

**TIMBAKTU ORGANIC PROJECT OF THE TIMBAKTU COLLECTIVE**  
**PROMOTING SUSTAINABLE AGRI-BASED LIVELIHOODS AND FOOD SECURITY AMONGST**  
**DRYLAND FARMERS OF ANANTAPUR DISTRICT, A.P., INDIA.**

**1. PREAMBLE:**

India has a large population engaged in agriculture. A huge part of this population lives in fragile eco systems of farming in dryland, rainfed situations. It is recognized that the worst affected in the rural society today are these families dependant on dry farming, with a future rapidly slipping out of their control in terms of unpredictable rainfall patterns, deteriorating farm lands, mounting production costs and unpredictable market situations.

Out of the total net sown area of 136.8 Mha, rainfed area accounts for 93.13 Mha spread over 177 districts. This constitutes approximately 68 percent of the total farming area in the country. These arid and semi-arid regions contribute 42% of the total food grain production of the country - 75% of pulses and more than 90% of sorghum, millets and groundnut. Even after half a century of neglect, the rainfed regions provide livelihood to nearly 50% of the total rural workforce and sustain 60% of cattle population of the country.

Successive governments of India and the regional States continue to allocate growing funds to support chemical and irrigated agriculture (the 2009 AP budget has doubled compared to the previous year). Most of the resources will however be directed to irrigated agriculture, and not to the dry land areas.

In recent times, the farming sector is facing adverse conditions on three fronts. In the last six decades, the population has more than trebled, putting enormous pressure on land, since the surplus rural population is not getting absorbed in other sectors of the economy. This, coupled with the trend of joint families breaking up into smaller nuclear families, is resulting in shrinking, uneconomic farm holdings. Also, the rising levels of literacy and growing media impact are leading to run-away **rural aspirations**, compounding the problem.

Apart from this, the **production base in farming** is getting rapidly degraded. The vegetative land cover on and around the farms has been depleted extensively. As a result, erosion has taken a heavy toll on the farm soils, which have become more shallow and sandy, and also low in soil organic matter content.

Over the years, the **changing climate** is making matters worse. The monsoon rains, particularly in their distribution, have become proverbially erratic. The number of rainy days seems to be slowly getting reduced. There is a gradual rise in the temperatures. As such, soil moisture evaporation becomes more, and surface water bodies dry up quickly, even during the rainy season. Once again, dry land crops suffer.

Added to this is the catastrophic decision to transfer the green revolution technologies into dryland regions. Due to high chemical use, reduction in both CPR and farm biodiversity, and wrong farming practices, farmlands today have become poor in fertility and water holding capacity, and therefore poor in supporting a good dry land crop.

## 2. AGRICULTURAL PROFILE OF ANANTAPUR DISTRICT

Anantapur district, part of the Rayalaseema belt of Andhra Pradesh, is the second most drought-affected district in India and comes under a massive rain shadow. Its geographical position in the peninsula renders it the driest part of the State. Being deprived of both the monsoons, it is subjected to droughts once every two or three years. The average rainfall of the district is 552 mm. by which it secures the least rainfall when compared to other parts of Rayalaseema and Andhra Pradesh.

### 2.1 Population

It has a total population of 36.40 lakh, of which 27.21 lakh are rural (75%) and 9.19 lakh are urban (25%). The density of population is 190 per sq km. against 277 of the State. The literacy level is 56.1 % as compared to 60.5 % of the State.

### 2.2 Area

The total geographic area of the district is 19.13 lakh ha, cultivated area being 11.69 lakh ha, with 10.27 lakh ha under *kharif* and 1.42 lakh ha under *rabi* (2005-06). The district has the lowest irrigated area (13.13%) in 2005-06. The main source of irrigation is bore wells (62.54%).

### 2.3 Administration

The district is divided into 3 administrative divisions consisting of 63 revenue *mandals* (Anantapur division 20, Dharmavaram division 17 and Penukonda division 26) with 929 revenue villages.

### 2.4 Rain

The district is so located geographically that it is not adequately benefited from either of the two monsoons and is subjected to frequent droughts. The normal rainfall in the district is 553mm, with 338 mm (61%) in SW season and 156mm (28%) in NE season. The other months are almost dry. March, April and May are the summer months when the normal daily temperature ranges from 29.1<sup>o</sup> C to 40.3<sup>o</sup> C. November, December and January are the cooler months when the temperature falls to about 15.7<sup>o</sup> C.

### 2.5 Livestock

Anantapur district has the second highest livestock population in the state (3,724,108), next only to Mehabubnagar. Sheep are the major animals seen in the district, 51.2 % of the total livestock, while cattle (18.7%), goats (13.5%), buffaloes (11%), pigs, donkeys, horses etc. (5.6%) are the other animals reared in the district. Farmers are facing fodder scarcity, particularly the green fodder. The veterinary services in the district are inadequate.

### 2.6 Land holding

The average operational land holding in the district is 2.0 ha. There are nearly 6 lakh agricultural families, of which 65 % have less than 2 ha. Of the 63 *mandals*, 49 have predominantly red soils and remaining 14 have red and black soils, almost in equal proportion. Thus, district has 76% red soils and 24% black soils.

### 2.7 Crops

Dry land / Rainfed farming is the primary livelihood option of the rural poor of this dry, arid region. The economy of the district also by and large depends on the success of dry farming. Poverty is endemic and a large number of families are struggling to survive.

The important crops of the district are Groundnut (77%), Bengalgram (4.2%), Sunflower (4.2%), Rice (4.1%), Redgram (3%) and Jowar (1.5%). In the last couple of decades, Groundnut, as a cash crop, has gained prominent position. The coarse cereals and

minor millets, which were the staple foods, have almost disappeared. It is also seen that food crops have gradually lost ground, thus making the district dependent mainly on the public distribution system in the cases of the poorer segments of the population. The prevailing productivity of groundnut is 436 kg/ha, whereas the potential is considered to be around 2500 kg/ha.

Area, Production and Yield of the main crops (2005–06)

Sl. NO	Crop	Area (000' ha.)	Production (000' tonnes)	Yield (kg/ha.)
1	Groundnut	899	392	436
2	Sunflower	49	8	173
3	Bengalgram	49	48	981
4	Redgram	35	24	677
5	Jowar	17	14	830
6	Rice	48	125	2608

**Source:** Chief Planning Officer, Anantapur

## 2.8 Change in cropping pattern

The advent of cash-cropping subsidized by the State (which decided to promote oilseeds amongst farmers) along with distribution of centrally procured rice and wheat through the Public Distribution System over the past 30 years, has pushed this district from being a mixed cropped area with great agro-biodiversity, to becoming the largest groundnut monocropped district in the country. Allowing free import of edible oils such as palm oil, has exposed the farmers adversely to market and production risks. Yields of the hybrid bunch variety of groundnut, promoted by the State and used extensively by the farmers have been declining consistently over the past few years and are plagued by pests and diseases. Chemical pesticide and fertilizer use has gone up significantly, and the net return for farmers has become negative or at best marginal. Due to the agricultural crisis and extreme indebtedness of the farmers, there has been high incidence of suicides in the district during the last few years.

## 3. TIMBAKTU COLLECTIVE:

The Timbaktu Collective is a registered Voluntary Organization initiated in 1990 to work for sustainable development of drought prone and ecologically-challenged Anantapur District, Andhra Pradesh. It began with a successful experiment in restoration of a degraded piece of land that was named "Timbaktu".

The Collective works in 140 villages serving about 45,000 marginalized people with particular focus on women, children, youth and disabled from among the landless labour and small/marginal farmer families.

The current programmes of the Collective include empowerment of women, natural resource management, organic farming and marketing, alternative education and child rights, youth and disability development.

The Collective has a well trained team of 108 full timers as well as essential assets to carry out the projects currently implemented. The Collective has been/is being supported by international donor agencies like ASW (Germany), OXFAM (UK), TdH (Germany), KZE/Misereor (Germany), EED (Germany)/EU, BMZ (Germany), SDC (Switzerland), ABILIS (Finland), DDP (UK), ASHA (UK, USA), FORD Foundation (USA), NOVIB (NL), Oxfam Australia, ICCO (NL) and national agencies such as CWS (Hyd), SDTT (M'bai), INFOSYS Foundation (B'lore) and District Water Management Agency (DWMA – Atp).

The most important strength of the Collective is that it is deeply rooted at the grass roots while keeping its awareness in the global, thus having a good balance of social mobilization and technological innovations suited to the rural poor. It's mission is to enable rural marginalized people (landless labour, small & marginal farmers) especially women, children, dalits & disabled to augment their livelihood resources, get organized and work towards social & gender justice and equity, in a meaningful and joyous manner. More information on the Collective may be found on the following:

<http://www.timbaktu.org>,  
<http://www.goodnewsindia.com/index.php/Magazine/story/timbaktu/>,  
[http://www.theweek.com/25dec18/currentevents\\_article10.htm](http://www.theweek.com/25dec18/currentevents_article10.htm),  
<http://www.indiatogether.org/2006/dec/agr-timbaktu.htm>,

#### **4. COLLECTIVE'S WORK WITH SMALL AND MARGINAL FARMERS AND RATIONALE:**

The Collective began its work on agro-farm biodiversity in 1999 with the "Seeds of Hope" project, supported by Asha for Education, to document local agro-farm biodiversity which included documentation of traditional forms of cultivation, collection of various crop seeds, conducting experiments in organic farming techniques on a demo farm and with a few select farmers.

Around September 2005 the Collective began the 1<sup>st</sup> phase of the "Timbaktu organic" project, supported by Sir Dorabji Tata Trust (SDTT). During this phase the Collective took to the farmers the lessons that had been learnt and documented. It organized 350 farming families from 8 villages into 15 *sanghams* and convinced them to convert atleast 3 acres per farming family to organic, a total of 1050 acres. The project then invested, over a period of 3 years, approximately Rs. 1285 per acre of land brought under organic while organizing a series of training programmes, exposure visits, and farmer field schools.

Simultaneously, in collaboration with the Mahasakthi federation of women's thrift cooperatives the Collective had raised loans from its friends (INR 2.6 mln) and an investment from Adisakthi thrift cooperative (INR 0.3 mln) as infrastructural investment to set up processing unit at Chennekothapalli, to store and process the organic produce of the farmers. The *Timbaktu Organic* project, over the next 3 years, invested (INR 12,75,500) in the processing and marketing activity by covering the costs of staff, creation of a dedicated website, studies, promotional material, participation in fairs and food demonstrations. This phase of the project came to an end in June 2009 (extended from the planned completion in March 2009).

During this period the Collective became one of the founding members of the Participatory Guarantee System Organic India Council (PGSOIC) which set up a system of group guarantee to certify the farmers - <http://www.pgsorganic.in/>. By December 2007, the marketing activity had taken off and in consultation with the Mahasakthi federation, the Collective began promoting the idea of registering a producer owned business enterprise to market the produce. In April 2009 the Dharani Farming and Marketing Mutually Aided Cooperative Society Limited (Dharani FaM Coop Ltd) was officially registered under the MACS Act of A.P. with 350 share holding farmer members. Adisakthi MATCS decided to hand over all the assets and liabilities to this new enterprise. ([www.timbaktu-organic.org](http://www.timbaktu-organic.org)) site under construction.

Meanwhile, the Collective, wanting to take this work to some more villages, launched a 5 year project titled "Revitalising sustainable rural livelihoods" in January 2008 with

support from EED/EU. This project covers 18 more villages and 540 farming families with 1620 acres of land. However, the investment per acre of land under this project had been increased to Rs. 4466. It was further supported with an investment of 500 pairs of draught/milch animals. The farmers contribution however was also very high, in the case of the draught/milch animals, it went upto 35%. At the same time the project also has funds to support training of the directors of the cooperative. In 2010 SDTT extended its support to help the Collective expand its work to another 10 villages.

As a result, a total of 1,190 families are now growing organic food in a sustainable way on 3,570 acres of land. As of March 2011, 850 farmers were certified organic while the remaining members are under conversion (In first three years, the produce of the farmer is treated as 'organic-in-conversion' and from fourth year it is certified organic). The consolidated data is sent to PGS Organic India Council every year. The certificates for the approved sanghas are received from the PGSOIC and the certificates are displayed in the sangha offices.

The Collective's work on agro-biodiversity conservation and organic farming over the last few years has revealed that a cropping mix of millets (small grained nutri-cereals), groundnuts and pulses (such as pigeon pea) could be the suitable trigger to solving the agricultural crisis in Anantapur district. Alternate crops to groundnut need to be promoted, so as to encourage the farmers to do crop rotation and inter cropping, which significantly reduce the risk of disease and pests, while reducing the overall risk of crop failure. Further, promoting community owned, local inputs-based organic methods of cultivation of crops can also significantly reduce input costs and will be economically and environmentally sustainable for the farmers in the medium and long run. Millets do not demand chemical fertilizers. In fact under dry land, rainfed conditions, millets grow better in the absence of chemical fertilizers.

The Collective has been promoting among the project farmers, the use of farmyard manure and biofertilisers such as vermicompost and Jeevamrutham along with growth promoters such as panchagavya, amrit pani, etc., all produced under purely ecological conditions in their backyard. These practices keep farm production not only ecological but also under the control of farmers. Millets have additional importance as high nutrition cereals, which can play a vital role in the nutrition and food security for poor households, given the inability and failure of the PDS system to provide the average household with its basic food and nutrition requirement. Grown with traditional local landraces and under ecological conditions, most millets are totally pest free. And hence do not need any pesticides. Even in storage conditions, most millets do not need any fumigants. In fact some millets such as Foxtail millet, themselves act as anti pest agents to store delicate pulses such as green gram.