

## CHAPTER-IV

### I. INVESTMENT CREDIT FOR AGRICULTURE

#### A) MINOR IRRIGATION:

The total irrigated area under minor, medium and major irrigation is 23.40% of the cultivable area and is considered to be lowest in the state. There is still scope of bringing about large areas of cultivable lands under irrigation. The average rainfall in the district is 1044.50mm and there is enough surplus yield in Godavari basin. Several surface water schemes can be conceived and developed to bring irrigation potential of the district on par with the State average.

#### B) GROUND WATER DEPARTMENT

The utilizable resource is 1151.94 MCM of which net draft is 152.09 MCM and balance potential for development is 999.65 MCM. The maximum number of additional wells with pump-sets feasible in the district at 85% of Ground water and exploitation is worked out at 1,10,372. There is a steady increase in the area under well irrigation in the district. Due to plantation and horticulture schemes, the demand for the dug and tube wells is increasing in the district. Bhainsa, Adilabad, Gudihathnoor, Narnoor, Indervelly, Jainad, Wankidi, Mancherial, Mandamarry and Tandur are the 10 mandals out of 52 mandals in the district where depth to water level is less than 8 mtrs.

#### C) LIFT IRRIGATION SCHEMES

##### 1. Scope for Lift Irrigation Schemes:

There is good scope for the lift irrigation schemes as there are good surface water resources in Adilabad district, the most important river being Godavari. The Kaddam and Peddavagu are tributaries of the Godavari. The Penganga, the Warda and the Pranahita are the other rivers that flow through the district. Besides these, there are also rivulets like Sathnala, Swarnavagu and Suddavagu. The AP State Irrigation Development Corporation, (APSIDC) Nirmal Division has completed 47 Lift Irrigation Schemes with a cost of Rs.2984.26 lacs on various river streams and canals by creating irrigation potential to the extent of 26109 ha.

##### 2. The details of schemes already implemented and those that are to be implemented are furnished below:

SI NO.	Particulars	No.of Schemes	Irrigation potential Created / to be created		Cost Rs. In Lakhs
1	Schemes commissioned	47	26109	Acres	2,984.26
2	Schemes ready for commissioning	1	300	Acres	57.16
3	On-going schemes	8	18030	Acres	6,503.28
4	Schemes proposed to be taken up	4	15465	Acres	6,164.61

##### 3. The division has taken up the survey and investigation of 5 LI Schemes to provide facility to the rehabilitated farmers of SRSP at an estimated cost of Rs.1113.50 lacs to provide irrigation facility to an extent of 1820 ha. The schemes have been proposed by AIBP 4 of the schemes are located on foreshare of SRSP and 1 is located on Kanakapur Vagu.

**D) DRIP AND SPRINKLERS:**

The areas under Mango, Cashew, Citrus, Guava, Ber and other plantation and horticultural crops including vegetables are showing increasing trend in the district Chennur, Bheemaram, Bellampalli, Nirmal and Bhainsa mandals are having considerable area under Mango and cashew. there is 16155 ha. under mango plantation, 1515 ha. 473 ha. under citrus 75 ha. under guava plantation and 100 ha. under banana plantation in the district. The Drip and Sprinklers irrigation schemes are executed by the department of Horticulture and Agriculture departments respectively. The sprinklers sets are used for irrigation cotton and groundnut crops during long spell of dry weather.

At present about 2540 sprinklers covering an area of 11010 ha. area in operation in the district majority of which are concentrated in the mandals of Adilabad, Tamsi, Talamadugu, Jainad and Bela. During the year 2006-07, a total of 1900 ha. is proposed to be covered under Micro Irrigation, out of which 1400 ha. with sprinklers and 500 ha. with Drip Irrigation.

**E) IRRIGATION PUMPSETS**

The estimate of minor irrigation structures suggest that the potential number of wells to be grounded are about 2000 every year and an equivalent number can be assumed to be potential for financing pumpsets. For the minor irrigation development, the support of APTRANSCO is considered most critical in the district. So far 72918 wells have been registered and 225 new Borewells have also been permitted.

**F) FARM MECHANISATION**

Adilabad district with gross cultivated area of 555912 ha. and with gross irrigated area of 129787 ha. offers good scope for mechanisation of Agriculture operations. There exists huge potential for about 33000 tractors in the district and close coordination between the officials of Agriculture department and the Bankers will go a long way in tapping the potential.

**G) PLANTATION & HORTICULTURE**

The area under plantation & horticulture crops is about 10.20% of the net cultivated area in the district and almost all the mandals are suitable for cultivation of fruits, vegetable and flower crops. The extent of area under the Plantation and Horticulture crops and their production during the year 2005-06 is given below:

<b>CROP</b>	<b>AREA (Ha)</b>	<b>PRODUCTION (Tonnes)</b>
Fruits	22681	141229
Vegitables	17276	241112
Flowers	226	2362
Spices	12422	48972
Medicinal & Aromatic Plants	105	327

The congenial climatic conditions prevailing in the district are favourable for establishment of a variety of fruits and plantation crops. Out of 52 mandals in the district, the maximum cultivation of horticultural crops is being taken up at Sirpur, Kagaznagar, Jaipoor, Nannel and Chennur mandals. All the mandals in the district are suitable for horticulture crops. The entire mandals in Sirpur, Kagaznagar are highly suitable for cashew plantation.

**H) AVAILABILITY OF PLANT MATERIAL**

Plant material of Mango, Acid lime, Guava, Papaya, Sapota, Anar, etc., is available in the district. Horticulture Nursery cum training centres are available at Utnoor, Bheemaram, Bellampally, Jambuga, Asifabad, Sathnala, Adilabad and DPAP farms at Gudipeta Jaipoor and department farm at Mudgal. They are producing 5.00 lakh seedlings. There are about 97 private nurseries producing 5.65 lakh mango grafts.

During the year 2006-07, the programme under National Horticulture Mission (NHM) included area expansion of 500 ha. of Mango, 100 ha. of Banana, 80 ha. of Flowers and 50 ha. of Medicinal plants. In addition, rejuvenation of old and sanile orchards of Mango (100 ha), Citrus (20 ha) have been proposed. Apart from this, the department has also planned to develop nurseries, protected cultivation (shade nets etc, ) post harvest management, conducting awareness programmes and trainings.

**I) SERICULTURE DEVELOPMENT**

The tribal population of the district is known for producing Tasar silk on a minor scale. The programme is being taken up in a big way by ITDA, Utnoor to help tribal people in the area. The major constraints in development of sericulture activity in the district is marketing of cocoons as farmers are being exploited by middle men. Though ITDA, Utnoor provides market support, farmers are forced to go to neighboring places for better prices.

The Department of Sericulture had come up with a Banking plan for the year 2006-07 to promote Mulberry Plantation in 70 ha. which 20 rearing sheds with a total investment of Rs.57.39 lakhs. The department has also planned to establish 5 Tasar Grainages in private sector with 50% subsidy on capital cost.

**J) FARM FORESTRY AND WASTE LAND DEVELOPMENT**

The land covered by forest in Adilabad district is about 691722 ha. which constitutes about 43% of geographical area and has one of the highest forest cover among the district in the state. The Andhra Pradesh Forestry Project is being implemented in the district with the financial assistance from World Bank. Major thrust of the project is on eliciting people's participation in the reforestation of depleted forest by creation of "Vana Samrakshan Samithis" under which 100 ha of forest area as allocated to a group of local villagers for looking after maintenance and production of forest area.

The thematic maps and Action plans prepared by the NRSA under IMRD programme are useful for identifying the areas suitable for raising trees under social forestry programme.

**K) RYTHU MITRA GROUPS:**

Though about 6400 Rythu Mitra Groups have been formed in the district, the financing of these groups had started during Kharif 2005 season only. The progress is slow due to various reasons. There is need to form more homogeneous groups exclusively for small, marginal and tenant farmers by re-organizing the existing groups. The department of agriculture has to play a key role in the overall scheme to ensure that objectives of Rythumithra Groups in technology transfer, market support etc., are realised.

**II. INVESTMENT CREDIT FOR ALLIED ACTIVITIES:****(A) ANIMAL HUSBANDRY:**

The department of animal husbandry is headed by the Joint Director under whom the following units are working:

i)	Veterinary Hospitals	09
ii)	Veterinary Dispensaries	76
iii)	Rural livestock units	61
iv)	Animal health centres	01
v)	Rinderpest check post	02
vi)	Veterinary polyclinic	01 (at Adilabad under control of separate Deputy Director,AH)
vii)	Mobile input project	01

Animal husbandry being the second largest activity of Agriculture, contributes significantly for gross income and employment in the district. The agro climatic conditions prevailing in the district are fairly suitable for rearing of live stock and poultry, particularly high yielding cross bred cows and graded murrah buffaloes, hybrid layers of broilers, improved breeds of sheep and goats and exotic/cross bred pigs. As per the information available the live stock available in the district is as follows:

a) Plough animals	-	3.14 lakhs
b) Dairy Animals		
i) Cows	-	2.57 lakhs
ii) Buffaloes	-	1.75 lakhs
iii) Sheep	-	2.55 lakhs
iv) Goats	-	3.29 lakhs
v) Poultry	-	11.82 lakhs

There is no gap in veterinary institutions as recommended by the National Commission for agriculture.

(B) DAIRY DEVELOPMENT:

There are 8 Bulk Milk Cooling units in 32 Mandals located at Adilabad, Nirmal, Bhainsa, Ichoda, Utnoor, Asifabad, Kagaznagar, Chennur centres under the supervision of Velugu Project, Adilabad. Velugu is encouraging the farmers to take up dairy as an additional income generating activity by providing fodder, concentrated feed and also marketing support by procuring milk through milk producers cooperative societies / collecting centres. 27 milk routes are established in the above areas and has proposed to connect several villages to these milk routes. Velugu provides animals, health care and artificial insemination facilities in coordination with Animal Husbandry Department. The milk collection and sale to Yeotmal (nearby District centre of Maharashtra State) has gone up to 10000 liters per day and presently at 6000 liters per day due to summer. Common interest groups (all women) are formed at village level and encouraged for dairy activity. The activity is in take off stage and offers scope for financial assistance by banks also.

(C) SHEEP/GOAT/PIGGERY REARING:

Deccani breed of sheep is normally available and reared. There is no organised market for selling sheep, goats and pigs or wool. The farmers are exploited for selling of animals. There is heavy demand for mutton in the district. There are 32 shepherd cooperative societies with 1498 members. About 9500 shepherds live in the district.

Modern slaughter houses have to be established for hygienic slaughter of sheep and goats and payment of remunerative price to farmers.

(D) POULTRY:

The district is under development in poultry sector. The per capita egg consumption in the district is 35 eggs as against recommendation of 180 eggs by National Institute of Nutrition (NIN). There is vast potential for poultry development in the district in view of large scale demand for poultry products. Demand is being met at present by procuring eggs and meat broilers / poultry from adjoining districts.

Infrastructure available / required for phased development:

- a) Infrastructural supports like water, power, technical assistance etc., are considered adequate. There is however no parent breeding purchase farm and batchery in the district. Commercial dyed layers and broilers chicks are purchased from Chittoor, Warangal, Bangalore and Hyderabad.
- b) Poultry feed and feed ingredients are available in local markets.
- c) The poultry farmers are dependent on batcheries for advice and private vaccinators for vaccinating their birds.

(E) FISHERIES

The Fisheries department in the district is headed by an Asst. Director supported by other field staff. The main activities of the department are:

- 1) Fish seed production and distribution
- 2) Lease of departmental tanks
- 3) Organisation of Fishermen Cooperative Societies
- 4) Implementation of Plan Schemes
- 5) Housing Programme
- 6) Supply of Nylon yarn, teppas and cycles under IRDP and
- 7) Providing financial assistance to fishermen / fisher women.

The fishermen population in the district is 0.40 lacs out of which only 30% are active. There are 138 fishermen cooperative societies with membership of 6574. All the water bodies available in the district are being leased out to the societies for development of fish culture in the district. Nirmal Jannaram and Asifabad mandals are suitable for private fish ponds. 3 at present Jannaram has private fish ponds.

There are 2 fish seed farms in the district.

1. Sathnala with 40 Cement tubes having capacity of 20 lakh of MC Spawn and 20 lakh of CC Spawn.
2. Kaddam with 56 Narsaries ponds with a capacity of 200 lakh of MC spawn and 10 lakh of CC spawn.

(F) STORAGE GODOWNS

There are no cold storage facilities in Adilabad district at present and therefore there is need to address this problem and create enough storing space for perishables that are being produced.

(G) MARKET YARDS

There are 16 regulated markets in the district at Adilabad, Bhainsa, Boath, Asifabad, Kubeer, Indervelly, Nirmal, Mancherial, Kagaznagar, Khanapur, Chinnur, Jainoor, Ichoda, Sarangapur, Jainath and Luxettipet.

(H) BIO-GAS PLANTS

The District Manager, Non-Conventional Energy Development Corporation of Andhra Pradesh Ltd., (NEDCAP) stationed at Adilabad is responsible for development of bio-gas plants and other non-conventional sources of energy in the district. He is assisted by other office staff. Adequate number of trained mansions are available in the district capable of constructing, maintaining and under take repairs to the bio-gas plants.

There are about 4500 bio-gas plants in the district and there is potential for another 5500 bio-gas plants.

(I) BULLOCKS AND BULLOCK CARTS

This activity has good potential in the district due to small holdings. For agricultural operations as also transportation of inputs and farm produce small and marginal farmers depend on bullocks carts as the rural roads in the district are not developed.

(J) CROP LOANS

Agriculture is the main occupation of the people in the district.

The gross cropped area is 5,55,912 ha. and net area sown is 5,10,321 ha. (approx.). The cropping intensity of the district is 109%. The normal rainfall of the district is 1051mm. The percentage of gross area irrigated to the gross cropped area is about 23%. The soils of the district are pre-dominantly clay loams. Clays and sandy loams. Black cotton soils are pre-dominant. The major crop grown in the district are paddy, maize, redgram, greengram, black gram, cotton, sesamum etc.,. There are marginal changes in the cropping pattern in the district and similar trend may continue in the coming years. The area under traditional crops is decreasing whereas the under crops like soybean is increasing.

Andhra Pradesh Agricultural University has established an Agronomic Research Station at Adilabad to tackle the problems related to crop production in the field of cotton, jowar, pulses, inter-cropping etc.,

The area under cultivation for major crops during Khariff 2007 is 4,44,000 ha. and during Rabi 2007-08, it is 1,43,000 ha. as detailed below:

<b>Crop</b>	<b>Kharif-2009-10</b>	<b>Rabi 2009-10</b>
Paddy(Irrigated)	21465	8961
Paddy (Un Irrigated)	1937	
Jowar	18641	29973
Cotton	292146	
Soyabean	120802	
Maize	15046	7110
Redgram	53580	9763
Blackgram	8261	801
Greengram	6708	1581
Bengalgram		27930
Seasamum	486	1245
Turmeric	4480	174
Chillies	2778	5924

### III. NON-FARM SECTOR:

#### (A) LARGE & MEDIUM INDUSTRIES:

Presently, the district has 19 large and medium scale industries with capital investment of Rs.23,500 lakh providing employment to 61000 persons. M/s Zenith Cements, Yapalguda, village Adilabad has proposed an investment of Rs.4535.54 lac providing employment to 534 persons.

#### (B) SMALL SCALE – INDUSTRIES:

There are 5269 SSI and Tiny units registered in the district with a capital investment of Rs.73638 lakh providing employment to about 35358 persons. However, at present, only 79 SSI Units and 658 Tiny Units only are reported to be functioning now.

#### (C) INDUSTRIES:

There are several major and medium scales industries established in the district which have given an impetus to the development of labour intensive and low capital investment oriented small scale sector and house hold and cottage activities in rural area. The industrial activities have been categorised purpose-wise namely.

- i) Demand based activities
- ii) Supply of raw material based and
- iii) Skill based activities.

However, for the purpose of discussion and development of non/farm sector in the district, at rural artisans level and also at various levels of industrial units, they could be classified as indicated below:

- 1) Handicrafts industries
- 2) Khadi and Handloom industries
- 3) Agriculture and livestock processing
- 4) Forest produce
- 5) Fire based industries
- 6) Chemical based industries
- 7) General Engineering industries

Among the handicrafts industries that could be promoted in the district. Normal toys and arts

deserves special mention. Brass items, carpet weaving, wooden toys and artistic wooden works, fire arts and crafts are the other cottage industries in the district.

1. **DEMAND BASED INDUSTRIES:**

The category includes agricultural and livestock based processing units in the district. The items manufactured out of food grains and pulses, processing and marketing of pulses, rice, mills, flour mills, bakery, sugarcane, jaggery, khandasari, collection of honey and by-products of apiary, oil crushing, manufacturing of animal and poultry feed, processing of milk and milk products, preparation of vermi-compost, bio-fertilizers, mushroom, cultivation etc., The forest produce based industries that could be promoted in the district are wooden furniture making agarbatti making, processing of forest produce, fibre based leaves, gum, mohva seeds etc., The forest also produce raw materials for the paper mill and timber for building and construction industries. There is scope for tiny and cottage industries also.

2. **RAW MATERIAL BASED INDUSTRIES**

3. **AGRO-BASED INDUSTRIES:**

**(a) Dal mills:**

The area under pulses in the district is as high as 75,000 ha. with an estimated production of 500 metric tonnes per annum. Therefore, there is scope for establishing a few dal mills in the district, preferably in the pulse growing aea like Bhainsa.

**(b) Soil-Fuel Briquettes:**

The district has a sizeable area of about 60,800 ha. under rice production. Large quantities of paddy husk and other agricultural and forest wastes are available in the district. The soil fuel briquettes could be made by using the above agricultural and forest wastes. These briquettes are in great demand as they have a very high calorific value. Hence, there is a scope for establishing a few units in the district.

4. **MINERAL BASED INDUSTRIES**

**(a) Coal:**

Coal is extensively found in Asifabad, Tandur, Kanara and North Godavari fields which are being developed, Tandur Collieries are on Kazipet Ballarsha line of Central Railway in the district. Intensive drilling is being taken up by the Geological survey of India to locate new deposits of coal. The Singareni Company Collieries Ltd., Bellampally and the coal chemical complex at Ramakrishnapuram near Mancherial are engaged in the extracting of coal, soft coke, cocker, with an estimated production capacity of 14,500 tones per day employing 48,500 labourers round the year.

**(b) Cement:**

There are extensive deposits of cement quality limestone belonging to the Penganga series in the district. The main deposits are found in North West Mancherial and Asifabad. Mancherial is having reserves of 600 MT limestone, suitable for cement industry and is being excavated in Asifabad. The Associated Cement Companies Ltd., Mancherial, CCI Adilabad, Orient Cement, Devapur, the Someshwara Cement and Chemicals Ltd., Ippalana Vaguru (village) Asifabad, Annapurna Cement Ltd., Sanmela area employees about 3,500 labourers round the year. The production capacity is about 3,500 tones per day.

**(c) Clay Industry:**

Extensive deposits of pure and dirty clay associated with Kofa, Malen belts of gondwanas occur near the villages of Daheba, Rellabata, Ketgab and Buttend of Asifabad and the clays are useful in manufacture of pottery, chinaware pipes, firebricks and sanitary ware.

**(d) INDUSTRIAL COOP. SOCIETIES:**

**BAMBOO SOCIETIES:**

There are 18 bamboo societies in different places of the district and 900 weaker section people are benefited by getting allotment of bamboo from forest department at concessional rate. The societies are manufacturing nets baskets etc., and selling it in local market.

**(e) Handlooms:**

The Government of India, Ministry of Textiles along with Ministry of Rural Development formulated a new scheme for intensive coverage of handloom weavers with a view to provide them sustained livelihood and higher income. Artisan Credit Card scheme is also being implemented in the district to meet the credit needs of the Handloom Weavers.

**(f) Rural artisan activities:**

The traditional artisans of the district namely carpenters blacksmiths potters and handloom weavers can be encouraged to taken up self employment generating vocations through bank credit. In general here is vast scope for these activities in all the mandals of the district as these services have formed necessary support for the farmers and other rural people. To help the rural Artisans, Artisan credit card scheme has been introduced.

**(g) Ancillary and other industries:**

The district has five industrial estates located at Nirmal, Mancherial, Adilabad(2) and Utnoor. The District Industries Centre, Adilabad has suggested the following product lines in large and medium sector.

1. Grey iron and steel foundry
2. Plastic/PVC corrugated or plain roofing sheets
3. Sandlime bricks
4. Noddles
5. Oil well cement and sulphate resistant cement
6. Printed multi layer blown film and printed mutli-layer pouches
7. Chicken meat, Meat meat.
8. Flavoured soft drinks / soda.

Other industries include chemical units, solvent extraction units, spinning mills etc., These industrial require certain small items, spare parts, consumables etc., on an on-going basis for their day to day operations. Presently these items are being mostly procured from Hyderabad, Bangalore etc., Further the Sirpur-Kagaznagar mills and Singareni Company Collieries Ltd., National Thermal Power Corporation, Food Corporation of India and other cement factories need ancillary items. Therefore, there is good scope for setting up of ancillary units for manufacturing these essential items in the district.

The industrial training institute in the district imparts training for development of various trades and several of the ITI passed personnel are yet to be employed. This trained manpower could be gainfully employed by motivating them to set up self employment units with bank credit in all the mandals of the district.