prioritizes the research – extension strategies within the district. It becomes the basis for development of work plans at blocks/ district level. All the (13) ATMA districts have developed their respective Strategic Research and Extension Plans.

**State Extension Work Plan (SEWP):** Based on the research-extension strategies given in the SREPs, the Block / district level plans for the year 2020-21 were developed by all the (13) ATMA districts as per the revised ATMA scheme guidelines and cost norms. The consolidated State Extension Work Plan for the year 2020-21 was developed at state level with an out lay of Rs. 4859.43 Lakhs. The District Action Plans developed under the scheme should be processed consistent with Article 243 ZD of the Constitution.

Gol has given Tentative allocation for Rs. 3189.30 lakhs for the year 2020-21 including state share and released an amount of Rs 956.79 lakhs as Central Share (State has also released an amount of Rs. 637.86 lakhs towards Matching State Share) as 1st spell duly revalidating the unspent balance amount of Rs 3449.28 lakhs for implementation of the activities. Accordingly, the districts are organizing the need based activities like farmer trainings, demos, exposure visits, Kisan melas, field days, farmer scientist interaction etc.

### Major activities organized during 2020-21 Rythu Bharosa Kendralu

The Government of Andhra Pradesh has established 10,641 RythuBharosaKendralu with Village Agricultural Assistants, Village Horticultural Assistants, Village Sericultural Assistants at village level during 2020-2021. The important components of RBKs are Agri Input Shop and Farmer Knowledge Centre. RBKs will bridge the information and service delivery gaps in the State's Agriculture Sector by brining all the Stakeholders of Agriculture and Allied Sectors into one single platform offering all services to farmers by ensuring year round productivity, profitability and sustainability. In RBKs, Agriculture & Allied Sectors officials & Scientists will provide latest and low cost technologies to farmers. Subject experts will conduct farmers trainings in RBKs through Physical contact or through Smart TV/ Online trainings.

### RBK-District Resource Center (DRC)

District Resource Centers have been established during 2020-21 at 13 districts integrating the ATMA and FTC staff to effectively utilize the resources and man power working towards common objective of farmers empowerment through trainings. The DRC is whole responsible for achieving the objectives of Farmer knowledge center in RBK. 3,006 Training (Virtual / Physical) Programmes organized covering 1,14,315 farmers.

### ICC (Integrated Call Centre)

The Integrated Call Center (ICC) has been established at Gannavaram on 30.05.2020 to strengthen the Extension services and to address the problems and to provide solutions to the farmers of Agriculture & Allied Sectors. The Integrated call center is functioning as telephonic based advisory service through single Toll Free Number 155 251 and WhatsApp Numbers 8331056149 to 8331056154 (6 Nos) for SMS /Video calls by farmers. Total calls received up to 18-12-2020 are 1,11,629. Based on the calls received at the end of each session, field problems are analyzed and need based solutions are given by DRC's through Diagnostic filed visits.

**DIGITAL Studio – RBK Channel** has been established at Gannavaram to telecast live interactions with subject experts, scientists and Officers of Agriculture and allied sectors on seasonal crop conditions, pest and disease management, Package of practices in Horticulture crops for obtaining high yields and also subjects related to allied Departments to provide technical content to the farmers through smart TVs for strengthening the services through RBKs.

During 2021 -22 under SMAE (ATMA), it is proposed to cover 15,157 with a Financial outlay of Rs. 4891.78 Lakhs

### Externally Aided Projects

#### Andhra Pradesh Integrated Irrigation and Agriculture Transformation Project

The newly formed State of Andhra Pradesh has proposed a next generation Andhra Pradesh Integrated Irrigation & Agriculture Transformation Project with climate resilience as its cross-cutting theme. This proposed project is based on the impact of Andhra Pradesh Community Based Tank Management Project. Out of the total project to be completed in a span of six years, Agriculture component is nearly Rs. 340 Crores assisted by World Bank.

#### The project has proposed four key pillars:

- i Improving irrigated agriculture efficiency at farm level
- ii Promoting adaptive sustainable and resilient agriculture practices.
- iii Supporting climate-friendly market and agribusiness promotion
- iv Project management and capacity building

#### Area of Operation:

This project is proposed to be taken up in 5 districts of AP(Srikakulam, Vizianagaram, Visakhapatnam, East Godavari and West Godavari districts) during the year 2020-21. Perspective action plan for the Agriculture Component is prepared and formal approval is accorded for Rs. 340 Crores over the project period of six years. This project is going to be implemented in selected 1204 irrigation tank villages. Agricultural operations proposed through this project are not confined to the command area of the tanks. The whole village is to be taken up as a unit for the implementation of this project.



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### Andhra Pradesh Irrigation and Livelihood Project Phase –II (APILIP-II)

Andhra Pradesh Irrigation and Livelihood Project Phase –II (APILIP-II) with Japan International Cooperation Agency (JICA) assistance is approved by the GOI for implementation in the State of Andhra Pradesh with an objective to increase irrigated area and the local productivity and strengthen institutional and marketing capacities by rehabilitating existing irrigation systems and supporting integrated farming systems, thereby contributing towards improvement of livelihoods of farmers and other rural communities and development of value chain in the state.

Under Agriculture Component of the project, the following activities are being taken up:

1. Promote Farmer Producer Organizations
2. Strengthening of Extension Service of Dept. of Agriculture
3. Establishment of Agricultural Mechanization Training Centres (AMTCs)

### AP Community managed Natural Farming (APCNF)

Under APCNF/APZBNF5, 94,899 farmers are practicing APCNF in an area of 2,60,781 ha during 2020-21 (30th November, 2020).

### Critical Gaps identified in implementation of Scheme:

- ♦ Changing mindset of the farmers and bringing behavioural change takes long time.
- ♦ Drudgery involved in preparation of inputs and their application.
- ♦ Difficulty in supply of APCNF/ZBNF inputs in large scale due to low cattle population.
- ♦ Readymade availability and ease in application of inorganic inputs (Fertilizers, Pesticides, Herbicides etc.)
- ♦ Plant material for preparation of botanical extracts is less available.
- ♦ Knockdown effect in controlling pests and diseases is high in chemicals when compared to APCNF/ZBNF inputs.

### Remedial measures taken up to fill the gaps.

- ♦ Handholding support to farmers with the help of CRPs (Community resource Persons). So far 5000 nos. of ZBNF/IB functionaries are working for ZBNF.
- ♦ Community preparation of inputs.
- ♦ Establishment of NPM input shops (1706 Nos), promoting ZBNF input supply through RBKs.
- ♦ Encouraging purchase of cows through SHGs, VOs.
- ♦ ZBNF promotion through RBKs.
- ♦ Model plots in villages.

### Proposed Action plan for 2021-22:

- ♦ Targeted to cover 10 lakh farmers under APCNF in 10 lakh acres area.
- ♦ Conducting Kharif Action Plan (KAP) in the month of Jan-Feb 2021.
- ♦ Knowledge dissemination and handholding support is constantly provided through farmer-driven extension architecture led by Community Resource Persons.
- ♦ Mobilization, Planning, Monitoring, input preparation by Women Self Help Groups.
- ♦ Focusing Community Resource Persons, SHG leaders, Lead farmers & VOAs for taking up PMDS.
- ♦ Conducting State level TOTs, District level TOTs and Village level awareness campaigns.
- ♦ Capacity building of field functionaries.
- ♦ Model plots for each ICRP to showcase practices.
- ♦ Documentation of best-case studies.
- ♦ APCNF Package of practices (POPs) to all major crops.
- ♦ Convergence with Agriculture and allied departments & other departments like WCD (Nutri gardens), MGNREGS (Horticulture multilayer plantations), SERP (SHG linkages, Homestead gardens).
- ♦ Establishing Science behind ZBNF by conducting field trials, Research plots.
- ♦ Promotion of 365 Days Green Cover (DGC) for increasing cropping intensity through Pre monsoon Dry Sowing (PMDS) and dry sowing.
- ♦ ZBNF/APCNF Video dissemination through Pico projectors, Farmer friendly content and Package of practices.



## COOPERATION

Cooperatives have traditionally been promoted and organized in a democratic and structural framework 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. Cooperative movement has completed over 100 years of service to farmers and other weaker sections of the Society.

The State has been pursuing a liberal policy towards Cooperatives to enable them to 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 Cooperative movement.

### Rural Credit Cooperatives

The Rural Credit Cooperative structure at present is a three tier structure with the Andhra Pradesh State Cooperative Bank at the APEX level with 13 District Cooperative Central Banks (DCCBs) at the district level and with 425 branches located in district headquarters, small towns and semi urban areas and 2051 Primary Agricultural Cooperative Credit Societies at village level.

The main objective of the Primary Agricultural Cooperative Credit Societies (PACS) is to provide credit services to its member farmers at village level. The PACSs are actively participating in distribution of Agricultural inputs (Fertilizers, Pesticides, Cattle feed and Seeds) and also doing non-credit business such as Paddy Procurement, Maize etc., Seed Processing, PDS, Insurance services and Supply of Drinking Water by installing RO plants, Maintaining of Petrol Bunks, Rice Mills, Weigh Bridges and Milk Chilling Units and providing warehousing facilities etc. NABARD has been providing assistance to develop PACS as Multi Service Centers.

Kisan Credit Cards have been issued to 14,51,662 farmer members of the PACS as on 31.03.2021. The total financial assistance received so far under Revival Package for Rural Cooperative Credit Structure is Rs.935.00 Crore and this includes the State's share of Rs.146.31 Crore.

### Loans to farmers

The A.P. State Cooperative Bank provided Rs.11,347.16 Crore (Kharif Rs.5493.79 Crore and Rabi Rs.5853.37 Crore) as production credit (Short term loans) to farmers through the PACS and DCCBs during the year 2020-21. Under Seasonal Agricultural Operations (SAO/OPP/DTP), in total Rs.9942.49 Crore loans were distributed. APCOB has refinanced an amount of Rs.940.98 Crore to the DCC Banks under Long Term Agriculture Credit to the extent as against the loaning programme of Rs.1605 Cr. allotted to all the 13 DCCBs during the year 2020-21.

Towards financial assistance to 33,100 Tenant Farmers, the Andhra Pradesh State Cooperative Bank has disbursed an amount of Rs.261.18 Crores during the year 2020-2021 through the PACS & DCCBs.

### Computerization of PACS

The revival of Cooperatives is one of the priorities of the Government and the essential element for revival is computerization of the accounts of 2051 PACS which are primary level societies. APCOB, the nodal agency for implementation of the project estimated Rs.69.00 Cr cost of the project and resolved to avail the financial support from National Cooperative Development Corporation (NCDC) with the sharing pattern of 65% loan from NCDC, 20% Grant from NCDC and 15% to be borne by APCOB, DCCBs and PACS.

## INTEGRATED COOPERATIVE DEVELOPMENT PROJECTS (ICDP)

Under the Centrally Assisted State Plan of Integrated Cooperative Development Project (ICDP) infrastructure facilities of societies are being improved for development of Agricultural production, supply of Agriculture inputs, Marketing, Storage and processing activity and Margin Money assistance is provided to societies like Fisheries, Dairies and Handloom etc.

ICDP Scheme under Phase-I (1989-2016) was implemented in all Districts in the State with outlay of Rs.168.39 Crores. The NCDC has sanctioned ICD Projects for (03) Districts i.e. Chittoor, Kurnool and East Godavari under Phase-II with total outlay of the Projects is Rs.609.39 Cr. The Project period is five (05) years under Phase-II. NCDC released Rs.119.62 Crores to the

## AGRICULTURE AND ALLIED ACTIVITIES

Government towards 1st year installment for implementation of ICDP Phase-II in the three districts during the year 2018-19. The State Government has released funds of Rs.122.44 Cr to the RCS Head Office in two spells i.e., during the year 2019-20 and 2020-21 including the State Matching Share. On implementation of the Project during five (5) years period, 16,34,907 members of these societies will be benefited.

The sectors covered this scheme under Phase-II are 1) DCCB, 2) PACS, 3) Coop. Joint Farming Societies, 4) DCMS 5) Weavers Coop. Societies, 6) Fisheries Coop. Societies, 7) Dairy, and 8) Mandal Mahila Coop. Samkhyas. The funds are released from the State PMC to the three Projects.

An amount of Rs. 17.25 Crs has been incurred for construction of Godowns through e-tender system and other civil works for 110 PACS and other infrastructure facilities. Margin Money assistance is provided to the SHGs through Zilla Mahila Samakhyas to the PACS and other weaker section societies for increasing of working capital thereby enhancing their borrowing power and also the working capital.

### Marketing Cooperative Societies

The 13 District Cooperative Marketing Societies (DCMSs) undertake procurement of agricultural produce to enable farmers to get minimum administered prices for their produce. Besides this, the DCMSs procure seeds on behalf of AP Seeds Development Corporation and also undertake procurement activities on behalf of MARKFED in addition to carrying on local business activities viz sale of Fertilizers, seeds, Consumable articles, Stationery items etc., to various departments in the districts. The performance status of DCMSs is given in Table 5.8 below.

Table.5.8 The performance status of DCMSs

(Rs. In lakhs)

Sl.No.	Particulars	For the year 1.4.2020 to 31.03.2021
1	Share Capital Contribution	364.90
2	Business Turn over	69723.53
3	Profit (10 D.C.M.Ss)	1609.26
4	Loss (3 D.C.M.Ss)	18.01
5	Accumulated losses	193.14
6	Assets	19819.12
7	Liabilities	17410.25

### AP MARKFED

AP MARKFED is an apex organization for the Cooperative Marketing Societies (CMS) in the State supplying agricultural inputs, Cattle Feed, fertilizers, gypsum, provision and other requirement to private run institutions and Government Hostels. Subsequent to interdiction of single window system in the State in 1987, MARKFED offers its services to PACSs at the primary level. It undertakes procurement of other commodities under commercial account every year depending upon the market situation

### AP STATE CO-OPERATIVE UNION

AP State Co-Operative Union (APSCU) is an Apex Cooperative institution in the field of Cooperative Education and Training functioning with Vijayawada as Headquarters. There are four Cooperative training Centres (CTCs) located at Vijayawada, Rajamundry, Ananthapur and Y.S.R.Kadapa districts in the State, working under APSCU offering Diploma in Co-operative Management and Computer Applications. The APSC Union is also publishing a Cooperative monthly magazine titled as "Sahakara Samcharam" for awareness building and propagation of Cooperative Principles and Cooperative Movement in the State.

### AP STATE CO-OPERATIVE RURAL IRRIGATION CORPORATION LTD

The AP State Cooperative Rural Irrigation Corporation Ltd., undertakes construction of check dams etc. in Agriculture sector. The State Horticulture Mission/Horticulture department has identified the APSCRIC Ltd. as the "Nodal Agency" for construction of Farm ponds in Horticulture fields.

### RURAL ELECTRICITY SUPPLY COOPERTATIVE SOCIETIES

The key objective of the Rural Electricity Supply Cooperative Societies is to purchase electricity in bulk from nearest DISCOM and distribute it to domestic industrial and agricultural control of Cooperative Department through RESCOs at Kuppam (Chittoor district), Anakapalli RECS Ltd., Kasimkota (Visakhapatnam) and RECS Cheepurupalli (Vizianagaram district).

### Rashtriya Krishi Vikas Yojana (RKVY - RAFTAAR)

The Rashtriya Krishi Vikas Yojana - Remunerative Approaches for Agriculture and Allied Sector Rejuvenation (RKVY - RAFTAAR) is a flagship programme of the Government of India with 60% grant by the Central Government and 40% grants by the State Plan Scheme for construction of Godowns by the Primary Agricultural Cooperative Society under supervision of Cooperation Department..

### Labour Contract Cooperative Societies

Labour Contract Coop. Societies function in a 3-tier structure i.e., Primary Level 2245 LCCS in the State, District Level – all District Federations of Labour Contract Cooperative Societies and State Level – AP State Cooperative Labour Contract Cooperative Societies Federation Ltd. Now all the District Level Federation and State Level Federation are under Liquidation.

### Cooperative Joint Farming Societies

Joint Forming Cooperatives also work in the three-tier structure i.e., Primary Level-364 CJFS, District Level-13 District Federation of Cooperative Joint Farming Societies and State Level - Andhra Pradesh State Cooperative Joint Farming Societies Federation Ltd. The Government issued orders for winding up of defunct Cooperative Joint Farming Societies (CJFSs) and other Cooperative Joint Farming Societies on the representation of the members of the societies.

### Consumer Cooperative Stores

Consumer Cooperative Stores 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 366 Consumer Cooperative Stores are functioning in the State. Consumer Cooperative Stores are also undertaking distribution of textbooks, notebooks, cloth, crackers and supply of various stationary items and provisions to Government hostels etc.

### Andhra Pradesh Cooperative Tribunal

There is only one Cooperative Tribunal in the State at Vijayawada. The APCS Act, 1964 provides two different

forum of appeal on decisions or orders, awards passed by the Quasi-Judicial Officers of the department. One is the APCT being an appellate forum in respect of certain Sections specified under Section 76 of the Act and as per Section 77 of the Act and the other being the Government and the Registrar of Cooperative Societies are the appellate authorities in respect of other orders or decisions which are not covered under the purview of APCT Act. 1964.

### Audit

There is a separate Audit Wing for Audit in Cooperative Department headed by the Chief Auditor who works under the General superintendence and under the control of Registrar of Cooperative Societies. The Chief Auditor shall audit the accounts of a society at least once in a year. For the year 2019-2020, (17328) Cooperative Societies were programmed for audit, of which (5562) are under aided category and remaining (11766) un-aided category, audit for the year 2019-20 is under progress.

### Horticulture

Over the years, there has been a structural shift in the cropping pattern in the state and horticulture sector is growing at a faster pace than agriculture towards making Andhra Pradesh a major horticulture hub. The agrarian state of Andhra Pradesh is heading towards a value addition platform from the conventional production approach. The returns from Horticulture per unit of land are higher as compared to Agriculture. Horticulture, as a climate resilient alternative involving less risk, assures higher income to farmers. Horticulture sector turned out to be an essential component for food and nutritional security in the state and is integral for food and nutritional security in the State. Horticulture comprises offruits, vegetables, flowers, spices and plantation crops. The Government of Andhra Pradesh is committed to farmer centric programmes and identified Horticulture sector as one of the growth engines in economic development of the State. In Andhra Pradesh area under Horticulture crops is 17.84 Lakh Hectares with a production of 312.34 Lakh MTs. The crop wise Area and Production particulars of Horticulture crops for 2018-19 and 2019-20 are given in Annexure 5.19 and the details in brief are shown in Table 5.9

## AGRICULTURE AND ALLIED ACTIVITIES

Table 5.9 Area and Production status during 2018-19 &amp; 2019-20

Sl.No.	Crop	2018-19 (Final Estimates)		2019-20 (Final Estimates)	
		Area in Lakh Ha.	Production in Lakh MTs	Area in Lakh Ha.	Production in Lakh MTs
1	Fruits	7.05	176.44	7.40	182.06
2	Vegetables	2.68	75.57	2.64	75.38
3	Flowers	0.28	5.30	0.26	5.25
4	Plantation Crops	4.96	32.49	4.94	32.84
5	Spices	2.36	15.26	2.54	16.67
6	Medicinal & Aromatic Plants	0.07	0.14	0.06	0.14
7	Total	17.40	305.20	17.84	312.34

Source: Horticulture Department

### Productivity enhancement and export potential

Andhra Pradesh ranks first in productivity of Oil Palm, Papaya, Lime, Cocoa, Tomato and Chilli. The State stood 3rd in implementation of Micro-Irrigation at national level. In area coverage, out of 10 top districts in the country two districts are from Andhra Pradesh. A.P is the largest producer of fruits in the country contributing 15.8% of the total production at the national level. As per EXIM Bank Report, A.P contributes 7.8% of Vegetables and Vegetable products in the country. District wise Productivity of Growth Engine crops are given in Annexure.5.20.

### Strategy for Development

- Enhancing income of Farmers. District specific and crop specific strategy and interventions have been initiated for enhancing the productivity, quality, marketability and thereby farmers income.
- Crop & Varietal Diversity Introduction of new crops, improved variety of Turmeric & Ginger, Japanese Mint, multiple cropping in coconut and intercropping in Oil palm and other plantations are the new interventions during 2019-20.
- Coverage of all Horticulture Crops with Micro-irrigation on saturation basis: It reduces the cost of cultivation by reducing expenditure on labour, fertigation, reduction in incidence of disease & pests, increased productivity & quality thereby 10-25% increase in farmers income.

- Cluster Approach for integrated value chain development.
- Strengthening of Post-Harvest Infrastructure: Development of PHM infrastructure consisting of pre-cooling, cold room, grading, packing, washing etc. at cluster level to reduce wastage and facilitate direct marketing
- Promotion of FPO as Agri-Business Start up: Services of 07 professional agencies have been engaged for promotion and developing 100 FPOs / FPCs as Business Enterprise.
- PPP Projects in collaboration with reputed agri business companies for production and quality enhancement and direct marketing of produce and Market demand based crop planning.

### Achievements

- Area Covered under Micro-Irrigation during 2019-20 is 1,21,733 Ha under PMKSY (PDMC) with total expenditure of Rs. 950.00 crores.
- 70,529 ha (1,74,207 acres) of additional area brought under Horticulture crops.
- R&R Scheme for enhancing the productivity of old coconut gardens implemented in 3314 Ha with a financial assistance of Rs. 14.82 Crores from Coconut Development Board (CDB), GOI. 5100 ha brought under new Coconut Plantation.
- 968 acres covered under permanent pandals with total financial assistance of Rs.980 Lakhs to enhance production and quality of Vegetables.

## AGRICULTURE AND ALLIED ACTIVITIES

- Protected cultivation i.e. Polyhouses & Shadenets were taken up in 0.09 Lakh sq.mtrs.
- Under Horticulture sector, a total of 251 FPOs have been registered till now and Rs. 14.97 Crores of financial assistance given to 91 FPOs to implement business plans.
- Farmers Producers Organization – Public Private Partnership (FPO-PPP) projects have been started with INI Farms Pvt. Ltd. and Desai Fruits and Vegetables Pvt. Ltd., Mahindra Agri Business Solutions Pvt., Ltd (for Banana exports), Sreeni Food Park (for Tomato Value Chain Development), ITC Limited (for Food safe Chilli production) and Mondalez (for value chain development of cocoa).
- ITC Ltd: Value chain development of Chilli, 3500 MTs of quality Chilli procured from Prakasam, Kurnool & Guntur district farmers and exported to different destinations.
- Through the programme value chain development of Banana and Pomegranate, INI Farm Pvt. Ltd and Desai Fruits and Vegetables Pvt., Ltd., were bridging the gap in exporting high quality Banana directly procured from farmers to various Countries. 28,520 MTs of banana exported.
- Mondalez : Additional area of 8590 ha brought under Cocoa plantation and 6700 MTs of Cocoa beans procured from the farmers.
- Sreeni Food Park: Value Chain Development for Tomato. 7000 MTs of Tomatoes procured from farmers.
- Mango exports to a tune of 1480 MT from VHT, Tirupathi and 30 MT from VHT Nuzvid.
- Ninjacart has started five common facility centres in Ananthapuramu and 3 centers in Chittoor for procurement of vegetables directly from the farmers @ 1000 to 5000 Mt per day.
- Rs. 80 Crores paid to 32000 Oil Palm farmers as part of differential price of Oilpalm FFB under Price Stabilization Fund by the State Government.
- Organic farming has been promoted in an extent of 11250 hectares of Mango, Cashew, Turmeric, Chilli and Vegetables through ICCOA & SIMFED.
- Centre of Excellence for vegetables and flowers with state of art facility has been created at

Kuppam in Chittoor district 2 lakh grafted vegetable seedlings were produced and distributed to the farmers.

- Nearly Eleven lakh metric tonnes of fruits, vegetables and plantation crops have been marketed with the help of FPOs and progressive farmers during the critical lock down period of Covid-19 pandemic.
- Seven lakh fruit and vegetable kits with total quantity of about 4000 MTs were sold in different colonies/ societies/ apartment complexes and helped the farmers in marketing of their produce during Covid-19.

### Post-Harvest Infrastructure in the State

The existing infrastructure in the state cover 363 Cold Storages with a capacity of 20.00 Lakh MTs, 246 Ripening Chambers with a capacity of 54,177 MTs, 4587 Pack houses with a capacity of 1,36,650 MTs, 14 Integrated Pack house with a capacity of 5050 MTs, 174 Mango Processing Units with a capacity of 66,850 MTs and 416 Cashew Processing Units with a capacity of 46,170 MTs. The state has newly created Post Harvest Infrastructures which include 6 Solar Poly Driers with a capacity of 14 MTs, 23 Solar Cold Room / Chambers with a capacity of 145 MTs, 4 Ripening Chambers with a capacity of 165 MTs and 17 Coconut pack houses with storage capacity of 35 lakh nuts.

### Programmes implemented for holistic development of Horticulture

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 dissemination of latest knowledge to the farming community. Further, in an attempt towards developing an organized production system and integrated value chain development, Farmers are being organized into Farmer Producer Organizations and seven professional agencies engaged to mentor and strengthen the FPOs into sustainable business entities.



## AGRICULTURE AND ALLIED ACTIVITIES

### 1) Pradhana Mantri Krishi Sinchayee Yojana

PMKSY- APMIP is the unique and first comprehensive project being implemented in a big way in Andhra Pradesh. APMIP was launched with an objective of enhancing the crop productivity by improving the water use efficiency through Micro Irrigation systems for the benefit of the farmers. In view of deficit Rainfall, Rain shadow regions, unpredictable rains and considerable depletion of ground water, farmers have opted for Drip

Irrigation. To achieve the concept of 'Per Drop More Crop', Micro irrigation is taken up particularly in the districts of Rayalaseema, apart from other backward areas in A.P.

It is an ongoing project and so far 13.41 lakh hectares has been covered under Micro Irrigation in 13 Districts in the State from 2003-04 to 2019-20, benefiting 11.91 lakh farmers. To encourage farmers for adopting Micro Irrigation the State Government is giving top up subsidy.

Table 5.10

Impact of Micro Irrigation

Sl.No.	Crop	1 lakh ha	13.41 lakh ha
1	Water saving	15 TMC	201 TMC
2	Power saving 1,553 kWh/Ha Worth @ 4/ unit	1553 lakh kWh Rs.62 Crores	20,825 lakh kWh Rs.831 Crores
3	Labour saving 52 Mandays per Ha Worth @ 200/day	52 lakh Mandays Rs.105 Crores	700 lakh Mandays Rs.1410 Crores
4	Fertilizer saving 50 Kg / Ha	5000 Tons	67,050 Tons
5	Reduction in cost of cultivation Rs.21,500 / Ha	Rs.215 Crores	Rs.2885 Crores
6	Additional Net Income Rs.1,15,000 / Ha	Rs.1500 Crores	Rs.20,115 Crores

### Highlights of APMIP

- Ranks 4th in area coverage under Micro Irrigation during 2019-20.
- AP covered 10% of total area covered under Micro Irrigation and 15% of total area under Drip in the Country.
- Among top 10 Districts under area coverage in the Country, 2 Districts (Ananthapuramu & YSR Kadapa) are from AP.
- Highest area coverage during 2017-18, 2018-19 & 2019-20.

### 2) Mission for Integrated Development of Horticulture (MIDH)

The Mission was launched to promote holistic growth of Horticulture sector through an area based regionally differentiated strategies. A Centrally Assisted State Development Scheme – the Mission for Integrated Development of Horticulture (MIDH) is being implemented in the State by the State Horticulture

Mission. 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 (9) districts of Andhra Pradesh viz., Srikakulam, West Godavari, Guntur, Prakasam, Nellore, Chittoor, Ananthapur, Kadapa & Kurnool and also in 3 ITDA's viz., Paderu, R.C.Varam & Seethampeta. The major components covered under MIDH are (a) Area Expansion (Perennial and Non-Perennial crops) (b) Rejuvenation of senile orchards (c) Protected Cultivation (d) Post Harvest Management (e) Creation of Water Resources (Farm Ponds) (f) Farm Mechanization (g) Capacity Building.

### 3) Rashtriya Krishi Vikas Yojana (RKVY)

RKVY is a Centrally Assisted State Plan scheme to implement major activities of Horticulture sector in Non-SHM Districts viz., Krishna, East Godavari, Visakhapatnam and Vizianagaram and also the projects under integrated vegetable production which are not covered in MIDH are being implemented in all the (13)



## AGRICULTURE AND ALLIED ACTIVITIES

Districts. The aim of RKVY is to increase public investment in infrastructure facilities and provide flexibility and autonomy in the process of planning and executing schemes in the Horticulture sector.

Under the scheme components like production of quality plant material, area expansion, rejuvenation and canopy management in old orchards, distribution of hybrid vegetable seeds, permanent pandals, trellies, protected cultivation (shade net houses & poly houses), post-harvest management activities, farm mechanization etc., are being implemented for sustainable growth in Horticulture sector



### Major initiatives under RKVY Schemes:

- 40% increase in productivity through Pandals & Trellies system in creeper vegetable crops.
- Quality production and increased productivity in vegetable crops by encouraging the good quality hybrid seeds in Vegetables instead of local varieties.
- Implementation of Onion ventilated storage structures in the State in order to store onion during glut so that to realize a better price by the farmers.
- To reduce the Post-harvest losses in Fruits & Vegetables by supplying the Plastic crates to the farmers for proper handling during the transportation.

- Establishment of whole sale Flower Market with Farmer Producer Organization with a view to benefit 8000 flower growers in and around of Kadiyam of East Godavari district for selling their produce with premium price and also exporting the produce to the other states and 10 (ten) Onion Storage structures with total capacity of 383 Mts by FPOs/farmers.

### Achievements under RKVY

- Under the scheme, an amount of Rs.3688.90 Lakhs has been spent so far under various components during 2020-21.
- An area of 21,250 acres has been brought under Organic farming & certification and the total outlay for 3 years is Rs.17.00 crores @ Rs. 20,000/- per Ha over period of three years) for adoption and certification of Organic Farming programme.
- Covered 75 FPOs with financial achievement of Rs.14.32 crores towards Promotional, Integrated Pack houses, Collection Centers, Value addition and marketing etc across the State against the 239 Registered FPOs

### 4) National Food Security Mission (NFSM) Oil Palm

Andhra Pradesh ranks 1st in cultivation of Oil palm with 1.72 lakh Ha with 1.23 lakh Farmers in 8 districts of Andhra Pradesh. The average productivity of bearing plantations is 19.81 tons Fresh Fruit Branches (FFB) per Ha. Out of 1.72 lakh Ha, the bearing area is 1.41 lakh Ha from which the production is 12.78 lakh MTs of FFBs with 2.08 lakh MTs of CPO during last financial year i.e., 2019-20. West Godavari district has highest area under Oilpalm i.e., 93,992 Ha.

13 Processing units are working with Government under this programme with a capacity of 461 MT/Hr. These companies have a buy-back arrangements for purchase of Fresh Fruit Bunches (FFB's) from farmers in the factory zones allotted to them at the rate fixed by the Government. During 2020-21, an area of 10870 Ha was identified and 8801 Ha (up to 31.03.2021) plantation completed against the target of 10,000 Ha during 2020-21.

Similarly against the financial outlay of Rs.3833.52 lakhs the achievement was Rs.3060.09 lakhs (up to 31.03.2021) during 2020-21.

## AGRICULTURE AND ALLIED ACTIVITIES

### 5)Externally Aided Projects:

#### A) Andhra Pradesh Integrated Irrigation and Agriculture Transformation Project

The Andhra Pradesh Integrated Irrigation and Agriculture Transformation Project (APIIATP) is being implemented with World Bank funds through Water Resource Department as Nodal Agency with an objective to improve the productivity of Horticulture crops near Ayacut area. The project period is 6 years and is being implemented in all the districts of Andhra Pradesh except Guntur. An amount of Rs. 127.70 crores is allocated for the year 2020-21.

#### B) Andhra Pradesh Irrigation and Livelihood Improvement Project –JICA

The APILIP project is being implemented with Japan International Cooperation Agency (JICA) funds through Water Resource Department as Nodal Agency with an objective to develop the food value chain of strategic crops on pilot basis. The project period is 6 years & is being implemented in 4 districts i.e. East Godavari, Krishna, Guntur and Chittoor of Andhra Pradesh for Value Chain Development of strategic crops such as Coconut, Mango (Fresh & Processing), Chilli and Tomato on pilot basis. The budget allocated for the total project is Rs. 40.35 crores.

### Highlights and Initiatives

- ♦ The government is encouraging expansion of number and network of FPOs to enable farmers to reduce transaction costs, access technology, raise bargaining power and integrate with value chains. Under Horticulture sector, a total number of 251 FPOs are registered and Rs. 746.12 Lakhs financial assistance has been provided to 50 FPOs to implement Business plans.
  - ♦ Farmers Producers Organization – Public Private Partnership (FPO-PPP) projects have been started with INI Farms Pvt. Ltd & Desai Fruits and Vegetables Pvt. Ltd. (for Banana exports), Sreeni Food Park (for Tomato Value Chain Development), ITC Limited (for Food Safe Chillies production) and Mondalez (for value chain development of cocoa), Ninja Cart for direct procurement of fruits and vegetables with FPOs/Farmers group, Big Basket, Metro Cash and Carry.
  - ♦ Value chain development
    - In case of Chillis, 29,733 MTs of quality Chilli
- procured from Prakasam, Kurnool & Guntur district farmers and exported to different destinations across the globe. Premium price has been paid for the farmers. This initiative has contributed to about 27% net higher income to the project farmers (ITC Ltd).
- In case of Mango and Tomato, High density plantations of Mango were promoted in six thousand hectares to get maximum benefit from the same piece of land (Jain).
  - ♦ Exotic fruits and vegetables promoted in Lambasingi area of Chintapalli and the FPO is marketing their produce at Visakhapatnam Rythu Bazaar and in other markets through various channels of marketing. The organization is also procuring Capsicum, English Cucumber and mango directly from the FPOs and Farmers (Lawrencedale Agro Processing India Ltd.)
  - ♦ A.P. Export Promotion Policy has been formulated with cluster development programme approach for Mango, Banana and Pomegranate. Further to promote exports, Mango, Banana and Vegetable farmers are being registered in APEDA Hortinet website.
  - ♦ Department of Horticulture is promoting direct market linkages with companies like Future Group, Big Basket, Ninjacart, Kisan Network, Suma Agro etc., to facilitate farmers to sell their produce directly.
  - ♦ 14 Integrated Pack Houses were sanctioned and grounded in the state to reduce Post Harvest Losses and facilitate direct marketing.
  - ♦ Several projects such as: Dehydrated Lemon project at Pulivendula, Jamun Juice Making unit at Guntakal, Mango Bars, Mango Tetrapack units at Piler, Solar Poly driers at Kurnool, Vizianagaram, Solar Cold Rooms at Nellore, Martur, Pomegranate Arils Processing unit at Ananthapur, Dry Fig solar drier and pressing unit in Ananthapur, Onion Chives at Penugonda (100% Export Oriented Unit), Hybrid Roses at Hindupur, were sanctioned under Post-Harvest Management of MIDH.
  - ♦ Under Market Intervention Programmes, Direct Marketing Linkages between Corporates & FPOs were organized. Retail Outlets were sanctioned along with Post-Harvest Infrastructure like Pack Houses, Cold Storages, Ripening Chambers, Onion Graders, Minimal Processing Units.

- ♦ For the 1st time, R&R scheme for development of existing Coconut Garden is sanctioned to State by the Coconut Development Board (CDB) and additional release of Rs. 14.82 Crores, total area covered 3314 Ha.
- ♦ For the 1st time, Panukula & Suvarnarekha Mango varieties exported to South Korea and Germany respectively from the State.

### Animal Husbandry

Livestock sector plays a key role in the economy where the poor contribute to growth directly. Being a source of livelihood and provider of draught power, manure and energy, livestock forms an essential part of the socio economic structure of rural farmers. The progress in the sector is inclusive in nature as it results in balanced development of the rural economy particularly in reducing poverty amongst the weaker sections and providing stability to family income. The Livestock assures drought proof mechanism by providing recurring and sustainable income to enhance the Socio-economic conditions of the rural farmers.

Through providing nutrient rich food products, draught power, dung as organic manure and domestic fuel, hides and skin, animals as a regular source of cash income are backbone for rural households. Livestock are a natural capital, which can be easily reproduced to act as a living bank with offspring as interest and the best insurance against the vagaries of nature.

### Inclusive Growth through Livestock

Most of the animal farming activities such as fodder collection, feeding, watering and healthcare, management, milking and household-level processing, value addition and marketing are performed by women. The growth in livestock sector is demand-driven, inclusive and pro-poor. The rate of return on investment from Livestock sector is comparatively very high. Livestock sector apart from contributing to the state economy in general and to agricultural economy in particular, also provides employment generation opportunities, asset creation, coping mechanism against crop failure and social and financial security. Livestock is the main source of animal protein for the population. Demand for animal food products is responsive to income changes, and is expected to increase in future.

### Milk, Meat and Egg – Key Growth drivers

The Animal Husbandry, from a humble beginning of backyard poultry, has grown into a dynamic industry. Milk and Meat production have also made a quantum leap with the production increasing substantially. Andhra Pradesh has some of the richest livestock resources in the country and is one of the most advanced states in Livestock sector. The State attained a prominent position in the country in Livestock Sector over the years because of its increasing livestock resources, enlightened and hard working nature of farmers and dedicated and sustained efforts of the Government. Milk is the single largest commodity contributing highest economy to the State.

Effective Veterinary and Animal Husbandry services are critical in achieving the significant production levels. Welfare schemes implemented by the Government for dairy, sheep and poultry units in addition to providing forward and backward linkages and organized marketing channels 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. A sizable number of families owning sheep and goat have already been covered with livestock insurance.

During 2019-2020, Andhra Pradesh stood 1st in Egg Production (2170.77 Crores), 4th both in Meat production (8.50 Lakh MTs) and Milk production (152.63 Lakh MTs).

### Livestock Population Status as per latest Livestock Census, 2019

Andhra Pradesh takes pride in having famous and world-renowned Livestock breeds like Ongole and Punganur in cattle, Godavari Buffaloes, Nellore in Sheep and Aseel in Poultry. As per the latest Livestock Census 2019, the Livestock resources in the State consist of 340.67 lakh total Livestock & 1075.11 lakh poultry. The Livestock population as per Latest Livestock Census 2019 as compared to 2012 Census is shown below. District wise Livestock population as per 2019 Census is given in the

#### Annexure.5.21

## AGRICULTURE AND ALLIED ACTIVITIES

## Livestock population in A.P (No. in lakh)

Table 5.11

Category	As per 2012 census	As per 2019 census
Cattle	47.16	46.00
Buffaloes	64.62	62.19
Sheep	135.59	176.27
Goat	44.96	55.22
Pigs	1.57	0.92
Poultry	805.83	1075.11

Source : Directorate of Animal Husbandry

Between the two Census periods, though there is reduction in the total Cattle and Buffalo Population, there has been an increase in the production and availability of nutritious food and supplemental income to farmers due to a perceptible increase in Crossbred Cattle and Graded Murrah Buffalo population especially female/Milch animals as per the Livestock Census, 2019.

The production of Milk, Eggs and Meat is shown in the following Table 5.12

Table 5.12: Production of Milk, Meat &amp; Eggs

YEAR	Unit	2016-17	2017-18	2018-19	2019-20	2020-21
Milk	L.MTs	121.78	137.25	150.44	152.63	147.14
Growth	%	12.58	12.71	9.61	1.46	-3.60
Meat	L.MTs	6.32	7.08	8.03	8.50	9.54
Growth	%	11.68	12.03	13.42	8.94	12.20
Eggs	Cr. Nos	1582.75	1777.76	2036.99	2170.77	2496.39
Growth	%	11.64	12.32	14.58	9.89	15

Rythu Bharosa Kendralu (RBKs) – a platform for Livestock services

### Rythu Bharosa Kendralu (RBKs) – a platform for Livestock services

Under the State Government's innovative Village Secretariat structure, Rythu Bharosa Kendralu (RBKs) have been put in place under Navaratnalu program, as an effective, efficient and unified platform to provide farmers with quality inputs and allied services in all the villages of the State. 10641 RBKs were established in the State and permission has been accorded for recruitment of 9844 Animal Husbandry Assistants (AHAs) along with functionaries of other line departments and so far 4506 AHAs were recruited. Apart from AHAs, 1640 Paravets, were mapped with RBKs to provide Animal Husbandry Services.





## AGRICULTURE AND ALLIED ACTIVITIES

The major functions of AHAs include delivery of services like First Aid & Treatment to the sick animals and follow up under the guidance of concerned Veterinarian, Conduct Prophylactic Vaccinations, Preventive Animal Health Care, including Deworming and De-ticking, Prompt reporting of animal deaths in the village, providing assistance for safe disposal of animal carcass and facilitation for issue of Panchanama report involving committee members in respect of Livestock Loss Compensation Scheme and follow up till DBT within 72 hours.

### Important programs/activities under Animal Husbandry Sector

Under Rajanna Pasu Vidyam, initially Veterinary Medicines were supplied @ Rs.4000/- per month to all the RBKs and a proposal is under consideration for re-appropriation of Rs 20,68,56,000/- towards the purchase of required medicines for coming next 9 months @ Rs. 4000/- per RBK under RKVY. There is a

proposal for purchase of Artificial Insemination(AI) equipment, so as to enable delivery of AI services at all RBKs. Till date 5050 Trevis were supplied to provide services at RBK level.

83,810 KCC applications data was uploaded online through PMFBY and issued 39,626 Pasu Kisan credit cards till date. 13.50 Lakh Animal Health Cards were issued so far and Animal Health Cards will be issued to the animals grounded under YSR-AAAsara/Cheyutha program for further follow-up for a period of one year.

At each and every RBK, a Display board is being arranged depicting visiting dates as per the Advance tour program of the concerned VAS on fixed days at RBKs for examination of referral cases and to monitor the AHA activities. Animal Disease Surveillance - Reporting details of deaths and diseases in their respective jurisdiction has been entrusted to AHAs. Accordingly, Disease Surveillance Report shall be generated and monitored at VAS level on periodical basis.

### AP-AMUL Paalavelluva (YSR Cheyutha)



The State Government is determined to increase the income of the women farmers and their families under the scheme by encouraging popular livelihood activities through purchase of animals Cows & Buffaloes (Pregnant heifers, milch animals) under YSR Cheyutha scheme through appropriate procedures for finalization of specifications and rates. The scheme envisaged with a project cost of Rs. 3517 crores is expected to benefit 4.69 lakh women. Under the scheme, pregnant Heifers, pregnant and milch animals shall be procured among the categories of buffaloes and cows as per the beneficiary choice.

### Objectives:

- Extend financial assistance to the women BC, SC, ST & minority communities of 45-60 years age.
- Enhance their livelihood opportunities and living standards.
- To ensure optimal production from animals supplied under this programme by making available good quality feed and fodder through RBKs in the state.
- Providing Health care services to the animals through AH Departmental staff.

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### Pre-induction training to the Beneficiaries:

- Training shall be given to the selected beneficiaries on type of animal, breed, unit size, unit cost, selection procedure at the time of procurement of animals, place of procurement, transportation of animals, insurance coverage etc. Enlightening the beneficiaries on the modern feeding practices, vaccination schedule, deworming, etc., by the concerned VAS/AVH AD. The local veterinarian is responsible for follow up activities in animal Health management

### Status of grounding of YSR Cheyutha units under AP-AMUL Paalavelluva grounded units are 2821 as on 21.12.20.

- Veterinary Assistant Surgeon's were appointed as RBK wise anchor persons for grounding of units from AH Department
- CEO, SERP has issued guidelines for sanction of loans to SC/ST beneficiaries under Unnathi scheme to all Project Directors of DRDA
- Pre induction training completed for all 4.69 lakh AP-Amul Paala Velluva beneficiaries.

### Marketing Tie-up:

- The State Government has entered into MoU with AMUL and remunerative price will be credited directly into beneficiaries bank account basing on FAT & SNF percentage. The profit derived by the company will also be given to the beneficiaries as bonus.



### YSR CHEYUTHA – JAGANANNA JEEVAKRANTHI



### Distribution of Sheep and Goat

Government of Andhra Pradesh is determined to increase the income of the women farmers and their

families by encouraging popular livelihood activities through purchase of Sheep and Goat under YSR Cheyutha scheme.



### Objectives:

- ♦ Extend financial assistance to the women of BC, SC, ST & Minority communities of 45-56 years age
- ♦ Enhance their livelihood opportunities and living opportunities standards
- ♦ To ensure optimal production from animals purchased under this programme by making available good quality feed and fodder through RBKs in the State
- ♦ Providing Health care services to the animals through Animal Husbandry Departmental Staff.
- ♦ Number of Cheyutha Beneficiaries: 2.49 Lakhs
- ♦ Project Cost: Rs. 1868.63 Crores
- ♦ Sheep and Goat shall be procured as per the beneficiary choice.
- ♦ Sheep: Nellore Brown, Jodipi, Macherla Brown and Vizianagaram breed
- ♦ Goat: Black Bengal/Local Breeds
- ♦ Unit cost - Rs. 75,000/-
- ♦ Cost of 14 weaned ewes/Does: @ of Rs. 4,500/each, aged 5-6 Months and One Breeding Ram/Buck: @ of Rs. 8,000/- aged 1 year.
- ♦ The unit cost shall include the following in order of priority.
  - ♦ Animal cost & Insurance cost,
  - ♦ Transportation cost and
  - ♦ Feeding cost

### Pre-induction Training to the Beneficiaries:

Training shall be given to the selected beneficiaries on type of animal, breed, unit size, unit cost, selection procedure at the time of procurement of animals, place of procurement, transportation of animals, insurance coverage etc. Enlightening the beneficiaries on the modern feeding practices, vaccination schedule, deworming, etc., by the concerned VAS/AVH AD. The local veterinarian is responsible for follow up activities in animal health management

Targets are fixed for purchase of 1,51,671 Sheep and 97,480 Goats UNDER YSR Cheyutha. The grounding timeline are as follows

Table: 5.13 Grounding Timelines

Sl. No.	Grounding Timelines		
	Phase I (Up to March 2021)	Phase II (April 2021- August 21)	Phase III (Sep 2021- Dec 21)
1	20,000 units	1,30,000 units	99,151 units

### Marketing Tie-up:

- An MoU between Government of Andhra Pradesh and Allana group was signed on the 20th August 2020 for marketing tie-up.

Status of grounding of Sheep & Goat: Total units: 3503, under bank linkage 1036, under unnathi 1567, under streenidhi 148 and grounded under self-finance 752.



### YSR Pasu Nashta Parihara Padhakam - Livestock Loss Compensation Scheme (LLCS):

Under the Government flagship programme of "YSR Pasu Nashta Parihara Padhakam", compensation of Rs. 30,000/- per head for Improved & indigenous breed and Rs. 15,000/- per head for Non-Descript breed will be paid to the eligible farmers in the event of death of Cattle/ Buffaloes. The farmers will be compensated only for 5 animals per family per annum. In case of Sheep/Goat, the compensation of Rs. 6,000/- per Sheep/Goat (6 months and above age) will be paid in the event of death of 3 and

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above Sheep/Goat at a time, irrespective of sex of the animal to the owners. The scheme is being implemented with an initial Corpus fund of Rs.100 Crs (Rs.50 Crs for Cattle/Bufferaloes and Rs.50 Crs for Sheep/Goat). District-wise details of compensation paid to beneficiaries under the scheme are shown in **Annexure 5.22**.

### Livestock Health Care Activities

- ♦ Important programmes taken up during the year 2020-21 include HS, BQ, ET, BT, Sheep Pox, Goat Pox, Anthrax vaccinations and strengthening of VBRI and disease diagnostic labs under ASCAD, NPRSM, PPRCP and NADRS.
- ♦ National Animal Disease Control Programme (NADCP) includes 100% vaccinations to all eligible population against Foot and Mouth Disease (FMD) and for 100% female calves against Brucellosis.
- ♦ Foot and Mouth Disease (FMD):
- ♦ 100% Cattle and Bufferaloes above 4 months age were vaccinated @six months interval (twice in a year).
- ♦ Animals are tagged and registered in information Network for Animal Productivity & Health (INAPH) app followed by FMD vaccination from Feb, 2020.
- ♦ The farmer details like name, phone number and Aadhar details also uploaded in app.
- ♦ As on date (Nov 2020) out of 9751550 target cattle and buffalo population, 9370083 (96%) animals tagged and registered, and 9058535(92%) animals vaccinated.
- ♦ Since, Brucellosis is of zoonotic disease, by controlling the disease in animals, Infection to humans can be prevented.
- ♦ NADCP for Brucellosis will be implemented in the state as per the Government of India Instructions and after receipt of Brucella vaccine from National Agricultural Cooperative Marketing Federation Ltd. (NAFED).

### Vaccinations against HS, BQ, ET, BT, Sheep Pox, Goat Pox and Anthrax:

The vaccine procurement has been planned well in advance to meet the vaccine demand as per seasonality and Preventive Vaccination Calendar for the Year 2020-21. As there is no vaccine production facility except for poultry viral vaccine production in the state, the required vaccines are procured on cost basis from TSVBRI,

Telangana, IAHVB, Bengaluru and other private suppliers basing on the demand and supply.

- ♦ 42,50,850 cattle and bufferaloes vaccinated against Hemorrhagic Septicemia (HS) as per target population.
- ♦ 69, 96, 900 Sheep and Goat vaccinated against Enterotoxaemia (ET) disease as per target population.
- ♦ 95, 49, 500 Sheep were vaccinated against Blue Tongue (BT) disease.
- ♦ 6, 60,000 cattle vaccinated against Black Quarter (BQ) disease.
- ♦ 1,00,000 Anthrax doses supplies to endemic areas in the state for conducting prophylactic vaccinations.
- ♦ Zoonosis day on July 6th is celebrated in a big way to bring awareness among public on the spread of diseases from animal to human and vice versa and a total of 2,14,000 doses of Anti rabies vaccine supplied to various veterinary institutes to conduct Anti rabies vaccination to pet dogs on Zoonosis day

### PPR Control Programme and Rinderpest Surveillance and Monitoring:

- ♦ During the year 2020-21 Under Peste des Petits Ruminants Disease Control Programme (PPRCP) vaccine supplied to all the districts to immunize 100% eligible population in the State. 1,87,55,730 Sheep & Goat vaccinated against PPR disease.
- ♦ India has been declared Rinderpest and Contagious Bovine Pleuro-Pneumonia (CBPP) infection free country. Under this programme Physical surveillance through stock routes and institutional searches are being carried out. By maintaining disease free status, opportunities for export of livestock products will be increased

### National Animal Disease Reporting System (NADRS):

- ♦ By controlling the disease outbreaks because of vaccination and timely diagnosis could able to bring the diseases to the base level, because of which, deaths and production losses are reduced, there by the economic stability of the farmer is improved.

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### VETERINARY BIOLOGICAL & RESEARCH INSTITUTE, SAMALKOT

- ♦ Veterinary Biological & Research Institute, Samalkot is the only Institute established with cGMP standards to produce potent and quality poultry viral vaccines and to supply on free of cost to entire Andhra Pradesh state for protection of backyard poultry (Desi birds) against the important viral diseases viz. Ranikhet disease and Fowl pox in poultry and Duck Plague in Ducks.
- ♦ The vaccines thus produced were supplied to the field institutions through Animal Disease Diagnostic Laboratories located in each district headquarters of entire state of Andhra Pradesh as per the demand.

### Quality Control Laboratory:

- ♦ Government of Andhra Pradesh have accorded permission to modernize the Quality Control Laboratory at VBRI, Samalkot as per cGMP/GLP standards with RKVY Funds. The works have been completed and waiting for inauguration in month of January 2021.

### Veterinary Biological & Research Institute, AP, Vijayawada

- ♦ VBRI, Vijayawada is looking after disease investigation if there are any outbreaks in the field and assist the field staff to take up appropriate treatment by swift diagnosis and control of the Disease. There is facility of toxin estimation in animal feeds and proximate analysis of feed and fodder.

### Activities are being carried out at VBRI Vijayawada

- ♦ The VBRI has taken up the disease diagnosis of various diseases. This institute has processed 26,679 samples received from field for disease confirmation (FMD, Brucellosis, Infectious Bovine Rhinotracheitis, Pestes des Petite Ruminants, Avian influenza, Chlamydia, Tuberculosis, Johnes disease, Glanders, Leptospira, Hemorrhagic Septicemia, Enterotoxaemia, Black Quarter Anthrax, Fungal diseases, Parasitic diseases,

Toxicological tests (HCN, Aflatoxin, Arsenic, lead, Nitrate nitrites, Organo Phosphate poison etc) Feed Analysis (Proximate principles, Silage, Mineral estimation)

- ♦ State Animal Husbandry training center at VBRI, AP is taking up the refresher training programmes to the newly recruited Veterinary Assistant Surgeons and the skill and Knowledge up gradation trainings to the technical officers (Both Veterinary Assistant Surgeons and Assistant Directors) of class B-Line Field Veterinarians and Subject matter specialists.

### Livestock Breeding Activities

- ♦ The important activities include: Improving the productivity of cattle and buffaloes in the State through Genetic improvement, Restructuring of Bovine Breeding operations in the State and Implementation of Central and State sponsored schemes

### Activities taken up by AP Livestock Development Agency (APLDA)

- ♦ Artificial Inseminations (AI) facility is made available to more than 88% Breed able Cattle and Buffaloes in the State through AH Department Centers and RBKs. During 2020-21 upto November 2020, 23.47 Lakh Artificial Inseminations were conducted.
- ♦ Artificial Inseminations done under NAIP phase I (During April 2020 and May 2020) - 180000 and AI done under NAIP phase II - 330000 up to March 2021

### Various activities implemented for Breed improvement in Livestock during 2020-21

- ♦ Under the National Artificial Insemination Program - Phase-II, 13.5 lakh inseminations are conducted in 500 villages. An amount of Rs.1617.75 Lakhs have been allocated for various components, out of which Rs. 808.88 Lakhs have been released.
- ♦ Under the Rashtriya Gokul Mission, an amount of Rs.2372.50 lakhs is sanctioned by GOI for supply of various inputs required:

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- to conduct Artificial Insemination at door step of the farmers,
- formation of breeders associations,
- procurement of bull calves,
- impart training to Gopal Mitras,
- strengthening of bull mother farms,
- strengthen infrastructure for training, conduct fertility camps,
- Replacement of Artificial Insemination kits,
- organize various training programmes for publicity and
- extension on various departmental activities.

### Gol programmes: National Kamadhenu Breeding Centre

Keeping in view of the advantages of rearing of Indigenous breeds; Govt. of India has initiated to take up Indigenous Breeds conservation and Development under Rashtriya Gokul Mission. In this context, Govt. of India has sanctioned National Kamadhenu Breeding Centre to the State of Andhra Pradesh for Southern Region with the financial outlay of Rs. 36.12 crore. So far, 42 indigenous breeds cattle were supplied to 42 beneficiaries.

### Gokul Gram Project

Gokul Gram is established under Rashtriya Gokul Mission with an objective to conservation and development of indigenous bovine breeds in the country. The Project is established at Cattle Breeding Farm, Chadawalawada, Prakasam district. Budget Released for 2020-21 is Rs.5.23 crore from GOI. The Objectives of Gokul Gram are: To promote indigenous cattle rearing and conservation in a scientific manner,. To enhance productivity of indigenous breeds and increase economic returns from animal products in a sustainable manner, to propagate high genetic merit bulls of indigenous breeds, to encourage appropriate technology for use of Draught Animal Power, to provide balanced nutrition and integrated animal health care.

### Feed and Fodder Development Activities

- ♦ The Department is supplying Fodder seed, Chaff cutters, fodder and Milking machines on Subsidy by procuring from rate contract firms finalized through open tenders to the livestock farmers for

improving Livestock productivity.

- Fodder seed or fodder inputs and Mineral mixer variety wise demand forecast was indented from farmers. Accordingly Purchase orders placed by APAGROS. Supplier will supply the fodder seed to the respective hubs.
- The availability of fodder seed and Fodder Inputs variety wise will be visible at kiosks placed at RBKs.
- So far 665 KGs of fodder seed was supplied through RBKs
- So far 35 MTs of fodder seed was distributed in the state
- Until now of 4401 Kg of Mineral Mixture is given to increase productivity and for sustained production.

### Sheep and Goat Development

There are 2735 Primary Sheep Breeders Cooperative Societies are functioning at village level with a membership of 110126 in Andhra Pradesh. There are 13 District Sheep Breeders Co-op. Unions functioning at district level.

### NCDC Programme:

The NCDC, New Delhi has sanctioned the project for an amount of Rs.275.00 crores with funding pattern of 60% loan, 20% subsidy and 20% beneficiary contribution to Andhra Pradesh for implementation of NCDC programme in the 11 Districts in Andhra Pradesh. The scheme is phased out into three years. Implementation of 1st phase NCDC scheme is progress in 11 districts. Till date 1330 Shepherds were benefitted. The Total number of Shepherds to be benefitted out of 1st phase NCDC is 2795. Repayment of NCDC Loan Installments from DSBCUs to Govt of A.P for the year 2020-21: Rs 3.85 Crs.

### Sheep and Goat Deworming

Every year Animal Husbandry Department is taking up (2) times free mass sheep & Goat deworming covering 231.49 lakhs Sheep & Goat population. The main objective is to reduce internal parasite burden, improved immunity, improved nutrient absorption leading to about 1 Kg improvement in body weight. The Joint Directors i/c District administration will prepare parasite profile by random sample testing and indent drugs basing on the profile. Post deworming analysis is also taken up by the department. 2nd round mass Sheep & Goat deworming program is in progress from 10th December 2020 during the year 2020-21



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### Poultry Development

The commercial poultry development has taken a quantum leap in the last three decades. The egg production in Andhra Pradesh is 1171.81 Crores number, with an average commercial Egg production of 282 eggs per year. Rural Back Yard Poultry contributing nearly 4.2% to the total egg production which is a very less portion of total egg production.

It is proposed to introduce high yielding broilers with increase in unit size of broilers to double the Income of the Beneficiary, as per the Government of India communicated guidelines.

- 200 beneficiaries are selected in KRISHNA DISTRICT and 600-day old chicks will be provided per beneficiary in 4 batches @ 150 chicks per batch for every three months.

### Objectives:

- To scale up the Rural Back Yard farming and to encourage the scientific rearing of broiler farming.
- To convert Rural SHG's into entrepreneurs.
- To enhance the broiler meat production.
- To enhance rural economy.

### Forward and Backward Linkages:

- Inputs like chicks, feeds will be supplied to the farmers through the identified agency as per MoU.
- Health coverage through Vaccination, Deworming and periodical guidance to the beneficiary will be done by the AH Department staff
- All in and all-out system is followed along with other bio security measures.
- GIS tagging, DBT and web based monitoring will be explored.

### National Livestock Mission (NLM)

- NATIONAL LIVESTOCK MISSION (NLM) is Central assisted state development scheme (CASDS) is focused on following sub missions.
  - Livestock Development: To enhance productivity and augmenting the farmers income
  - Skill development, Technology transfer & extension: To enhance capacity building of farmers and staff by way of conducting Livestock Melas at district level and training

programmes to farmers and staff to ensure promoting skills and transfer of latest technologies.

- Fodder & Feed development: To produce and distribution of high yielding fodder seed to farmers.

### Activities implemented under RKVY scheme

1. RKVY RAFTAAR Budget of Rs. 50.00 crores for the year 2019-20 has been allocated and Rs. 25.00 crores have been released as 1st instalment and 2nd instalment of Rs. 25.00 crores yet to be released.
2. RKVY RAFTAAR Budget of Rs. 1618.12 crores for the year 2020-21 has been allocated and Rs. 452.58 Lakhs was released
3. 3251 Trevises were distributed in 1st phase (RKVY 2019-20 budget) and installation of trevises at RBK's was completed.
4. 5030 Trevises were distributed in 2nd phase (RKVY 2020-21 budget) and installation of trevises at RBK's was under process. Drugs and medicines under Rajanna Pasuvaidyam were supplied for first Aid treatment to animals at RBK's for an amount of Rs. 8.66 crores.
5. LN2 containers worth of Rs. 484.96 crores indented and supplied to RBK's for maintaining Cold Chain for storing and transportation of Frozen Semen in order to promote Artificial Insemination.
6. Animal Health Awareness Trainings to farmers and Animal Health Camps are being conducted under Pasu Vignana Badi program at RBK'

### Livestock Statistics

The Livestock Census is being conducted across the country periodically since 1919. The 20th Livestock Census was launched in the month of October, 2018 in both rural and urban areas and completed successfully in the month of April' 2019. 20th Livestock Census has been designed to capture Breed-wise number of animals and poultry birds.

For the first time, livestock data was collected on-line in 20th Livestock Census through tablet phones. The data was collected and scrutinized mostly by para-veterinarians and veterinarians. In AP the whole Census operations were carried out by 4869 enumerators: 1204 supervisors and 436 Scrutiny officers and other field staff.



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The 20th Livestock Census was carried out in 16392 villages and 2985 urban wards across AP covering 1.35 Crores of Households and Non-Households

### Key results

- » The total Livestock population is 536.76 million in the country showing an increase of 4.6% over Livestock Census 2012. The total Livestock population is 34.07 million in AP showing an increase of 15.79% over Livestock Census 2012. AP stands in 6th position in country.
- » The total number of cattle in the country is 193.46 million in 2019 showing an increase of 0.8 % over previous Census. In AP, the total number of cattle is 4.6 million in 2019 showing a decrease of 2.45% over previous Census. AP stands in 14th position in country.
- » The total buffalo population in the country is 109.85 Million showing an increase of about 1.0% over previous Census. The total buffalo in AP is 6.2 Million showing a decrease of 3.76% over previous Census. AP stands in 6th position in country.
- » The total sheep in the country is 74.26 Million in 2019, increased by 14.1% over previous Census. The total sheep in AP is 17.63 Million in 2019, increased by 30% over previous Census. AP stands in 2nd position in country.
- » The Goat population in the country in 2019 is 148.89 Million showing an increase of 10.1% over the previous census. The Goat population in AP in 2019 is 5.52 Million showing an increase of 22.84% over the previous census. AP stands in 11th position in country
- » The total poultry has increased by 16.81% and the total poultry is 851.81 million during 2019. The total poultry in AP has increased by 33.85% to 107.90 million during 2019. AP stands in 2nd position in country.
- » As per the norms an amount of Rs.1393.65 Lakhs required for the activities of 20th Livestock Census' 2019. The GoI have released an amount of Rs.1213.12 Lakhs up to March 2021 and the total amount has been utilized. Balance amount of Rs.180.53 Lakhs to be released by the Government of India.
- » An amount of Rs.9,59,07,950/- released to the Enumerators towards honorarium charges by direct benefit transfer mechanism to the individual accounts of the Enumerators
- » An amount of Rs.1,59,84,662/- released to the Supervisors towards honorarium charges by direct benefit transfer mechanism to the individual accounts of the Enumerators.

### Integrated Sample Survey Scheme

- » The Integrated Sample Survey scheme is being conducted in the Andhra Pradesh state since 1976-77 as a Centrally Sponsored Scheme and study the attendant practices of the livestock on 50:50 central and state share basis.
- » The objective of the scheme is to estimate the season wise production of Major Livestock Products i.e., Milk, Egg, Wool and Meat and study the attendant practices of the livestock, as per the methodology provided by the Government of India. This will in turn facilitate the Ministry of Agriculture, Government of India to build up State wise Production Estimates of Major Livestock Products by obtaining these estimates from all over the country.
- » 312/78 Sub Sample Villages/wards, 708/467 Large Sample Villages/wards and Total 1020/545 Villages/wards have to be surveyed for detailed study of ISSS in three (3) seasons every year in Andhra Pradesh.
- » Achievements of the Major Livestock Products for the year 2020-21: Milk Production: 147.12 (Lakh MTs), Egg Production: 2496.39 (Crores Nos), Meat Production: 9.54 (LMTs).
- » Targets of Major Livestock Products for the year 2021-22: Milk Production: 155.00 (Lakh MTs), Egg Production: 2600 (Crore Nos), Meat Production: 10.10 (LMTs) of Andhra Pradesh State.
- » GoI have released Rs.40.00 Lakhs under Salary component and revalidated Rs.4.82 Lakhs under TA/DA and Training components during 2020-21. An amount of Rs.43.85 Lakhs have been utilized and Rs.0.97 Lakhs remaining unspent.

## Effect of Covid-19 Pandemic on Livestock Sector

An exclusive web application has been developed to capture the data on (5) important parameters to assess the situation at field level. All the Veterinary Assistant Surgeons and Assistant Directors at Area Veterinary Hospitals (323) have entered the data online using the services of Animal Husbandry Assistants, Gopal Mitras and Milk collection agents & farmers.

The parameters of quick assessment are as follows:-

- 1) Status of fodder to Livestock: 2,774 Fodder shortage villages have been identified and the shortage can be overcome by transporting the fodder within the District. Further, (2009) Critical fodder-deficit villages are found in Prakasam and (4) Rayalaseema Districts.
- 2) Distress Sale of Livestock: There is no distress sale of animals in the State due to Covid – 19 pandemic
- 3) Marketing of Milk: Due to complete lockdown, marketing of milk in urban areas is affected. Some villages/towns reported reduced marketing, especially urban areas where the milk is sold to hotels etc., Average Sale Price of Milk
  - a. Farmers are getting on an average Rs.31.31 per litre of Cow @ 4% Butter Fat
  - b. Similarly, for buffalo milk, the average price per litre is Rs.48.09 @ 7% Butter Fat
- 4) Marketing of Meat – There is huge reduction in sale of meat especially chicken meat due to rumors of COVID-19 impact on consumption of poultry meat during February, March and April 2020. The market stabilized thereafter, and average mutton price is recorded as Rs.670/- per kg during Covid-19.
- 5) Marketing of Eggs – The egg consumption reduced drastically in the beginning of Covid-19 pandemic due to rumors that egg consumption will lead to spread of Covid-19. Thereafter, the Government have taken steps to promote egg consumption. The average egg price is recorded as Rs.5/- during Covid-19 pandemic.

## AP Dairy Development Cooperative Federation (APDDCF)

Andhra Pradesh has 60 lakhs milch animal population of which 58% are buffaloes. The state has got world famous draught breed known as "Ongole" & the poor man's cattle breed known as "Punganur". AP is the 4th largest milk producer in India contributing 32,630 Cr. at constant prices to the state economy (6% of the GDP).

- ▷ More than 27 lakh women in rural areas are engaged in dairying activity and A.P. is a state where majority of the milk procured in the state is in unorganized sector. As a result, the milk producers are subjected to exploitation and the price given to the dairy farmers is very less. Hence a strong player in marketing of milk is required to take care of vulnerability.
- ▷ The State Government with the assistance of UNICEF commenced Integrated Milk Project (IMP) in the year 1960, which focused on organizing milk production, to augment the income of dairy farmer and to meet the increasing demand for milk from semi-urban areas.
- ▷ To give a further boost to the dairy development activity, an independent Dairy Development Department was carved out in the year 1972.

## Current Status of Milk potential in Andhra Pradesh

- Total Milk production in Andhra Pradesh is 412 LLPD and out of which, the marketable surplus is 143 LLPD of which only 61 LLPD (24%) is in organized sector and there is huge potential for dairying in Andhra Pradesh.
- The State Government has started farmer centric Rythu Bharosa Kendras in 10,641 villages exclusively to take care of farming related activities where one AHA (Dairy Assistant) is also deployed to work for promotion of dairy related activities.
- The State Government has identified key challenges to address for revival of dairy sector to benefit dairy farmers. They include:
  - Insufficient processing facility
  - No focus on local marketing

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- Exploitation by Private dairies
- Under-utilized and Un-utilized plant capacity
- Tie up with Amul for marketing support will help strengthening the dairy co-operatives in the State and empower women to increase their income.
- Arrangements are being made to supply feed to the farmers at competitive prices through Dr. YSR Rythu Bharosa Kendras in villages all over the state.
- APDDCF has dairy plants in Ananthapur, YSR Kadapa, Chittoor, East and West Godavari District Milk Unions, Kankipadu Dairy plant in Krishna District under APCS Act, 1964 and the Ongole dairy in Prakasam District under Indian Company's act 1956 which has opted to get converted to the APCS act 1964 and are being considered to give the plants on long-term lease to AMUL at their request for operational maintenance.

### AP Centre for Advanced Research on Livestock (APCARL)

CARL was established with a vision to be a world class centre of excellence for advanced research on Livestock. Its mission is to find solutions to the problems of Livestock in the fields of Health and Production and transfer the latest technologies to end users and the goal is to improve animal health and productivity for the benefit of farmers. APCARL is a modern hub on Livestock Research, it has multidisciplinary approach at single location, it is fully autonomous and flexible, it has application of cutting edge technologies to find solutions for emerging problems and also to transfer the technologies to the field veterinarians and farmers.

The main objectives are to conserve indigenous germ plasm, to study introduction of genes for better production, reproduction, disease resistance and adoption, to develop feed and fodder resources to mitigate drought and cyclones, to improve animal reproduction through new technologies, to study disease monitoring, surveillance and mapping, to develop cost-effective vaccines and disease diagnostic tools and to create adequate trained personnel in the country in the specialized areas of Veterinary Sciences such as nano-biology.

The proposed vaccine facility will be established as per the GMP (Good Manufacturing Practices) & OIE (Office International des Epizooties) standards. The tentative production of the vaccines can be expected by the end of year 2021. With this initiative the State Government will get taxes through the sale of vaccines and also employment opportunities; will be increased to the skilled and non-skilled man power.

- The State Government in principle has approved the project on 'Mission Punganur for production of Punganur cattle using IVF technology with an outlay of Rs 69.36 cr over a period of five years. The project is at preliminary stages and Sri Venkateswara Veterinary University will be the technical partner.
- The Government has also signed MoU with IRMA (Institute of Rural Management, Anand) for establishing Institute of Rural Management – Andhra Pradesh to help organize training programmes in Rural Development programmes in the state and for empowerment of youth through organization of various certificate courses and trainings. The proposed courses are expecting to start in May 2021.

### Fisheries

Andhra Pradesh has favorable agro-climatic conditions for the growth of fisheries and aquaculture sector. The State is contributing about 29.7% of National fish production and is a major exporter of Shrimp in India with share of 40.4% in total value of sea food exports of the country during 2019-20. The sector is providing employment to nearly 26.5 lakhs. The main aim of the department is to sustain the fish production through optimum utilization of available water resources, promoting welfare of fishermen, to address the critical gaps in the infrastructure for value chain and to promote domestic fish consumption in the State.

### Key Achievements

- The production of Fish achieved during 2019-20 was 41.75 lakh metric tonnes (LMT) and for 2020-21, it is 46.23 LMT (as on 31-03-2021) as against annual target of 46.25 LMT.
- The Government is implementing "Y.S.R. Matsyakara Bharosa" for the welfare and development of Fishers, which is unique of its kind in the country.

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- Under Y.S.R. Matsyakara Bharosa, relief is provided to marine fishermen families during fishing ban period. The Government enhanced the relief from Rs.4000/- to Rs.10000/-. An amount of Rs.109.23 Crores was spent to benefit 109231 fishermen families.
- The Government enhanced HSD oil subsidy to fishing boats from Rs.6.03 ps to Rs.9.00 per liter to benefit 17,504 boats. Such subsidy is transferred at source (front end) through smart cards. All the registered Mechanized and Motorized crafts are made eligible to avail HSD oil subsidy irrespective of registration date.
- The Government enhanced the financial benefit to deceased fishermen (while fishing) family to Rs.10.00 lakhs from Rs.5.00 Lakhs. 20 marine fishermen were benefited.
- To utilize the long coast line of 974 Kms, construction of fishing jetties and fish landing centers are planned. An amount of Rs.100.00 Crores was allocated during 2020-21.
- Power tariff concession was provided to aquaculture by reducing the unit rate from Rs. 3.86 to Rs. 1.50 to benefit 54,452 aqua farmers.
- Establishing Integrated Aqua labs in 35 (27 New labs and 8 Departmental labs) locations in 9 coastal districts for providing aquaculture inputs testing and disease diagnostic facilities to farmers. Rs. 37.77 Crore was sanctioned under RKVY 2020-21 for equipment. Rs. 7.29 Crore sanctioned under RIDF (NABARD) for civil works.
- 744 Village Fisheries Assistants were recruited and positioned at Village Secretariats to render better extension services to the fisheries sector.
- Rythu Bharosa Kendras at Village level will promote innovative and advanced technologies in fisheries sector and also to supply certified and quality inputs through aqua inputs shops to aqua farmers and fishers.
- E-crop (e-fish) booking for aqua farmers to facilitate remunerative prices for their produce, access to insurance, credit support etc.
- To ensure the successful crop, YSR Mastya Sagu Badi, a Farmers Field School at village level providing extension services and crop advisories to aqua farmers.
- Integrated Call Centre: Integrated Call centre "155251"-a dedicated Integrated Call Centre was established with 63 technical officers for agriculture and allied sectors for advisories to farmers and fishers queries by Experts
- During COVID-19 period, there was a drastic fall in the prices of shrimp due to lack of export orders from other countries, at that time government intervened convinced the processors/exporters and ensured to procure the produce from the farmers at the price fixed by the farmers.

### Strategies

The important strategies for realizing the goals are:

- Development of marine infrastructure through construction of Fish Landing centres (Jetties and Harbours).
- Promotion of deep sea fisheries, open sea cage culture and Sea weed culture Supply of nets, boats and other inputs on subsidy basis Promotion of alternative species for brackish water aquaculture,
- Establishment of aquatic quarantine facility for P.vannamei for production and supply of SPF brood stock to hatcheries to supply quality seed,
- Aqua zonation for area expansion and organic aqua farming,
- Promotion of innovative technologies like nursery management and grow out pond management, innovative technologies like RAS and Bio-floc technologies.
- Stocking advanced fish seed fingerlings in all potential in land water bodies.
- Cage culture in suitable reservoirs
- Promotion of Domestic Consumption through Aqua Hubs, which will be established at Constituency level in the State with facility of storing of live fish, fresh fish and other marine fish species. These facilities will supply fish to the retail outlets and kiosks. These retail outlets in the coming days will be expanded and developed as Janatha bazars to ensure availability of quality fish to common man at affordable prices.
- Promotion of value added products and cold chain facilities.
- Promotion of better management practices, capacity building and skilling activities.

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### Fish production

41.75 Lakh Tonnes of fish and prawn was produced in the state in 2019-20 against 39.92 Lakh tonnes in 2018-19. During 2020-21 46.23 Lakh Tonnes of fish and prawn are produced. District wise details of fish and prawn production for the year 2019-20 & 2020-21 are given in **Annexure 5.23**.

### Registration of 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 (DLC) recommends applications of farms above 2 Ha water spread area to State Level Committee and further recommend to CAA for consideration of registrations. The fresh water aquaculture in the state was regulated.

### Important Acts Promulgated for Promotion of Aquaculture

- A.P State Aquaculture Development Authority (APSADA) is constituted (Act No 29 of 2020) to promote unorganized aquaculture sector in the state to a well organized aquaculture industry. APSADA also aims to attract investments to promote aquaculture based establishments and industries; create conducive atmosphere for sustainable trade and export of aquaculture produce and seafood products and to monitor, regulate and promote the supply of quality aquaculture inputs like seed, feed, feed supplements, aqua chemicals, aqua products, medicines etc.
- Promulgated AP Fish Feed (Quality Control) Ordinance 2020 (AP Ordinance 7 of 2020) to enforce Quality Standards for Fish Feed being sold to aquaculture farmers in Andhra Pradesh State. The main objective of the Ordinance is to ensure the comply of BIS/FAO/ GOAP quality standards of fish feed through legal enforcement. To bring all the Fish Feed business Operators under the purview of the "Fish Feed Act" and to promote quality fish supplies to other states and exports to international market with good brand image.
- Promulgated AP Aquaculture Seed (Quality Control) (Amendment) Ordinance 2020 (AP

Ordinance No. 10 of 2020) to bring all the aquaculture seed production business operators under the purview of the "Aquaculture Seed (Quality Control) Act" by issuing (i) license, (ii) accreditation and (iii) certificate to all the hatcheries and larval rearing centres; to enforce the quality standards for Aquaculture Seed, promoting quality produce of fish and shrimp for supply to other states and exports to international market with good brand image.

- Enacted AP Fisheries University (APFU) Ordinance 2020 (Ordinance No. 15 of 2020) to generate highly skilled Fisheries Polytechnic Diploma holders, Fisheries Professional Graduates (BFSc), post-graduates (MFSc) and Ph.D. candidates to meet the technical manpower demand in aquaculture sector in the state. Fisheries University is proposed to establish in West Godavari District. The main objective of establishing AP Fisheries University is to impart education in different branches of Fisheries Science; to undertake the extension of Fisheries Science to the rural people of the State of Andhra Pradesh and to promote research, field and extension programmes, production and post-harvest technology including processing and marketing in Fisheries Science.

### Important Schemes and Programmes

#### a) Diesel Oil Subsidy for Fishermen Boats (Exemption of Sales Tax on HSD oil):

- YSR Matsyakara Bharosa scheme proposes to supply HSD oil on subsidy @Rs.9.00 per litre to all the registered and active mechanized and motorized fishing vessels for making the marine fishing as sustainable and economically viable to coastal fishers. The ceiling limit of HSD oil is 3000 liters per month per boat in case of mechanized boats and 300 litres per month per boat in case of motorized crafts and applicable for 10 active fishing months in a year. The Budget Estimate sanctioned is Rs.5000.00Lakhs.

#### b) Relief to Marine Fisher during ban period:

- Fishing ban period on marine fishing for 61 days will be observed from 15th April to 14th June every year with an objective of conserving the fishery wealth and to sustain the fish production from



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marine waters. From 21-11-2020, the Relief to marine fishermen families during fishing ban period, has been enhanced from Rs.4000/- to Rs.10000/-

**c) Fisheries Development Scheme:**

- Under Fisheries Development Scheme, Training and Extension, Revolving fund for MMGs, Enhancement of production, Productivity of inland water bodies,

Matching Share of Fisheries Department / GOAP and Exgratia Payments to the deceased fishermen families for accidental death while fishing are proposed as sub-schemes with an amount of Rs.1000.00 Lakhs.

**d) Central Assistance to State Development Schemes (CASDS):**

- Under this scheme an amount of Rs.24.29 lakhs has been allocated under Budget 2020-21 and the Matching central Share proposed for CASDS under BE is Rs.961.00 lakhs.

### Capital Expenditure

- RIDF:** Under Rural Infrastructure Development Fund (RIDF), an amount of Rs.1500.00 lakhs is proposed to be spent for the approved ongoing projects i.e. additional shore based facilities, fish seed farms, approach roads and other fisheries projects sanctioned under RIDF under various tranches of RIDF.
- Under Central Assistance to State Development Schemes, Central share for construction and maintenance of fish landing center/ Fishing Harbours, an amount of Rs. 2133.00 lakhs is proposed.
- Under Central Assistance to State Development Schemes, State share for construction and maintenance of fish landing center/ Fishing Harbours, an amount of Rs. 2133.00 lakhs is proposed.
- Fishing Jetties/ Harbours under State Development Schemes: Rs.10000.00 lakhs is proposed towards construction and maintenance of Jetties / Harbours along the sea coast of Andhra Pradesh, to provide safe berthing facilities for fishing craft and also to promote hygienic handling of fish harvested at

landing centres besides promoting cold chain facilities.

- Under YSR Aqua labs, an total amount of Rs.1000.00 lakhs is proposed.

### Prime Minister Matsya Sampada Yojana

Under PMMSY, the GoI has sanctioned 26 projects under CSS with total project cost of Rs. 275.60 Crores and released funds for Rs.48.88 Crores as 1st installment to Government of Andhra Pradesh. The GoAP has released Matching State Share of Rs. 24.387 Crores. Under this scheme, all the subsectors of fisheries- Inland, marine, Aquaculture and welfare are covered. The GoI assistance is 24% to General and 36% to SC/ST beneficiaries of the unit/ project cost.

### Other Schemes

- Under RKVY 2020-21, an amount of Rs. 3777.26 lakhs was sanctioned for fisheries sector in the state for equipment/instruments for establishing 35 Integrated labs (27 new + 8 Dept. labs).
- Government has sanctioned Rs.1179.90 lakhs for establishment of 46 Integrated Aqua labs in the State under RIDF- XXV and later reduced to 27. The executive agency is AP Police Housing Corporation. As on 22-12-2020, 14 labs are under construction.

### Organization of Fishermen Cooperative Societies:

The Fisheries Cooperative Societies are formed for the promotion of thrift, self-help and mutual assistance of the members. Government has given great importance to cooperative societies in fisheries sector to empower fishermen to manage aqua resources. Departmental tanks (MI tanks) are given on lease to these cooperative societies for exploitation of fishery wealth for better livelihoods. Assistance is also provided for inputs like fish seed stocking, boats, nets etc on subsidy. So far, 2.51 lakh fishermen have been organized into 2293 societies. The main objective of these societies is the welfare of Fishermen. There is a need to infuse professionalism and good governance so that these Cooperatives can develop on their intrinsic strength. Details are shown in Table 5.14

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Table 5.14 Fishermen Co-operative Societies

S.NO.	Types of Society	No of Societies	No of Members
a)	Inland Fishermen Coop. Societies	1370	136762
b)	Marine Fishermen Coop. Societies	440	80913
c)	Fisherwomen Coop. Societies	483	32826
	TOTAL	2293	250501

Source: Commissioner of Fisheries, A.P

## Forest

Andhra Pradesh State is bestowed with two mighty river systems of Krishna and Godavari. The State has wide and varied vegetation types enriched by a variety of flora and fauna. Andhra Pradesh located strategically in the central region of the Indian sub-continent, has representatives of the magnificent Indian plant and animal life. Its varied topography ranging from the hills of Eastern Ghats and Nallamala's to the shores of Bay of Bengal supports varied ecotypes, which in turn support a rich diversity of flora & fauna.

The forests in Andhra Pradesh make for highly rejuvenating gateway. Tourists often head to the forests near Andhra Pradesh to experience jungles safaris. The famed wildlife in Andhra Pradesh is mainly scattered across these forests. While the benefits from dense forests are numerous, the tangible benefits 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.

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 the 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.

As per Indian State Forest Report 2019 Andhra Pradesh state forest cover an area of 37392.24 Sq. Kms, which amount to 22.94% of the total geographical area. Out of this, Very Dense Forest is 1994.22 Sq. Kms, Moderate Dense Forest is 13938.36 Sq. Kms, Open Forest is 13204.82 Sq.Kms, and Scrub Forest is 8254.84 Kms. District wise forest area is shown in **Annexure 5.24**.

### State Forest Development Agency (SFDA)

SFDA is a society registered as a federation of FDAs in the State. 22 FDAs have been sanctioned by Government of India for implementing National Afforestation Programme (NAP), which is a Centrally Sponsored Scheme (CSS) with a funding pattern of 100% Grant from GoI upto 2014-15 and from 2015-16, the pattern changed to 60:40 share between the Centre and State. Various Plantation activities, SMC works, awareness camps for capacity building are being taken up by FDAs through the Vana Samrakshna Samithies (VSS). Centrally Sponsored Schemes like National Afforestation Programme (NAP), National Mission for a Green India (GIM) and National Medicinal Plants Board (NMPB) Schemes are being implemented through FDAs.

### Eco-Tourism

Government has started Eco-Tourism initiatives by taking up creation of new community based Eco-Tourism Centers and strengthening the existing Eco-Tourism centers by the Forest Department involving local tribes in implementation and management by CBETs / EDCs duly empowering their economic status.

### A.Nagaravanams

Nagaravanams(City Forests) are proposed for providing wholesome living environment and contributing to Smart, Clean, Green and Healthy cities to Urbanites. So far, (22) Nagaravanams are completed and open for public. In addition to the Nagaravanams, a total of (7) Temple Eco-parks are proposed to encourage the pilgrims to visit the temples throughout the year by designing different theme parks to highlight the historical significance of the temple. For the financial year 2020-21, an amount of Rs.750.00 lakh is allocated for establishment and maintenance of Nagaravanams and temple eco-parks across the State.

### B.VanaVihari(Eco-Tourism)

The State has started the scheme for creation of new community based Eco-Tourism centers and strengthening the existing eco-tourism centers inside the forest area and also to develop Cottages / Dormitories, nature Camps, nature trails, Boating, Watch towers, interpretation Centers etc., across the State.

### Dr.Y.S. Rajasekhara Reddy SmruthiVanam

Dr.Y.S.Rajasekhara Reddy Smruthi Vanam project was developed in an extent of 22.80Ha in Nallakalva Village of Atmakur Mandal and to maintain the project.

### Forest Produce (Production)

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 previously 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 harvesting timber and poles from matured plantations of Teak, Eucalyptus, Casuarinas etc. and long bamboos from bamboo coupes as per prescriptions of the working plan of respective divisions. The physical targets and achievements of Departmental Extraction of Forest Produce of Timber, Fuel, Poles and Bamboos details are given in Table-5.15

Table 5.15 Forest Produce extraction

S.NO.	2016-17		2017-18		2018-19		2019-20		2020-21	
	Target	Acht.	Target	Acht.	Target	Acht.	Target	Acht.	Target	Acht.
Timber(Cmt)	3998.33	4427.9	4800	1653	3784.00	1906	4335	2411	30540.13	801.67
Fuel (Cmt)	43652.7	1821	40010	3974	55329.00	89	202656	23	41858.56	7.05
Poles (Nos)	85744	13763	48788	875	88176	91	86746	0	97989	8.20
Bamboo (Lakh Nos)	77.11	30.11	54.25	24.68	49.80	22.10	58.42	21.24	35.98	8.50

Source: Forest Department

### Forest Revenue

Forest products in the state are Timber, Bamboo, Firewood& Charcoal etc. The income accrued from forestry sector in the State was Rs.17.67 crore during 2020-21 The Details of the value of forest produce in the State are given in **Annexure-5.25**.

### Production

There is no supply of raw material from the Forest department to all the three major wood based industries in the state. Forests are looked upon 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.

### Social Forestry

The State Government has launched a massive people's movement involving public and farmers in a big way to increase tree cover outside reserve forests to improve environment and to provide gainful employment to

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thousands of unemployed youth. Distribution of seedlings to the public, raising community land plantations/ avenue/shelterbelt plantations and raising institutional plantations etc have been done under Social Forestry programme.

### Vanamahostavam

The Government has launched 71st Vanamahostavam on 22.07.2020 at Ibrahimpatnam of Krishna District, Andhra Pradesh. During 2020-21, a tentative target is set to plant approximately 20 crore plants by all stake holders. The massive afforestation programme will be carried forward under the rubric "Jaganannapacchhathoranam".

### Afforestation

To improve green cover, APFD has been raising plantations like Assisted natural regeneration plantations, block plantations, Avenue plantations, Barrenhill afforestation, Mangrove plantations and Shelterbelt plantations under CAMPA, Centrally Sponsored Schemes and State Development schemes.

The Government envisages to improve Green cover outside Reserve Forest by planting "One Plant by One Citizen" and by involving Grama Volunteers to distribute and plant seedlings. The main species raised for public distribution and planting in public lands are Teak, Red Sanders, Bamboo, Amla, Seethaphal, Casuarina, Eucalyptus etc. Forest department has raised 1.17 crore tall seedlings and 5.30 crore small seedlings for planting in the year 2020-21, out of which 4.00 crore saplings have been utilised/ distributed and 15.62 crore seedlings have been planted by all line Departments and public during 2020-21.

### Soil and Moisture Conservation works

Soil and Moisture conservation works are being taken up i.e. Staggered Contour Trenches (10mx0.5mx0.5m), Mini Percolation Tanks (10mx10mx1m), Check Dams, Rock Fill Dams, De-silting Percolation Tanks etc to assist natural regeneration and to increase the ground water.

### Seed Dibbling

Forest Department is collecting the seeds of native species. The same are being utilized/dibbled on the bunds of Trenches to bring more area under greenery.

### MGNREGS

APFD has generated 4.31 lakh man-days of employment and incurred an expenditure of Rs.53.25 crores to raise seedlings, plantations and execute SMC works under MGNREGS. During 2020-21, 15.62 Crore plants were planted out of the target of 20 crores.

### Wild Life

The State of Andhra Pradesh is located in East Central Peninsular India. It represents the extensive Deccan Bio-Geographic Zone. It has three important geographical zones i.e., the Coastal Plains, the Eastern Ghats and the Deccan Plateau. It has three important rivers Godavari, Krishna and Pennar which drain into the Bay of Bengal. The Notified Forest area of A.P. is 37,221.11 sq.km, which is 22.84% of geographical area. Forest under Protected Area Network is 8139.88 sq.km which is 21.87% of notified forest area.

Andhra Pradesh has one Tiger Reserve (FDPT Srisailem Circle), one Elephant Reserve (Koundinya Sanctuary and Rayala Elephant Reserve, Anaparthi Circle), one Biosphere Reserve (Seshachalam - Spread in Tirupathi and Kurnool Circles), Three National Parks and Thirteen Wildlife Sanctuaries in the state. The details of Wildlife Sanctuaries and National Parks in the state are shown in **Annexure 5.26.**

The State is endowed with varied Eco-systems, habitats, and rich heritage of Biodiversity and is a store house of unique flora and fauna. It harbours some of the rare and endangered flora like *Pterocarpus santalinus* (Red Sanders), *Cycas beddomei*, *Shorea tamarit*, *Syzium alternifolium*, *Terminalia pallida* etc. It has fauna like Tiger, Gaur (Indian Bison), Great Indian Bustard, Lesser Florican, Jerdon's Courser, Golden Gecko, other avifauna like Flamingo, Pelican etc. It has the Second Largest Mangrove eco-system in the country (Godavari and Krishna Estuaries.)

### In-SITU Conservation

This involves conserving the wildlife in their natural habitat by giving proper protection and managing the habitat to meet the requirements of the wild animal species found naturally in the area. Areas which are potentially suitable for this type of conservation were identified and notified as Wildlife Sanctuaries and National Parks. As of now, the state has 13 wildlife

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sanctuaries and 3 national parks covering an area on 8139.88 sq.km, which is 21.87% of the State's Forest area and 4.99% of the State's geographical area.

### Ex-SITU Conservation

Wildlife management involves conservation of wildlife outside its natural habitat in places like Zoo Park, Deer Park and Rescue Centers. The purpose of this type of conservation is to breed wild animals in such areas so as to build up their population. Apart from conservation breeding, ex-situ conservation is also helpful in education, research and recreation.

### Zoological Parks in Andhra Pradesh

The two Zoological parks in the state namely Indira Gandhi Zoological Park at Visakhapatnam and Sri Venkateswara Zoological Park at Tirupati are rated among the best Zoos of the country with excellent facility for display of animals, conservation breeding, visitor amenities, conservation education etc. A Society called Zoo Authority of Andhra Pradesh (ZAAP) has been formed and registered for effective monitoring of the management of the zoos. The revenue obtained from the Zoo Parks is ploughed back for the management of zoos under the supervision of the society.

### Deer Parks

There are 2 deer parks in the state i.e., Kandaleru Deer Park at Kandaleru Dam, Nellore district with an area of 25 Ha and Chittoor RF Deer Park at Chittoor district with an area of 3.25 Ha another 2 Deer Parks are functioning under the control of private organizations i.e. Deer Park, Nagarjuna Fertilizers and Chemicals Ltd, Kakinada and Deer Park, GVK Power Plant, Jegurupadu.

### Nagarjunasagar Srisailem Tiger Reserve (NSTR)

Nagarjunasagar Srisailem Tiger Reserve with an area of 3727.50 sq.kms. is one of the largest conservation landscapes in the country. This is one of the country's rich biodiversity hot spots having a contiguous landscape of a good forest eco-system of un-fragmented Nallamala is of the Eastern Ghats. The primitive tribal group 'Chenchus' have been involved in the management of

NSTR and at present nearly 600 of them are engaged as protection watchers, animal trackers and nature guides. Scientific management and monitoring of wildlife is being taken up including the use of camera traps.

National Tiger Conservation Authority (NTCA) Government of India has awarded excellence award for effective human resource management for involving Chenchus (600 no.) in protection and the management of Tiger Reserve. Successfully taken up a good habitat management practices resulting in increase of the Tigers, Co-predators and their prey species. The population of tigers in Srisailem is showing an upward trend as per the estimation conducted by National Tiger Conservation Authority, GoI and Wildlife Institute of India. The present tiger population is estimated to be in the range of 48-58 tigers excluding cubs.

### Seshachalam Biosphere

The Seshachalam Biosphere Reserve (SBR), with an area of 4755.997 Sq. km. is located in Seshachalam Hill-ranges of Eastern Ghats in Southern Andhra Pradesh. The reserve intends to enhance the efforts to conserve in-situ all form of life, along with its support system. The reserve is a home for nearly 1756 species of flowering plants belonging to 879 genera and 176 families. More than 220 species of Birds were reported from the reserve.

### Protection of Migratory Birds

Important wetlands like Kolleru Lake, Pulicat Lake, Nelapattu tank are notified as Wildlife Sanctuaries. Component under CAMPA (BDC) as special area development designed for conserving these Bird congregation areas.

### Conservation of Sea Turtle along the Coasts

Olive Ridley Turtles started coming to Andhra Pradesh for the past (10) Years along the coasts of Srikakulam, Vizianagaram, Visakhapatnam, East Godavari, Krishna, Guntur, Prakasam, Nellore. Start nesting during the month of December up to May for a period of 5-6 months. To protect the nests, eggs and hatchlings, special camps arranged involving local communities and NGOs. During 2020-21, 2.84 lakh hatchlings were successfully released into sea.



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### Man – Animal Conflict

#### Strategies to tackle Man - Animal Conflict

In Andhra Pradesh State, a herd around 32 elephants are wandering in Forest areas in and around Ramakuppam mandal of Chittoor District. These Elephants are very frequently coming out of forest in search of fodder and water sometimes causing damage to the agriculture crops adjoining the forest areas. In addition to elephants, other wild animals like sloth bear, black Buck and wild boar are also causing damage to the crops and Sloth bear attacks on humans. Government have taken all possible measures in mitigating Man-Animal (Elephant) Conflict, such as payment of compensation for Crop damage, Human Death, Human injury etc. In addition to regular precautionary steps and post mitigative measures, compensation is enhanced from time to time. During 2020-21 an amount of Rs.111.76 Lakhs has been paid as compensation to 1325 affected people.

Wildlife Protection and rescue parties are formed in all the forest divisions of the State for protection and rescue of wild animals. A state level Committee is formed which meets regularly to find solutions to Man -Animal Conflicts in the State.

#### Vigilance

Forest Fire Prevention & Management Scheme Centrally Sponsored Scheme (CSS) erstwhile called as Intensification of Forest Management Scheme:

The main objectives of the scheme are:

1. To minimize forest fire incidences and assist in restoring productivity of forests.
2. To institutionalize the partnership with forest fringe communities for forest protection.
3. To contribute to the larger goal of maintaining environmental stability.
4. To prepare fire danger rating system and devise forest fire forecasting system.
5. To encourage the optimal use of modern technology (such as Remote sensing, GPS and GIS) in planning, developing and operationalizing Fire Prevention and Management System.
6. To develop knowledge on impacts and dynamics of forest fire.

Under Forest Fire Prevention and Management Scheme for the year 2020-21, an action plan for implementation of the scheme during 2020-21 was submitted to the GoI for an amount of Rs.1406.224 lakh (Central share: Rs.836.966 lakh + State share: Rs.569.258 lakh) on 60:40 ratio basis, and orders are awaited from Government of India.

#### Red sanders Protection Scheme

The scheme is meant for protection of Red sander trees in Seshachalam, Veligonda, Lankamala and Talakona Hill Ranges of Andhra Pradesh distributed in the districts of Kadapa, Chittoor, Nellore, Prakasam and Kurnool over an area of 5300.97 Sq.Km. Proposals for Red sander protection scheme was submitted to Government with a financial outlay of Rs. 11,298.00 lakh during the year 2020-21. An amount of Rs. 1,000.00 lakh allotted by the Government during May, 2020. The scheme is under implementation and the expenditure incurred till November, 2020 is Rs.306.06 lakh for Red sanders protection activities.

#### Forest Conservation Act, 1980 - Compensatory Afforestation

Forest Conservation Act, 1980 deals with such diversion of forest lands for non-forest purposes so that only minimum and essential projects are taken up on forest lands. Details of progress on Compensatory Afforestation under Forest (Conservation) Act, 1980 in the state for the years 2016-17 to 2020-2021 (1.04.2020 to 31.12.2020) are shown in **Annexure 5.27**.

#### Compensatory Afforestation Fund Management & Planning Authority(CAMPA)

Government of India, Ministry of Environment, Forest and Climate Change 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 under CAMPA for protection of forests and wildlife. The two main components taken up under A.P State CAMPA.

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- Compensatory Afforestation (CA) Plantation works are taken up in CA lands taken in lieu of forest areas diverted.
- Net Present Value (NPV): Under this, core forestry activities of Natural Forest Management; Protection of plantations and forests, Forest Fire Management; Biodiversity Conservation; Research & development; Capacity Building of frontline forest staff, Information Technology and communication for monitoring the activities, Infrastructure development for Front line staff etc., are taken up.

### Recognition of Forest Rights Act, 2006

The RoFR Act has come into force with effect from 31.12.2007. The Ministry of Tribal Affairs issued detailed guidelines to the states in July 2012 and notified amendment to the FRA Rules in September, 2012. As per the Act, Forest rights have to be given to the Tribal and other Traditional Forest Dwellers, if they are in possession of any forest land as individuals or as community as on 13-12-2005. As per the information provided by the Tribal Welfare Department, 1,92,675 RoFR Titles /DKT pattas were distributed for an extent of 6.47 Lakh acres to the tribal and other traditional forest dwellers up to March 2021.

### Andhra Pradesh State Biodiversity Board

Biodiversity includes the variability among living organisms from all sources and the ecological complexes of which they are part and includes diversity within species or between species and of ecosystem. The A.P. state represents one of the richest repositories of biodiversity in the whole of south and south East Asia due to varied topography from the hilly ranges of Eastern Ghats, the Nallamalais to the shores of Bay of Bengal. Endowed with varied ecosystem, habitats and rich heritage of Biodiversity the state becomes the store house of rich flora and fauna. It has the Second largest Mangrove eco-system in the East coast of India. Besides, A.P. is rich in Agriculture Biodiversity and is home to several varieties of crop plants - Landraces, Food crops, Cultivars, Horticulture crops, Livestock, Fisheries etc.

The State Biodiversity Board (APSBB) is mandated towards conserving and restoring biodiversity and ecosystem to deliver benefits essential for all sectors of

the society in a sustainable manner, in accordance with the provisions as stipulated under the Biological Diversity Act, 2002. The State of Andhra Pradesh also aims to achieve zero loss of biodiversity and ecosystems services by the year 2030.

The main objectives of the A.P. State Biodiversity Board are 1. Conservation of Biological Diversity, 2. Sustainable utilization of the Biological resources, and 3. Fair and equitable sharing of biological resources among all stake holders.

### Achievements

- A total of 14,021 Biodiversity Management Committees (BMCs) at all levels of local bodies formed in A.P. 13,227 at Gram panchayat level, 661 at Mandal level, 120 at Municipal/Municipal Corporation level, 13 ZP / District level BMCs are formed.
- Identified District Level Tradable Bio-resources (TBR's) and 13 documents prepared. APSBB have been conducting various Awareness Programmes. So far, about 300 Biodiversity allied Awareness Programmes / Workshops / Seminars / Conferences at all levels.
- About 6000 BMC members / Stakeholders have been trained at primary level and about 3000 people including NGOs, Academicians, cultivation and researchers and base front Botanists are trained at advanced level.

Identified and sent proposal to Government of Biodiversity Hotspots / Heritage Sites.

1. Recognized and documented the traditional practitioners of medicinal plants from different districts.
2. Documentation and publication of brochures, books and publicity material.

In recognition of the efforts of BMC Coringa, E.G. District received a National Biodiversity Award for development & Conservation activities.

1. Outreaching of philosophy of Biodiversity conservation through Massive Awareness Programmes
2. Mainstreaming Biodiversity concerns across allied and production sectors in A.P.

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### Action Plan, 2020-2030

APSB have been preparing the strategies and action Plan 2020-2030 across all sectors connected to the Biodiversity Conservation key sectors. The main strategy of the Action Plan is Mainstreaming of the Biodiversity concerns and sustainability in all streams of development sectors, Forests & Wildlife, Agriculture, Fisheries, Horticulture, Animal Husbandry, Industries, Port & Shipping, Oil & Natural Gas and other development Agencies for achieving the vision set forth.

### Andhra Pradesh Forest Development Corporation

The Objectives of the Corporation are – 1) To raise large scale plantations to meet the demands of forest-based industries with species such as Eucalyptus, Bamboo, Tropical pines, Coffee, Cashew, Casuarina etc, 2) To generate gainful employment to the landless poor, particularly in remote and agency areas 3) To undertake consultancy services to the industries to raise and maintain plantations in their vicinity. Details of plantations raised by APFDC up to March, 2021 are shown in Table 5.16 and achievements shown in Table 5.17

Table 5.16 Plantations raised by APFDC up to March, 2021

Table:5.16

Sl.No.	Species	Area ( ha.)
1	Eucalyptus (Seed origin)	2621
2	Eucalyptus (Clonal)	33572
3	Bamboo	2418
4	Cashew	5707
5	Coffee	4010
6	Teak	825
7	Medicinal plants	367
8	Casuarina, Pines & other Misc. species	239
9	Eco-Tourism Projects	201
	Total	49960

Table 5.17

Achievements under APFDC

Sl.No.	Activity	Target	Achievements
1	Raising plantations-Ha	240	230.10
2	Harvesting of Eucalyptus pulpwood – Mt.	1,11,539	96186
3	Harvesting of Long Bamboo – No.	8,32,852	11,36,548
4	Harvesting of Bamboo Industrial Cuts –Mt.	329	202.85
5	Harvesting of Raw Coffee – Mt.	350	334.36
6	Harvesting of Pepper- Mt.	6.4	6.395

# In Progress

### Plantation Activities

#### Eucalyptus Plantations:

The APFDC has been raising Eucalyptus Clonal plantations and with 33572 ha., it is the single largest grower among PSUs in India. There are proposals to raise another 1000-2000 ha. in the next 3 to 4 years. Due to improved site preparation, use of quality planting material and management practices, optimum yields are obtained from the plantations.

#### Bamboo Plantations:

Bamboo plantations are raised in an area of 2418 ha. The Corporation is intending to expand the Bamboo plantations over an area of 100 Ha in the next 3 to 4 years to ensure more supply of raw material per annum to the Paper Industries besides raw material to the artisans.

#### Coffee Plantations:

The Corporation is maintaining about 4,010 ha. of existing Coffee plantations in the agency areas of

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Visakhapatnam and East Godavari Districts with intensive cultivation practices, by following scientific methods. These plantations are generating about 3.50 lakh mandays of employment to the tribals all-round the year

### Pepper Cultivation:

APFDC has 1.80 lakh Pepper standards in its Coffee Estates in the agency areas of Visakhapatnam and East Godavari Districts comprising of high yielding varieties like Panniyur-I, Purnima, Sreekara, Subhakara, Panchami, Panniyur-5. It is proposed to plant another 1.15 lakh standards with pepper in the next 5 years.

### Cashew Plantations:

The Corporation has got cashew plantations over an area of 5707 ha. along the coastal belt in Guntur, Prakasam and Nellore districts and in the inlands of East Godavari, West Godavari and Chittoor districts. Presently, the older plantations are being replanted with high yielding Cashew varieties using scion banks.

### Eco-Tourism:

APFDC has developed Rajeev Eco Park at Idupulapaya of YSR Kadapa district. Eco Tourism Centers at Muthayapalem near Suryalanka Beach and Ananthagiri near Araku are established with nature Education camps and other amenities.

### Employment Generation

The Corporation is providing employment to the Tribals and to Srilanka repatriates almost round the year. In other areas the employment is provided to the land less and poor during regeneration and harvesting activities.



About 9 lakh man-days of employment (3.00 lakh mandays in raising and maintenance of plantations 3.50 lakh mandays in Coffee plantations and 2.50 lakh mandays on harvesting of plantations) per annum are provided to the poor, Tribals and Sri Lanka repatriates/refugees.

### Andhra Pradesh National Green Corps

The National Green Corps are conducting environmental awareness programmes to the rural people through eco club schools students organising Environmental Education Awareness & Training (EEAT) programme. During 2020-21, National Corps conducted various awareness programmes to students.

- Webinars conducted on 'the colourful world of butterflies' and on 'Introduction of Insects world - Lived in our surroundings in which 2366 students from 13 districts participated.
- One earth one home programme conducted in 165 schools with 850 students from 13 districts participated.
- Another webinar on Tide Turner Plastic challenge by MoEF&CC, GoI, New Delhi in 214 schools with 1582 students in 13 districts.
- Webinar on Education on Coastal & Marine conservation and Launch of Marine matters by WWF-India in 215 schools with 1521 students in 13 districts.

### Sericulture:

Sericulture is an agro-based activity. The major activities of Sericulture comprise cultivation of Mulberry as food plant to feed the silkworms which spin silk cocoons. These cocoons are reeled for unwinding the silk filament by processing and weaving to value added products such as Silk fabric and Silk garments. Sericulture provides livelihood opportunity to millions, owing to its high employment potential, low capital requirement and remunerative income at frequent intervals.

The very nature of this activity with its rural On-Farm sector involves raising of Mulberry garden, rearing of silkworms and harvesting of cocoons and Non-Farm sector involves Silk Reeling, twisting activities with enormous potential for employment generation has

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attracted the attention of the planners and policy makers to recognize the Sericulture activity is among one of the most appropriate avenue for socio-economic development of largely Agrarian economy of India. Sericulture assures an average income of Rs.1,25,000/- per acre/annum.

Andhra Pradesh is the Second largest producer of Silk in India next to Karnataka. Mulberry is grown in all most all the districts such as Anantapur, Chittoor, East Godavari, Prakasam, Kadapa, Kurnool and Krishna. Mulberry Silk is most popular variety and derived from Multivoltine and Bivoltine varieties of silkworms. The farmers in the State are rearing both Multivoltine and Bivoltine varieties of Silkworms based on the climatic conditions prevailing around the year. The Sericulture Department is working with the following goals and to strengthen the Farming community through Sericulture activities.

### Strategies

The important strategy for encouraging Sericulture in the State includes:

- Cluster approach for close monitoring,
- promotion of Bivoltine Cocoon production to increase net income of the farmer

- quality of Raw silk which reflects on GVA increase,
- chawkie concept promotion through supply of 100% Chawkie worms (Young age) to farmers instead of Silkworm Eggs (DFLs) to improve Productivity
- Encouraging the usage of Organic fertilizers in Mulberry cultivation to reduce the cost of production for production of quality BV cocoons,
- 100% Coverage of Mulberry Gardens with Drip irrigation system,
- creating demand for the Cocoons through establishment of Multi-End Reeling Units (MERUs)
- Automatic Reeling Machines (ARMs) under Private sector.
- Integration of Reeling and twisting activities to increase profit margin to the entrepreneurs in production of Raw Silk to meet indigenous demand,
- Implementation of e-marketing in cocoon transactions at Government Cocoon Markets.

Table: 5.18

Current Status of Sericulture in Andhra Pradesh (2020-21)

S.NO.	Item	Unit	Present Status up to November-2020
1	Mulberry Plantation	Acres	118407
2	Sericulture farmers	Nos.	67828
3	Mulberry Cocoon Production	MTs	59079.37
4	Raw Silk Production	MTs	8420.38
5	Productivity	Kgs/100 Dfls	75
6	Tasar Cocoon Production	In Lakh Nos	18.53
7	Automatic Reeling Machines Established (ARM)	No. of ends/units	4600 ends – (6) units under functioning, 800 ends-2 units Under erection.
			1800 ends sanctioned during 2019-20 & 2020-21.
8	GVA Realized	Rs. in crores	1053.70



### Significant achievements during 2020-21

- **Mulberry Plantation** : An area of 6889 acres has been newly brought under Mulberry cultivation during the year 2020-21. The total Mulberry extent 1,18,407 acres in the State.
- **Bivoltine Cocoon Production** : 9162.84 MTs International Quality Bivoltine cocoons produced during the year 2020-21
- **Bivoltine Raw Silk Production** :1479.69 Mts of 2 A & above Grade Raw Silk produced in the State during the year 2020-21
- 59079.37 M.Ts of Reeling Cocoons (BV +CB) were produced by the Sericulture farmers in the State during 2020-21 up to November-2020. Due to Covid-19 Pandemic effect, a decrease of cocoon productivity from 74 to 75 Kgs per 100 DFLs net income to Sericulture farmers.
- An extent of 5553 acres of Mulberry gardens were covered with Drip irrigation system during 2020-21.
- 500 new Silkworm Rearing Sheds have been grounded during 2020-21 extending Sericulture activity in the State.
- Two (400) ends Automatic Reeling Machine units, one (200) ends ARM units were sanctioned under "Silk Samagra" during 2020-21. Establishment of the units are under process.
- Under SILK SAMAGRA, Rs.2248.35 lakhs received from Central Silk Board, Bengaluru towards implementation of various growth sector schemes for the benefit of farmers and reelers in the State during 2020-21.
- Under State Development Schemes sanctions were obtained for Rs. 1294.97 lakhs towards implementation of developmental schemes for Sericulture Farmers, Reelers and Twisters during 2020-21.
- **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)** is implemented under convergence activities and incurred an expenditure of Rs.18.72 crores under Sericulture works towards wages and Material components during 2020-21

- **Tasar Cocoon Production** : 18.53 lakh Tasar Cocoons were produced by the Tribal farmers in the sub-plan areas of East Godavari district and earned income of Rs.55.59 lakhs during 2021. Due to effect of Covid-19 pandemic, there is decrease of 52% growth compared to corresponding period of 2019-20.

The District wise achievements under Sericulture are given in **Annexure 5.28**

### Special Remedial Measures taken during COVID-19 Pandemic

Govt. Cocoon Markets were run duly following all Covid-19 precautions by close monitoring of Department like day to day through Tele conference. Farmers have been provided special permission to transport their cocoons to the Cocoon Markets across the State and inter-state. Reelers have been supported by providing working capital loans from SERIFED through pledge Raw Silk produced by Reelers to compensate market stringency during the Lock down period.

### Schemes being implemented

Different schemes including State Development Schemes, Centrally Sponsored Schemes like SILK SAMAGRA, Rastriya Krishi Vikas Yojana (RKVY) and convergence schemes like Mahatma Gandhi National Rural Employment Guarantee programmes are implemented.

The Pattern of assistance:

Table:5.19

Category	Govt. Assistance	Beneficiary Contribution
General	75%	25%
SCSP	90%	10%
TSP	90%	10%

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### Innovates of Sericulture Practices

- a) Supply of 100% Chawkie worms to farmers, through Chawkie Rearing technology farmer can get good, uniformly grown healthy silkworms and the duration of the silkworm crop with the farmers is reduced to 17 to 18 days and which impacts the qualitative and quantitative cocoon yield.
- b) Installation of Turbo Ventilators & Cooling systems in the Rearing Sheds for maintenance of required temperature and humidity during Silkworm Rearing for production of quality cocoons.
- c) Adopting shoot rearing system, a farmer can save time and reduce 40 % labour requirement during late age silkworm rearing. Mulberry leaf is also saved upto 15-20% in shoot rearing method. This technology is widely adopted by the farmers.
- d) Tree Mulberry Plantation to overcome drought / less irrigated conditions.

### E-Governance Initiatives

- Benefits to farmers / silk reelers are transferred on DBT mode through the CFMS / PFMS systems. e-marketing for transactions of cocoons is being implemented in (8) Govt. Cocoons Markets in the State for transparent cocoon transactions and fair cocoon prices to the farmers.

### Research and Development

Andhra Pradesh State Sericulture Research and Development Institute (APSSRDI), Hindupur has focused at a significant mandate of developing silkworm breeds / hybrids suitable to varied abiotic and biotic stresses in Andhra Pradesh with the primary objective of evolving new races, suitable for prevailing climatic conditions of the state and capable of producing International Grade Cocoons / Silk. APSSRDI has the unique distinction of developing cross breeds transgenic silkworm hybrid PM x CSR2 (Tg), Nistari (Tg) x (SK6 x SK7) and Bivoltine hybrids transgenic silkworm hybrid CSR2 (Tg) x CSR4, Lepakshi (FC5 x FC6) resistant to viral disease which is first of its kind. This epoch making technology would be revolutionizing the sericulture industry in India thereby benefitting the farmers in alleviating their economic status.

APSSRDI assists the Department of Sericulture in its silkworm seed production. The institute is also involved in Human Resource Development (HRD) programmes such as conducting Certificate course in Sericulture of IGNOU, New Delhi; Agri -clinic and Agri Business center (ACABC) of MANAGE, Hyderabad for the development of entrepreneurial skills, and Conducting regular training programmes to new entrepreneurs of Sericulture Training and in commercial Chawkie Rearing Center (CRC) for progressive farmers, T.o.T and Farmers awareness programmes through electronic Media.

### Critical gaps identified in implementation of schemes and remedial measures taken:

- 1 High investment on construction of Rearing sheds.
- 2 Intensive care to be taken in silk worm rearings by the famers.

### Remedial measures taken;

1. a). Financial assistance is being provided in addition to Dept. subsidy, through MG-NREGS scheme and also recommended for Bank loan in place of beneficiary contribution for construction of silk worm rearing sheds and rearing equipment.
- b) Release of financial assistance on DBT mode.
2. Supply of Chawkie worms (young age) through Govt. and Pvt. Chawkie Rearing Centers silkworms from 3rd stage onwards to lessen the crop period at farmers level to get good yield.

### Action Plan proposed for the year 2021-22:

It is proposed to cover 10,000 acres of Mulberry plantations, to produce 69874.81 M.Ts of cocoon (CB+BV), 9450.13 M.Ts of Raw silk (C+BV) and 45.00 lakh of Tasar cocoon during the year 2021-22.



Silk worm Rearing shed



Mulberry garden



(280) ends Twisting unit



Bivoltine cocoons



(10) basin Silk Reeling unit



Silk worm feeding on Mulberry Leaf

## AGRICULTURE AND ALLIED ACTIVITIES

### Agricultural Marketing

Marketing is a key link in the supply chain. Markets functioning effectively are essential for driving up the growth in the agriculture sector and for generating employment and economic prosperity in rural areas. Agricultural marketing infrastructure plays a pivotal role in fostering and sustaining the tempo of rural economic development and is critical for better performance of the agriculture sector as a whole. Effective marketing infrastructure is essential for cost effective marketing to minimize post-harvest losses.

It is envisaged that large investments are required for development of post-harvest and cold chain infrastructure nearer to the farmers' field. With rapidly changing production- consumption trends, the requirement of cold storages in markets has increased manifold more so in case of perishable commodities. Successful marketing requires learning new skills, new techniques and new ways for obtaining market price information.

There are 1057 godowns with capacity to store 9,67,067 MTs are existing in the state, of which 770 godowns with a storage capacity of 7,00,678 MTs are under utilization. The District wise godowns in Agriculture Marketing Committees is shown in the **Annexure 5.29**

The Agricultural Marketing department under takes various activities such as regulation of trade in market yards, management of markets, facilitation for procurement operations under Minimum Support Price (MSP), providing loans to the farmers under Rythu Bandhu Pathakam, Market Intervention, Management of Rythu Bazaars etc., The Market Committees have collected Market Fee of Rs.242.49 crores during 2020-21. The district wise Market Fee collected are given in the **Annexure. 5.30.**

Under Rythu Bandhu Pathakam, Rs.0.70 crore loans have been provided to 532 farmers during 2020-21

### National Agriculture Market

National Agriculture Market (e-NAM) is an electronic common platform promoted by Government of India to integrate all primary markets across the country for online participation in agricultural trade for assuring true price to the produce of the farmers. The objective is

to link local farmer to National trade, free the farmer from the clutches of middlemen & offer the best price. e-NAM is implemented in 33 Markets in the State. Major traded commodities in e-NAM markets are Dry Chillies, Cotton, Turmeric, Lemon, Tomato, Jaggery, Castor seed, Ajwain and Fruits & Vegetables.

### Achievements

- During 2020-21 under e-NAM, 8418 farmers registered, 242 unified Licenses Issued, 247 Traders & Commission agents and 104 FPOs registered in the state.
- 845877.30 quantity with a trade value of Rs.4013.54 Crores traded in e-NAM.
- Assaying labs established in 33 Market Yards in Model Market Yards/ e-NAM markets in the State. 1,69,276 lots were assayed.
- Online Payment: - Eleven markets are serving direct online payments to the farmers and total online payment done is Rs.2.83 Crore for 6225.37 Qtls. of the commodity for 736 lots.
- Incentives to traders: - If the trader undertake market transactions from end to end trading process under e-NAM, Market Fee @ Rs 0.25 % is exempted and collect Rs.0.75% only.
- Infrastructure: Deployed sufficient manpower, computers and internet connection in all APMCs to handle day to day e-NAM operations.
- Average Number of Bids/lots: The average number of bids per lot across all the markets is 3. Adoni market has highest number of bids per lot is > 30 bids.

### Initiatives taken under e-NAM

- **Assaying Labs :** Assaying labs have been set up in all e-NAM AMCs, and empaneled reputed organization NCML for authenticity of assaying results. Installed latest NIR technology equipment in Kadapa and Duggirala AMC to identify the curcumin content in Turmeric commodity.



- **e-NAM Integrated Weighing Machines :** e-NAM integrated weighing machines are installed in the markets, which will transfer weighing data directly to the e-NAM platform, removing possibility of manual error or manipulation.
- **Price Display Boards:** Price Display Boards, CCTV Cameras, Announcement systems are installed in all markets for information dissemination. Commodity wise Min, Modal and Maximum information is displayed in boards to aware farmers about latest price.
- **Farmer Training Centers (FTC):** Dedicated FTC set ups, with audio-video equipment is placed in all e-NAM markets
- **Direct Purchase Platform (DPP):** Enabled Direct Purchase Platforms in the market yards. Department established DPPs in the market yards to free the farmer from the clutches of Commission Agents from the market yard, where the farmer can sell Agri Produce directly to the purchaser through e-NAM.
- **Single Trade License:** Single Trader License adopted for traders in the State.
- **Bio-Digesters:** Bio-Digesters are set-up and functioning in all e-NAM, to convert the waste into useful compost under cleaning, grading and packing facility provided by GOI.
- **Primary Processing Centers (PPC) :** Establishment of Primary Processing Centers are under process at Madanapalli -Tomato, Eluru - Lemon , Anantapur & Pulivendula - Sweet Lemon (Mosambi).
- **Inter Mandi trade through e-NAM:** Inter Mandi transactions traded between APMCs for a value of Rs.241.99 Lakhs for a quantity of 8941.83 Qtls of commodities namely Banana, Castor seed, Groundnut and Tomato. Similarly Inter state trade through e-NAM is also being promoted

## Implementation of Schemes

### 1. Procurement operations under Price Stabilization Fund

The Government of Andhra Pradesh has taken a historical decision of establishment of Price Stabilization Fund (PSF) of Rs.3000 Crores aimed to provide market intervention to those farmers for the crops which are sold below the MSP and to provide market intervention to those crops which do not have MSP but are selling much below the normal price.

For the first time in the country, the Government of Andhra Pradesh has announced MSP for crops significantly grown in Andhra Pradesh and for which GOI has not announced Chillies – Rs.7000 per quintal, Turmeric- Rs.6850 per quintal, Onion- Rs.770 per quintal, Minor Millets- Rs.2500 per quintal, Banana- Rs.800 per quintal, Sweet Orange –Rs.1400 per quintal.

### 2. CMAPP APP

During COVID period, the prices were monitored daily across all RBKs. CMAPP only app in the country, which is gathering price information from village/RBK level for all the crops every day and is an end to end solution for monitoring market prices and MSP procurement operations across the State for all the Govt. agencies involved in MSP procurement except Paddy. A.P is the only state in the country taking up the MSP procurement at Village/RBK Level opening 5982 procurement centres for procurement of various commodities during this Kharif.

The e-crop data was integrated for identification and to pass on the benefit of MSP to right beneficiary (actual cultivators/tenants)

### 3. Procurement during Covid-19 period

During Covid-19 pandemic, when the economy is in trouble, the Agriculture Marketing Department defying all odds has remarkably procured 18965.105 MTs of onion, banana, sweet orange and tomato valued Rs 19.31 Crores during the lockdown despite several restrictions.



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AGRICULTURE AND ALLIED ACTIVITIES

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The State government ensured that various commodities were procured from farmers without any delay in a safe manner following all the protocols of social distancing. The number of centers was increased substantially reducing the farmer footfalls and these measures ensured that none of the procurement centers became Covid-19 hotspot anywhere in the State.

#### 4. Procurement of Cotton under MSP Operations

- The Cotton procurement takes place in 73 Ginning Mill centers and 11 AMC centers across state. During 2020-21, the CCI procured 18,17,709 MTs of cotton from 44,440 farmers for a value of Rs.1039.29 Cr.
- The Minimum Support Price (MSP) of cotton fixed by GOI is as follows:
  - Long Staple length -Rs.5825/-
  - Short staple length -Rs.5515/-

#### Action Plan for 2021-22

- Rythu Bazars: 15 New Rythu Bazars will be established in the year 2020-21 and they will be constructed as per the need.
- e-NAM: The Government of India has already sanctioned 33 additional markets under e-NAM which are yet to be integrated in the e-NAM software.