



**SUSTAINABLE DRY LAND AGRICULTURE  
BY MAHILA SANGHAMS  
IN  
ANDHRA PRADESH**

**REPORT**

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CENTER FOR ENVIRONMENT CONCERNS  
3-4-142/6, Barkatpura, Hyderabad – 500 027**

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# 1. INTRODUCTION

## 1.1 Project Background

The Government of India and UNDP both accord high priority to food security. The GoI and UNDP have signed a Programme Support Document (PSD) for food security, which provides the framework for UNDP support to national efforts of ensuring food security at the household and community level. It has been decided that the limited resources available under the PSD will be used for innovative sub-programmes, the lessons from which can be mainstreamed later into the Government's own programmes. Towards this end, the food security programme will focus on addressing the feminisation of agriculture and the increasing burden of household food security on women, thereby mainstreaming gender concerns and capacity building.

## 1.2 Objectives

### 1.2.1 The objectives of the GoI – UNDP Food Security Programme are:

- .. To enhance food production through intensification of agriculture, increased productivity and improved farming techniques.
- .. To diversify farming systems and increase value addition through agro-processing for improved livelihoods.
- .. To improve access to food through experimenting with alternative distribution systems.
- .. To address gender issues relating to food security and to provide concrete solutions for the feminisation of agriculture.

### 1.2.2 Development Goal:

To enable women farmers to exploit the productive potential of rainfed drylands and achieve household food security while conserving and regenerating the natural resource base.

### 1.2.3 Sustainable Human Development Justification:

The proposed sub-programme is centred on empowering women farmers with access to productive resources, including the knowledge and technologies that will enable them to reverse the processes of environmental degradation and depletion of natural resources in the region. It is based on an understanding of development that is pro-poor, pro-women and pro-environment, and will demonstrate a sustainable and equitable model of agricultural development.

The central focus of this strategy is to create synergy between two undervalued but potentially highly productive resources – women's labour and degraded fallow lands. By investing in their labour – which is their major self-owned resource – in growing staple food crops on fallow lands using sustainable technologies and practices, landless women farmers can simultaneously address several critical issues.

- .. Bringing fallow lands under cultivation will result in an increase in overall food production.
- .. Reliance on market mechanisms for household food security will be reduced, since women will be able to cultivate food crops for their own consumption.
- .. Use of sustainable practices will result in improvement in the productivity of fallow lands and regeneration of natural resources.
- .. Increased availability of work and increased access to food grains will translate into increased bargaining power with employers/landlords. Particularly on the issue of equal and minimum wages.

- .. Using the knowledge and skills they already have also learning new ways of farming and experimenting with new technologies, will enable women to gain recognition as farmers in their own right.

## 1.3 Immediate Objectives:

1. Enabling women to gain access to productive resources for sustainable agriculture.
2. Regenerating the natural resource base in the sub-programme area.
3. Women farmers supported to achieve household food security.
4. To establish an effective system to meet the information needs of women farmers.
5. To integrate strategic gender interests into the process of agricultural policy formulation.

## 1.4 Important outputs envisaged:

1. 5000-7000 acres of marginal, degraded and fallow land brought under cultivation.
2. Effective support provided to women farmers by the agricultural training and extension system and by other resource agencies.
3. Improved soil quality and groundwater availability in degraded and marginal lands.
4. Local biodiversity conserved and regenerated.
5. Alternative and sustainable energy systems established on a pilot basis in 50 villages.
6. Diversified farming systems established in sub-programme area.
7. Alternative marketing systems and alternative distribution system for food grains established.
8. Computerised information network on agriculture set up and operationalised.
9. Establishment of institutional mechanisms for exchanges and dialogues between policy makers, women farmers and other concerned groups, to influence agricultural policies.

## 1.5 Activities:

1. Identify land to be taken up under this programme
2. Negotiations and finalisation of land leases
3. Establishment of norms for operation of micro-credit
4. Mobilisation of resources and initiation of activities for land reclamation, soil conservation and watershed development, including hiring/purchase of equipment and machinery.
5. Workshops/training programmes: to develop seasonal plans, technologies and appropriate agronomic practices for dry land farming, INM, IPM and Gender issues.
6. Exposure visits of mixed groups of resource persons and women farmers to teaching/research institutes and NGOs working on dry land farming within and outside state.
7. Quarterly meetings at cluster and mandal level.
8. Result demonstrations/Farmer melas.
9. Identifying extremely degraded land and planning necessary intervention and taking up of necessary works.
10. Preparation and application of vermicompost, biofertilisers, and green manure
11. Seeds of dryland staple crops, seed banks
12. Setting up of Bio gas plants and solar lamps
13. Evolving modalities for setting up and operating of grain banks
14. Setting up and operating grain banks.
15. Identify and purchase and sale of essential commodities.
16. Establishment of units for primary processing local cereals, oilseeds and pulses.
17. Monitoring and evaluation of the Project.
18. State and national level workshops to share the experiences and insights of the programme.

## 1. Sustainable Dry Land Agriculture by Mahila Sanghams in Andhra Pradesh implemented by CEC

The Centre for Environment Concerns is implementing this project in 20 villages spread over two mandals in Medak district of Andhra Pradesh. 100 SHGs are formed in these villages as a part of this programme there by mobilising 1643 women farmers. The table listing the villages in which CEC is carrying out this project is enclosed in Annexure 1.

### 2.1 BASELINE SURVEY

In order to understand the socio-economic background of the area as well as the beneficiaries information was collected using PRA methods as well as questionnaire method as a part of baseline survey. For the exercise, two villages Mirzapur (N) and Kollur belonging to Nyalkal and Jarasangham mandals respectively were selected. In each village three women's groups were selected for intensive baseline survey.

#### 2.1.1 VILLAGE PROFILE OF MIRZAPUR

##### Location

The 'N' in Mirzapur (N) stands for 'Nyalkal' as it is a village located in Nyalkal Mandal. It is a roadside village on the Metlakunta - Allahdurg road, around 3km away from the mandal headquarters. It is a minor gram panchayat.

##### The Domination by the Reddys

Members of Bhaskar Reddy's family have been elected the Sarpanch of Mirzapur for the past 30 years. Although an SC woman was elected as Sarpanch on the basis of the SC reservation quota the last time, in the recent elections, Bhaskar Reddy was elected sarpanch unopposed.

##### Neighbouring Villages

On its eastern side of the village is a hill called "Rachanna Gutta", on top of which there is a temple called "Rachanna Temple". People of the village believe that he is the protector of that village. To the south of Mirzapur is the village called Mungi, and to its north are the villages of Vanampalli and Tekur, all in a radius of 3 to 5 km.

##### Social Strata

Mirzapur has around 800 voters and around 300 households. It has people belonging to different sections, religions and caste groups. The Reddys dominate the village in all aspects - social, economical and political, even though they are not a large number. All the fertile land is concentrated in their hands and the other lower castes have only less fertile lands. The village is covered mostly by less fertile soil (*Garubu*) though there is some presence of black soil (*Nalla Regadi*).

##### Social and Economic Infrastructure

The village has a community hall, panchayat building and a primary school. For drinking water, the village has a piped water system and 4 hand-bores, in addition to which agricultural bore wells are also used. As it is a small village, a weekly village market (*shandai*) does not take place here, and the nearest *shandais* are in Nyalkal on Wednesdays and Hadnoor on Saturdays.

Most of people in this village are poor and illiterate and because of poverty, parents cannot afford to send their children to school and need them to help earn a living. As in most villages in the area, Mirzapur is an agricultural village in that most of its inhabitants derive a livelihood

from activities related to agriculture. Small and marginal farmers, as well as those who do not have agricultural lands of their own, work as agricultural labourers in other farmers' lands, particularly where irrigation facilities are available. Male labourers earn around Rs. 40 per day, while women earn half that amount. But since the region receives scant rainfall, and irrigation is a problem, most cultivation is rainfed kharif. Only few farmers have sufficient access to irrigation to grow a second crop. Agricultural work therefore is not available round the year, because of which labourers are forced to migrate every year in search of additional employment.

##### Cropping Pattern

Most farmers grow a variety of crops in the rain-based kharif season, sowing in June/July as the rains begin and harvesting takes place in September/October. However, when rains are delayed (as in last year), harvesting takes place in December/January. Kharif crops include paddy, sorghum, black gram, pigeonpea and green gram.

The rabi crop is sown in October and harvested in January/February, and the crops grown in this period include wheat, white sorghum, safflower, chickpea, linseed and coriander. Wheat and paddy are grown on the 10-15% of cultivated land where irrigation is available, with some farmers also growing sugarcane as an annual crop. The staple food of the villagers is rice (purchased mostly from outside the village) and sorghum.

#### DEVELOPMENTS IN MIRZAPUR

##### The Mahila Sanghams (Women's Self Help Groups)

CEC held a brainstorming session in early 1994 with the village women to try and convince them to form a Women's Self Help Group (*Mahila Sangham*) in their village. To give them added incentive, they organised a visit to the neighbouring village of Ibrahimpur, to see the improvements there since the formation of a Women's SHG in that village. Impressed with what they saw, the women of Mirzapur decided to start an SHG (*sangham*) of their own.

But they faced opposition from outside and within their households. Reddy landlords in the village warned them not to form a mahila sangham, threatening that they would not employ them in their fields. Male members of the households of these women also objected to their forming or joining a mahila sangham. The women, however, stuck to their resolve to form the Sangham and, with the support of CEC, went ahead and formed the first women's' SHG with 33 members in late 1994. They opened a bank account and began weekly savings of Rs. 5 per member.

For CEC, these initial two years were difficult, since holding this group together posed a big challenge. But they managed to win the confidence of the village women and after 1997 developments were faster and easier. At present there are seven Women's Self-Help-Groups (*Mahila Sanghams*) in the village, called Gautami, Vennela, Malle Puvvu, Chemanthi, Lakshmi, Manjeera and Bhavani Mahila Sanghams. These groups emerged from splitting the existing sangha in seven, which was necessary in order for them to qualify for support under the UNDP programme which limits the size of a *sangham* to 15 persons.

##### Community Hall

In 1999, the Sangham members met the local MLA and lobbied him to sanction a community hall for the village women's groups (*mahila mandali*). They undertook the construction them-

selves with an advance payment and it is nearly complete today. However, since the term of the local MLA was over before the completion of the building, and the new MLA comes from a different party, they still have to get remaining funds.

### **Sangham Activities**

All the SHG members regularly participate in the meetings held every week. Every week two members of the Sangham participate in the meetings held in Nyalkal on Mondays with the representatives of the women's sanghams of the other villages where CEC is working. In this meeting they discuss among themselves and also with CEC staff, the possibilities of improving or implementing other activities and paying back the instalments. They discuss complaints and problems that they face in the respective villages, and discuss possible solutions.

All sangham members who come to weekly meetings at the mandal level are given refreshment and are repaid travel expenses. Apart from this they are also given Rs. 25 towards wages foregone in order to attend the meeting.

Apart from this Mirzapur (N) group leaders conduct weekly meeting with all the group members at village level and inform them about their SHG's position, economically, socially and politically with latest information from the weekly and monthly meetings held at Nyalkal and other places.

### **Learning from Interaction**

The women of the Mirzapur Mahila Sanghams have learnt a great deal from the experience of establishing and nurturing the sangham. Two key observations made during the discussions with the women of the sangham during the recent field visit are described below.

## **2.1.2 PROFILE OF KOLLUR VILLAGE**

### **The Village**

The village Kollur is situated in Medak district of Andhra Pradesh. It is a part of the Jharasangam Mandal. It is situated at a distance of 20 kilometres from the nearest urban centre, Zaheerabad. It is 7 kilometres away from the Mandal headquarters. A three-kilometre cart track connects it to the all weather, blacktopped road leading to Jharasangam, the Mandal headquarters. A part of the cart track is under water for a large part of the year. Besides this, the remaining part of the cart track is in bad shape, which deters motorised vehicles to approach the village. It is no wonder that villagers point out the lack of proper approach road as the important problem facing the village.

More than 200 families live in this village. Majority of the households belong to backward castes. There are 100 Golla families, 10 Chakali (washerman), 5 Lingayath families, 4 each belonging to Waddera, Mangali (barber), Sale (weaver), 2 each belonging to Kummari (pot maker), Yerukula, Pakkeera, Bathina, Eediga (toddy-tappers) and Tenugu castes. 55 families belong to Scheduled Castes. Though there are only 2 Brahmin families and 4 Reddy families

### **The Start of the Women's Sangham**

**The women of the Sangham had this to say about the birth and development of their Sangham: "It was like planting saplings in the land where nobody was there to take care. But with intervention of CEC this sapling got good nourishing and now it has become a healthy plant. If this nourishing continues even in future definitely this plant will become a huge tree giving shade to others".**

belonging to forward castes they still play important role in the village. Though they account for less than 3 percent of the families in the village they own nearly 15 percent of the agricultural land. A good chunk of the fertile land is under their cultivation, and most of the irrigation wells in the village are in their fields only.

Almost all of the households in this village depend on agriculture for their livelihood. Agricultural land in this village consists of nearly 1200 acres. About 100 acres belong to the government. This is used as pasture land. This land is also not fertile. Out of this 1200 acres only about 400 acres are fertile lands and the remaining are of inferior variety. Given the undulating nature of the land here only about 30 acres are under irrigation, and open wells are the important source of irrigation. Though a small stream passes by the village it is not of much help in irrigating the fields in the village. Only ten acres belonging to a Reddy farmer are irrigated with the stream water, that too only for one crop.

Agricultural operations start from the months of April and May. During these months, land is tilled to prepare it for sowing once monsoon rains commence in the month of June. Usually between June and November villagers get enough work in the fields. The agricultural operations come to an end by the month of January. Before June and after January, women get very limited or almost no work opportunities in the village. During the busy monsoon season, labourers go to neighbouring villages in search of work. Work in sugar cane harvesting is available in the months of January and February. While male labourers are paid Rs. 30 per day as wages, women are paid Rs. 10 – 15 only. This difference in wage payment is attributed to smaller number of hours worked by women. Some times they are also paid in kind, 4 – 5 kgs of sorghum per day.

Sorghum, green gram and pigeonpea are the important crops grown in this village. Sugar cane is cultivated in lands which are irrigated by wells. Wheat is sown in a small area. Paddy is not cultivated in this village. They buy rice from the ration shop and the open market. The villagers usually buy broken rice, which costs about Rs. 6 per kg. They buy this rice from the weekly market at Jharasangam, which is held on Mondays. They don't buy rice according to the price - that is, buying more when price is low and less when prices are high. They buy according to the money/income in their hands. They purchase sorghum only when its price is lower than broken rice.

Credit facilities are hard to come by. The formal credit facilities are not accessible to them. For credit they have to depend on local moneylenders who charge exorbitant interest rates. They have to pay interest of 36 percent, i.e., Rs. 3 per Rs. 100 per month, while in the formal credit institutions it will be about 18 to 24 percent.

Though some families in the village belong to service/artisan castes, with the decline of rural artisan occupations they also depend on agriculture labour for their living. The Madiga caste is one of the Scheduled Castes where people are traditionally leather workers. But they no longer depend on it as industrially produced leather goods have entered the villages against which they cannot compete. People from the Chakali caste had laundry washing as a hereditary occupation. They used to be paid annually for their service by the households who utilised their services. Now this arrangement has come to an end. As a result of the drying up of this source of income, they also turned to agricultural labour for survival. People from Kummari caste are traditional pot makers, but have stopped doing this, as it no longer met their income needs. They some times sell pots made in other villages. "Sale" caste households are traditional weavers but they no longer weave cloth. The four Sale families in the village do retail business in cloth. Waddera caste people depend on stone/earth work for their living.

They still depend on it for their survival. As adequate work is not available in the village there is a permanent migratory life. They go to other places including Hyderabad and Mumbai in search of work. Golla families who constitute nearly half of the village are shepherds by profession. They still depend on it for their living. Compared to other families, particularly from the backward castes, they are economically in a good position.

As the avenues of employment are meagre in the village almost all families except those belonging to Brahmin, Reddy and Lingayath castes resort to migration in search of work and livelihood during the lean seasons.

### **Problems**

It is the absence of a good approach road to the village that bothers many. The absence of protected drinking water supply and hospital facility is also felt in the village. In other words, villagers want provision of infrastructure facilities like road, irrigation, power supply, communication facilities like posts and telephone, protected drinking water, health facilities both for humans and animals. Invariably provisioning of such infrastructure facilities will have its positive impact on the lives of the people of the village. Obstacles in the availability of services crucial to agricultural operation like timely and easy availability of credit, quality seeds, fertilisers and pesticides are felt in this village. Though there is a branch of a nationalised bank and a cooperative credit society in the Mandal headquarters at Jharasangam, it is not within the reach of the farmers of the village. Without influence it is not possible to obtain credit from these formal credit agencies. Other extension facilities are also not available to the farmers here. As a result of this, a proportion of the agricultural land is kept fallow. Once a piece of land lies fallow it is difficult to bring it under cultivation again as it involves more expenditure. Removal of these impediments will go along way in improving agricultural production. Absence of new employment opportunities in the village like training for tailoring and milk centre to cater to the needs of milch cattle maintaining households are also pointed out by the villagers.

### **Seasonality and Food Security**

Life in the village hinges on rainfall. It influences food security during that agricultural year. Rainfall is spread over a four-month period starting from June and extending up to September. During some years there also occur summer showers during May. It helps in land preparation and this will not be of much use for sowing. Sowing follows rains during the month of June. During this season Kharif crops are sown. Crops sown during this period will be ready for harvesting after August. Winter/Rabi crops are sown after September. These are grown using residual moisture in the land as well as winter dew.

Harvesting and crop arrivals commence during or after the month of August. The crops to be first harvested are green gram and black gram. Green gram is the important source of protein in the diet of the villagers. Their staple crop Sorghum is harvested in October. During December, Coriander and Pigeonpea crops are harvested. While Coriander is a spice crop meant for the market, Pigeonpea is another important source of protein in the food consumed in the village. Harvesting of Pigeonpea often extends into January. But the crop calendar do not follow this regularity. To a great extent it depends on timely and sufficient rains. Rabi crops like Bengal Gram and Wheat are harvested during February.

Work availability in agriculture is closely related to these agricultural operations. Work availability is more during the month of July because of inter crop operations like weeding. Though agricultural

operations begin in May, they do not offer much scope for wage employment as this work is mostly related to tilling of the land, which does not involve much wage labour. Work is also available during August. Work availability increases in October, which happens to be the harvesting season for the Sorghum crop. From this month onwards work availability declines gradually till February when agricultural operations come to an end, and along with it scope for employment in agriculture. During the months of March, April, May and June the availability of work in the village is almost nil.

Most of the households in this village belong to the small and marginal farmer class. Some of the households are land less. Small and marginal farmers cannot depend on their lands for their income/food requirements. Both male and female members of the household have to look out for wage labour. This shows that food security in most of the households depends on the work/income available in agriculture. Given the agriculture cycle, these families will be in a food insecure position during the months from March to June. Again, some of these families will be in a precarious position before the harvesting is over as their access depends on the harvesting. This usually happens during the months of August to October.

Though the PDS scheme is there in the village it does not address the food security problem completely/comprehensively. Rice available from PDS outlets meets only part of their total food consumption. Even if rice is available at the outlet if the beneficiary household does not have money in hand to purchase it is as good as having no rice.

In the absence of adequate employment opportunities in the village migration to other places like Mumbai and Hyderabad is an important mechanism to cope with adverse food security situation. Paradoxically, migration starts in the month when work availability is more in agriculture i.e., October. This trend continues up to the month of May when migration reaches its peak. In between, those who have gone on migration will return in May and then are dependent on the work in their own fields. Almost all the families except big landowners resort to migration. Migrants start returning with the onset of monsoons in the month of June. As the surpluses available from their own or wage labour are meagre, there is no other alternative to migrating during lean seasons.

Apart from migration, resorting to debt is another mechanism to cope with food insecurity. Though there are two reasons for resorting to debt, the lack of alternative income sources is the predominant one. The families who have cultivating lands contract debt to meet the input expenditure. This usually takes place during the months of June and July. This again depends on the onset of monsoons. The debt incurred during the months of April, May and September is to tide over the difficult food situation. During April and May work availability is nil. Also it is during these months that events like marriage take place. During the month of September work availability is low for those in search of wage labour, and, in the case of those dependent on cultivation they have to wait for one more month before harvesting. In order to tide over the situation they also take recourse to debt. In sum, lack of availability and access are forcing the people in to a debt trap.

### **Availability of Food Grain**

The availability or source of food grain also informs us about its accessibility, given the precarious income position of the villagers. The villagers buy a substantial proportion of their food requirements from the market. The much talked about government-supported PDS plays marginal role in providing accessibility as the food grains made available through its outlets are not sufficient to meet the food requirements of the people. Again only rice is available from the PDS outlets while the staple food here is Sorghum. Only 15 to 20 kgs of rice is provided per family per month through the

PDS while the actual requirement is about 60 kgs. For the remaining quantity, they have to source them either through own cultivation or through market purchases. Given the smaller land holdings people have to access the market to obtain their requirements.

Sorghum is the staple food in this village and also an important food crop. There are two varieties of sorghum. While a good proportion of yellow sorghum is obtained from own fields, some more quantity is purchased from the market. Most of the white sorghum is obtained from their own fields and only a small quantity is purchased in the market. This also shows the preference of the villagers; they prefer yellow sorghum to the white one. As paddy is not grown in this village, the entire amount of rice is to be obtained from outside the village. While a small proportion of rice is procured from the PDS outlet in the village, they depend on the open market for the remaining quantity. From the open market they normally buy the cheaper broken rice and not the whole rice variety. Further, their preference for broken rice depends on the relative price of sorghum in the market. Wheat production and consumption in this village is negligible. A small quantity is produced under irrigated conditions and a small quantity is purchased from the market. Wheat is not supplied through PDS outlets in the village.

Among pulses, the villagers mostly consume Green gram. Most of it comes from their own cultivation. Another important pulse variety that they consume is Pigeonpea. While a part of it comes from their own fields, another part is purchased from the market. They also consume Bengal gram, but in a very small quantity. It is consumed mostly during festivals or important occasions. Most of the Bengal gram produced is sold in the market. Pulses are not made available through PDS outlets.

Given the fact that farmers have debt burden both due to input requirements during the cropping season and food requirements during the lean season, they have to sell a proportion of the total yield to repay their debts. Proportion of the grain varieties retained for household consumption show their food preferences. In the case of yellow sorghum, which is a native variety, more than 50% of the output is retained for self-consumption. In the case of white sorghum, which is a high yielding variety, less than 50% is stored for self-consumption and the remaining is sold. This retention proportion also reflects the proportion of land used for these crops. Land allotted for yellow sorghum is less than the land allotted for the white variety. In the case of pigeonpea nearly 80 percent of the output is used for self-consumption. In the case of green gram nearly 50 percent of the output is sold. The difficulty in storing it for a long time is also one of the reasons for disposing it off in the market. The proportion of land under green gram is also more than that of pigeonpea. Only 20 percent of the Bengal gram output is retained for self-consumption. The question of retaining wheat or rice did not arise, as there is a little or no local production of these cereals.

### Food Consumption

Normally the villagers consume a mix of Sorghum and rice, and this mix depends on the prices of both of these cereals. If the price of rice, particularly broken rice is lower than sorghum they will opt for rice. Yellow sorghum is consumed mostly during winter, i.e., following harvesting. Its availability in the market is low. On an average, a ten-member family consumes 5 kgs of yellow sorghum and 2 kgs of rice during winter. In the case of a 6-member family it could be 2.5 kgs and 1 kg respectively. On an average, a ten-member family consumes 3 kgs of rice and 5 kgs of sorghum during summer. In the case of a 6-member family, the consumption would be 1.5 kgs rice and 1.5 kgs white sorghum. During the rainy season household consumption is on a similar level.

Seasonal variations in work/income have their impact on household consumption. During the months

of April and May when work or avenues of income generation are low, cereal consumption is also low.

### Storage Practices

At present the predominant practice in storing grain is to use jute bags. If the quantity to be stored is small, then mud pots are used. Given the size of the pots up to two quintals can be stored in a pot. In the case of both varieties of sorghum, mostly jute bags are used for storing. In case the quantity to be stored is say less than one or two quintals then they will be stored in mud pots. Pulses are mostly stored in mud pots too. In the case of rice as the quantity to be stored at a time is small pots are mostly used for its storage. There are also indications that the use of pots is on the decline. One of the reasons is that the people from the Kummari (potters) caste in the village had stopped making pots and purchase of pots had to be from outside the village. Another reason for the decline in the use of pots is their increasing cost. In the past big baskets made of split bamboo, which are locally, called 'Gumme' were used extensively for grain storage. Over the period its use has stopped. Its cost has become unaffordable. Also grain stored in these baskets were prone to rodent attacks which can easily make holes in the basket, rendering them useless. Thus investments made into bamboo baskets are wasted.



Traditional storage bins in use at Mirzapur, Zaheerabad. The villagers have faced a number of problems with these bins.

Villagers also follow traditional methods in securing the grain against pest attacks. They keep neem leaves in the bags and pots to repel pests. They also use ash for the same purpose. Currently they have also started using pesticide powder against pests. They use these methods both for the seed grain and the grain meant for consumption. Important pests that attack stored grain are weevils and Bag worms. The villagers dry their grain and seed grain in the sun whenever they come across infestation of pests. Similar is the case with dampness and termite attacks. According to the villagers' experience, pest attacks usually start after two or three months of storage. As a precaution against infestation grain needs to be dried in the sun once or twice in a three-month period. Even when dried in the sun, the pests move to a shade and try to come back again. When grain is also not properly cleaned the prospect of pest attacks is more.

### Population Covered by SHGs

	No. of SHGs	Total No. of Members	Total Population covered			Average Size of the Family
			Male	Female	Total	
Mirzapur (N)	3	46	117	89	206	4.48
Kollur	3	45	108	107	215	4.78
Total	6	91	225	196	421	4.63

### Distribution of Beneficiaries by Caste

Caste	Mirzapur (N)	Kollur
SC	44	38
BC	2	7
Total	46	45

In Mirzapur (N) 46 members belonged to 3 SHGs in Kollur 45 members belonged to 3 SHGs. While in the case of Mirzapur (N) these SHGs covered a population of 206, in Kollur they covered 215. For

this sample population, while in Mirzapur (N) males outnumbered females, in Kollur they are almost equal number. While in the case of Mirzapur (N) the average size of the family is 4.48 members, in the case of Kollur it is 4.78 members indicating that compared to Mirzapur (N), the family size is bigger in Kollur.

In Mirzapur (N), all the beneficiary families belonged to BPL families, while in Kollur, except for three families, all the families belonged to BPL families. In both the villages, a majority of the members of the groups come from Scheduled Castes. A small proportion of the members comes from backward castes. In Mirzapur (N) while 44 members are from SC castes, only 2 members are from BC castes. In Kollur while 38 members are from SC castes, 7 members are from BC castes. There is no member from forward castes. The economic as well as social character of the members of these groups shows that they belonged to the target population under this project.

### Land Particulars Cropping Pattern

In both these villages agriculture is predominantly rainfed and if there are irrigation facilities like well/bore well irrigation it is in the hands of well-off farmers. None of the beneficiary families owning land has any irrigation facility. As a result only rainfed dry land crops are grown by the beneficiaries in their lands.

While in Mirzapur (N) crops are grown in both the seasons, in Kollur crops are sown only during kharif season. In Mirzapur (N) in kharif jowar, green gram and red gram and in rabi season coriander and bengal gram are sown

In Kollur there is only one crop season i.e., kharif. No crop is grown during rabi. In kharif, jowar and green gram are grown. Coriander and wheat are also grown but on a very insignificant area.

Land Particulars	Mirzapur (N)	Kollur
<= 0.50 acre	13	7
0.50 1.0	11	11
1.00 1.5	6	5
1.50 2.0	10	7
2.00 2.5	2	2
> 2.5	4	13
<b>Total Land</b>	55.25	89.1
<b>Average Size of the Holding</b>	1.49	2.12
<b>Total Fallows</b>	33.8	40.95
<b>% of Fallows</b>	61.18	45.96

### Asset Base

Particulars	Mirzapur (N)	Kollur
House	Pucca	29
	Kucha	17
Bullocks		10
		6
Buffaloes		6
		5
Sheep/Goat		11
		3
Poultry		6
		2
Implements		3
		8

Even though all the families have their own house, either pucca or kucha house, their asset base is limited and narrow. Many of the households who own land do not own either bullocks or agriculture implements. As a result they have to depend on others for these. Also, in both these villages, a small proportion of the group members is tending milch animals or sheep and goats. This is because of lack of fodder, both green fodder as well as dry fodder. Due to their small asset base and hence a limited income generation capacity, they have to depend on agriculture labour for their livelihoods.

All the families of these beneficiaries show agriculture as the main source of income. Given the

dependence of agriculture on rainfall work availability in agriculture also depends on the rainfall as well as seasonality. Depending on the season wages per day range from Rs.100 to Rs.15.

### Ration Cards

Public Distribution System is the important programme taken by the government to address food insecurity of the poor people. An important drawback of this programme is that some times it excludes the genuine and needy families from its operation.

The present survey also shows the same. In Mirzapur (N) 37% of the members of the sangham are not the beneficiaries of this PDS. Similarly, in Kollur also 26.67% of the members do not have ration cards to access grain from PDS.

Availability of Cards	Mirzapur (N)	Kollur
Yes	29 (63%)	33 (73.33%)
No	17 (37%)	12 (26.67%)

### Monthly Foodgrain Consumption

In the absence of self-sufficient production of food grains and the limited reach of the PDS, members of the sanghams depend on the open market for their food grain needs. While in Mirzapur (N), 67.68% of the grain consumed comes from the open market, in the case of Kollur it is 66.98%. If we add PDS food grain to this, then nearly 80% of the food grain has to be obtained through cash transactions. Again, the contribution of PDS to food security is limited as it provides 10 to 13 percent of the food grain need. Normally it is considered that PDS contributes nearly one fourth of the food grain consumption in a family. Another important observation arising from this analysis is that jowar accounts for more than half of the food grain consumption in both the villages.

		Mirzapur (N)	Kollur
Jowar	Own Production	720	915
	From Market	1330	1255
	<b>Total</b>	2050	2170
Rice	PDS	492	442
	From Market	1208	1498
	<b>Total</b>	1700	1940
<b>Total Consumption</b>		3750	4110
<b>% of Jowar</b>		54.67	52.8
<b>% Of own production</b>		19.2	22.26
<b>% of PDS</b>		13.12	10.75
<b>% of Market</b>		67.68	66.98

## 2.2 WORKSHOPS AND EXPOSURE VISITS

### Introduction

Workshops and exposure visits are meant to enlighten and empower the members of the women's sanghams. These training and workshops are meant to impart new techniques and skills in improved farming practices, educate them on issues related to food security including food storage and improve the leadership and management skills and capacities of the members of these sanghams to manage activities on their own. Over the project period, several workshops were organised in the project villages.

CEC sees these workshops as an opportunity for women to come together and discuss matters of mutual interest and share a fellowship. With more women volunteers coming forward the number of representatives from the villages has increased. These workshops are one day long sessions wherein various aspects of the project management and reported and discussed. The workshops' programmes are held at Nyalkal and Jarasangham.

These workshops are tailored to the agriculture season. As a result these take the shape of training

focused on field level training and exposure. Select workshops were held to discuss seed selection, seed multiplication and seed/grain storage in collaboration with agricultural scientists.

### **Mandal Level Workshop**

During the project period, mandal level workshops were conducted on Khariff and Rabi crop management. Until now 20 mandal level workshops have been conducted. 50 women participated in each workshop which covered topics like Seed selection, seed multiplication, choices of bins, and Planning Programme on MCA Fund Utilisation. Mandal Level Workshops were also conducted on agricultural activities to be taken up in respective Kharif and Rabi seasons. Some workshops paid special attention on specific crops like Rabi Chickpea, Sorghum crop and production techniques involved in them.



Mandal-level Workshop for Mahila Sangham members, Nyalkal

Mandal level workshops were conducted involving 50 women from the project villages to expose them to various government programmes and how the groups can access them. These workshops were attended by local government personnel like Mandal Revenue officer and Mandal Development Officer and Assistant Director of the Department of Agriculture. With the women's groups becoming articulate and their leadership maturing, CEC has attempted to increasingly link the women's groups to government departments and their activities. 20 workshops were conducted during this period.

### **Issue Based Workshops**

Under the present project, 26 issue-based workshops were also conducted for 45 to 50 women each, on issues like soil and nutrition management, Integrated Pest Management, storage of seed and grain, seed multiplication, management of seasonal crops, and Agriculture Farm Implements. Issue based workshops were conducted in collaboration with the Save Grain Campaign for select women members from the project villages. The workshops focused on improved individual storage methods for seeds and cereals, testing their edible quality.



Mandal-level issue-based workshop held at Nyalkal

There were also sessions on improved agriculture implements as the women's groups are now seeking tools and technologies to reduce work load and increase productivity.

Workshops were also conducted on integrated pest management. For this exercise, red gram and Bengal gram crops were selected as these are the important pulse crops and are also very susceptible to pest attacks which affect the income of the farmers in this region. Workshops were also conducted for women farmers on soil fertility management, including soil testing. Another important topic taken up as a part of these issue-based workshops is crop insurance. This topic has particular significance in the background of uncertainties involved in dry land farming. These sessions were facilitated by Basix, a pioneer in the area of agriculture insurance.

One of the important objectives of the project is to develop management and leadership skills of the

members of the women's sanghams. This demands their exposure to different issues related to public and private transactions. To serve this need, some of the workshops covered management of land lease especially rental value, interest rates on borrowings/loans, linking and tapping funds from the Development of Women & Children in Rural Areas (DWCRA) programme promoted by the Andhra Pradesh government, and exploring support from commercial banks for some of the current investments. As part of the women collective having greater control in the project management, training on finances including management of bank accounts was taken up with the rise in activities and various types of accounts. All these efforts have helped to build the capacities of village women leaders and members in coping with issues confronting them in every day life.

### **Capacity Building Workshops for M.S. Team**

Besides the mandal-level and issue-based workshops, capacity building workshops were also organised in order to educate and empower the women farmers. While some of these workshops were meant for project staff and group leaders, others were meant for all the women farmers. One capacity building workshop was organised in Hyderabad for 40 staff and village organisers. This workshop was facilitated by Thinksoft Consultants Private Limited, Hyderabad. 5 staff members were also sent for T.O.T conducted by SAMETI.



Capacity building workshop for M.S team at Thinksoft Consultants, Hyderabad

### **Capacity Building of Women Farmers Groups**

123 capacity building workshops were conducted for women's groups and group leaders covering 1942 women farmers. These workshops targeted village-level women groups and women group leaders. These workshops were held on a weekly basis involving women's group leaders. Efforts were also made to bring together all members of the groups once in a month to discuss issues facing them and evolve strategies to tackle them. These capacity building workshops involving women groups and group leaders are intended to develop their organisational capability and leadership qualities. This is important for sustainability of the programme. Even after the completion of the present project they should be able to carry on their activity with out any external support.

These workshops are further supplemented by a weekly meeting in all the villages attended by all the members in the women's sangham. CEC project management attends at least two village meetings per week. In addition to this weekly meetings are held attended by one representative from each of the programme villages. As part of the above, CEC now has a cadre of five women members volunteers in each village to look after the food security programme. The entire group, five members from each village, meets once a month wherein one aspect is chosen for training and discussion.



Women farmers working out their their tasks in a workshop

Each month the meeting is held in different villages so that more people could be involved from different villages in understanding the process and contributing to it.

These weekly and monthly meetings also function as platforms to train village women organisers. At these meetings five women from each of the collectives participate. Various subjects are taken up at

these meetings – each member presenting an event in their village and a general discussion on it, reading of newspapers and debating on it, lectures on specific issues dealing with agriculture, money management and social development. In some meetings various costs are worked out and choices are identified which are in favour of the poor and women. It is also an occasion to discuss work at hand, future work and co-ordination etc., and furthering the business agenda as a shared effort.

#### Issues dealt with at the Workshops

- Grain storage
- Participatory technology development: Design and setting up of grain bin
- Seed production/multiplication
- Organising seed banks and Seed storage: individual and community
- Improved agriculture implements: Multi crop thresher, Seed drills, Improved ploughs, Seed treatment boxes, Sprayers
- Solar lamps
- Wasteland development
- Pasture development
- Crop production techniques during Kharif and Rabi seasons
- Crop insurance
- Micro-finance
- Soil testing / Soil fertility management
- Green manure Vermicompost
- Government programmes
- Integrated Pest Management

#### Resource Persons

These workshops were facilitated by the experts drawn from the following organisations/departments apart from the staff of CEC.

- Indian Grain Storage Research and Management Institute
- Save Grain Campaign
- Sri Satyasai Agro Industries
- Mandal Revenue Office
- Mandal Development Office
- Department of Agriculture
- State Agriculture Management Extension and Training Institute
- Basix – a Hyderabad based development organisation specialising in micro finance
- Thinksoft – a Hyderabad based consultants specialising in development and gender issues

### 2.3 Exposure visits

Along with workshops, during this project period exposure visits were also organised for the members of these sangham, locally and also in locations outside the state.

#### Intra-State Visits

Locally these exposure visits took the shape of inter village exchange visits. These exchange visits helped them to examine and understand cropping practices and land lease agreements. This local exposure visits have provided them further ideas of how the lands are prepared, selection of the crop and the seed variety and development of 'best practices'. A total of 131 women farmers participated. Some of the meetings include visits to the fields so that the activity is discussed at the site and hence

based on the concrete ground conditions and as some women are inhibited to speak in formal meetings these field visits gave them an important occasion to share their experiences. In September 2001, 50 members of the groups from the project villages visited Sahajeevan, a Chittoor based NGO who are working on watershed management and food security.



Mahila Sangham members on an inter-village visit with CEC staff and technical experts



Above: Women farmers attending the farmer-to-farmer extension at Vigyan Bhavan, New Delhi  
Right: Mahila Sangham Members at the Krishi Expo 2002 held in New Delhi

They have also visited Lam farm in Guntur district; a government research station working on selected dry land crops as well as livestock development. Crops seed and observed are Red gram Bengal gram, and Green gram. Farmer women discussed with scientists and taken their suggestions and also cleared their doubts. Finally Director Dr.Rosaiah explained what is lam farm, how it can help to farmers and also we promised to give seed for women groups.



In August 2000, 50 women representing all the project villages also went on an exposure visit to Andhra Pradesh Agriculture University and attended a National Agriculture Fair in Agriculture University Campus in Hyderabad. They also participated in Farmers' Day programme in September 2002. In August 2002, 16 women attended field day in CRIDA, Rajendra Nagar.

#### Inter-State Visits

28 women farmers representing different groups visited Krushi Expo 2002 at New Delhi and 6 women farmers attended the national seminar on farmer to farmer extension March 2002. These visits also helped strengthen bonds among women of different villages who together participated in these exposure visits and 10 women farmers visited Agricultural Expo-2003 at Pragathi Maidhan, New Delhi.

### 2.4 Participatory Material Development

Under the component of Participatory Material Production, education material on different aspects of dry land agriculture was developed that could be within the reach of the women farmers participating in the project.

This education material includes banners, charts, posters, and booklets. Most of this material includes pictures and charts so as to be accessible to the illiterate women farmers. Banners were used to explain different kinds of botanicals used as a part of intergrated pest management (IPM). Charts and posters were prepared to help identification of deficiency in the growth of different crops, new methods and techniques in grain storage management and pest control in grain storage without

resorting to chemical pesticides. A thousand booklets each were prepared on Redgram and Bengal gram crop management and distributed to women farmers.

## 2.5 COMMUNITY GRAIN STORAGE BINS

The Project proposes crucial intervention to improve food security of the members of the women's groups participating in this project. This involves market operations to try and insulate the members from price fluctuations in the open market. For this purpose community grain banks were planned. To facilitate the community grain banks, a community grain storage bins are to be erected.

Four storage bins have already been constructed as a part of this project. In the villages of Mirzapur (B), Kollur, Mungi and Nyalkal, bins have already been constructed. In Mirzapur (N) village already a concrete bin with the capacity store 13 tonnes exists. In 3 more villages places have been identified by the women sanghams to construct community grain storage bins.

Before starting the construction of bins the grain storage needs of the community were assessed.

They were also involved in choosing the technology and size of the bin. In Kollur bin was constructed using locally available laterite stone. It was designed to have two compartments to store two different types of grain. Each compartment can be used to store 50 quintals of grain. In Mirzapur (B) a metal bin is erected. This has the capacity to store 40 quintals of grain.

In Mirzapur (N) kharif and rabi sorghum was stored and in Mirzapur (B) rabi sorghum was stored in the bins. In Kollur grain was stored after its completion as the kharif jowar crop was affected by untimely rains during harvesting. This led to moulding of grain and this grain could not be stored in the bin.

The Community Grain Storage Bins is a very important component of the present project. The whole food security component of the project revolves round this programme.

As such this raises many issues regarding the concept as well as applicability of the programme. CEC has pioneered this concept. As a self-appraisal CEC has chosen one of the villages where it has already launched this programme to thoroughly examine different aspects of this programme.

## 2.6. SEED BANKS

### Introduction

Proper seed selection and seed treatment play an important role in higher agricultural yields. Besides this, with the increasing penetration of seed companies supplying hybrid varieties, the dependence on these companies for seed is increasing by the year. Along with this local seed varieties are slowly disappearing, further increasing dependence on seed companies. To avoid this total dependence on seed companies, the seed bank concept is being taken up as a part of the present project. This involves two components. One is the multiplication of seeds needed by the women farmers with the help of foundation seed procured from research stations. Another one is the taking up seed storage practices.

### Seed Multiplication

Under the seed multiplication component in the project villages, different varieties of seeds of different crops grown by women farmers were taken up.



Community storage bin constructed at Mirzapur, Zaheerabad

## Seed Multiplication Program for 2001-2002

S.No	Name of Village	Jowar		Red Gram		Chick Pea					
		P.V.K.801		LRG-30		ICCV 2		ICCV 10		ICCV 37	
		Acres	Yield (kgs)	Acres	Yield (kgs)	Acres	Yield (kgs)	Acres	Yield (kgs)	Acres	Yield (kgs)
1	Mirzapur (N)	1	800	2	675						
2	Mirzapur (B)	0.5	300	2	750	1	200	1	250	1	
3	Nyalkal	1	700	2	120						2
4	Mungi	1	400	1	225	2	350				
5	Malkapur	0.5	300	1	780	2	375				
6	Ratnapur	1	500								
7	Siddapur	0.5	300	1	160						
8	Thotipally	1	600								
9	Ibrahimpur	1	750	2	350						1
10	Rukmapur	1	600								
11	Ramatheertham	0.5	250								
12	Kollur	1	825					2	630	1	
13	Islampur	0.5	340								1
14	Satwar	1	700	2	400			1	175	1	
15	Giniarpally	0.5	300								

The foundation seed necessary for this programme was obtained from research centres like ICRISAT, the Regional Research Station at Warangal, and the A.P Seed Development Corporation. Attempts are also being made to obtain some foundation seed from Regional Research Station and the Lam farm in Guntur district, which is also working on crops grown in dry lands. Groups were not able to retain kharif seed during the agriculture year of 2001-02 due to crop failure. The following table provides the details of land used and quantity of seed produced under this programme during the agriculture year 2001-02.

### Seed Storage Bins

Once the seed for different crops are produced its preservation until the next sowing season presents problems. The existing practices are not able to store grain in healthy condition for one year. IGMRI had provided technical inputs in designing metal storage bins to store seed grain. These metal bins are capable of storing One quintal of grain. Fabrication of these bins is ordered according to the specifications provided by IGMRI. Until now 15 sets of seed bins with a capacity to store 100 kgs are fabricated and installed in 15 villages and the women groups started storage in the bins. Seed bins are installed in the following 15 villages: Mirzapur (N), Nyalkal, Malkapur, Mungi, Mirzapur (B), Ratnapur, Giniarpally, Kollur, Ramatheertham, Tatpally, Siddapur, Rukmapur, Ibrahimpur, Satwar, and Islampur.



Multipurpose storage bin used for seed storage in Zaheerabad district

## 2.7 REGENERATING NATURAL RESOURCES

### Introduction

The project takes cognisance of the fragile nature of the agricultural lands and the need to protect the same. Towards this direction it has evolved different activities which will go along way in protecting nature. These activities include propagating use of vermi compost and solar lamps. While vermicompost activities have given a fillip to the use of organic materials in agriculture, the solar lanterns have been a boon to farmers tending their fields either in the early hours of the day or late at night.



Vermicompost shed constructed in Mirzapur(B) village.

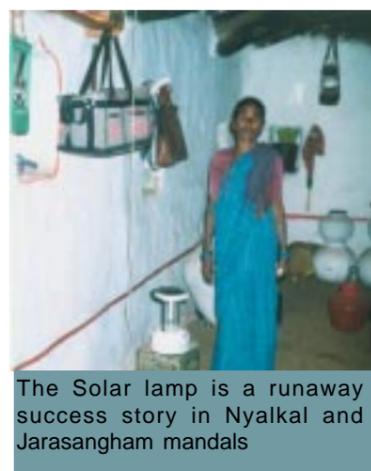
### Vermi Compost

Vermi compost has got as much nutrient value as chemical fertilizers and at the same time has no adverse effect on soils. Initially generation of vermi compost was carried out in the two villages of Nyalkal and Mirzapur (B). In these two villages permanent vermi compost sheds were constructed. Members of the women farmers' groups were trained in operating and maintaining these sheds. They have already started collecting raw material like dung, leaves and other waste matter needed for vermi compost.

The use of vermi compost will bring down the dependency on chemical fertilisers and also will help to bring down costs of production. Arranged for procurement of seed from Govt.

### Solar Lamps

Use of solar lamps is being propagated to reduce dependency on fuels that are harmful to environment. Already 270 solar lamps were distributed to the group members and installed in the project villages and one home solar system was installed in Mungi village. Lot of demand is there for solar lamps as women felt that they are very useful. By using these lights, which can also be taken to the fields, members can save money on electricity to some extent. Beneficiaries have to repay the money in instalments of Rs. 30 per month for two years, which will go towards expenditure on maintenance and the battery. One important problem with these solar lamps is their maintenance and repair. Now if there is any problem these need to be taken to Hyderabad which is more than 100 kilometers away. To overcome this the company supplying these solar lamps has come forward to train local persons in their maintenance.



The Solar lamp is a runaway success story in Nyalkal and Jarasangham mandals

## 2.8 LONG TERM INVESTMENTS FOR LAND UPGRADATION

### Introduction

An important objective of the project is to empower women through facilitating their access to productive resources. Towards this objective women's groups interacted with the local officials and saw to it that degraded lands lying fallow for many years are made available to them to take up land upgradation work including soil and moisture conservation and fertility improvement.

### Mungi

In Mungi village 35 acres of revenue land is allotted to the women's groups. As a part of this project financial help was provided to the women's groups of this village to productively use this land by upgrading it. Initially it was deep ploughed as it is for the first time it is being brought under cultivation. After necessary land preparation fodder seed Stylo Hemata was sown in August 2001. For healthy growth of fodder they applied single super phosphate while sowing the seed. Germination of the seed was good. Weeding was done by women group members. The women groups have taken up fodder cultivation in order to meet the fodder needs of buffaloes that they started to keep to improve their income and also provide work and income round the year.



A "before-and-after" view of the long-term land upgradation programme in Nyalkal mandal of Zaheerabad district

### Mirzapur (N)

In Mirzapur (N) village 23 acres of land was taken up for land upgradation. This was lying fallow for the last 20 years. This land is owned by members of the women's groups in the village. This land was given to them by the government under surplus land distribution. As it was on a hilly slope and of very low fertility they did not bring it under cultivation. Under the present land upgradation watershed works were taken up on this land including bund construction. After necessary land preparation sun hemp seed was sown in August 2001. This crop will be ploughed back to improve soil fertility.



Soil and water management for land upgradation

### Nyalkal

In Nyalkal village also 25 acres of land was taken up for development under this programme. This land was lying fallow for a long time. Initially the land was tilled and prepared for sowing. Later it was sown with sun hemp crop. Afterwards this sun hemp crop would be ploughed back into the soil to improve its fertility.

### Four More Villages

While in three villages viz., Mungi, Mirzapur (N) and Nyalkal work is already in progress, four more villages - Giniarpally, Tatipally, Mirzapur (B) and Rukmapur – are identified for the programme. 90 acres land taken and plowing completed. In these four villages land for development is also identified.

## 2.9 FARM EQUIPMENT TO THE WOMEN'S GROUPS

Use of improved implements is very important in increasing yields as well as in improving the profitability of operations. In the context of the present project the improved agricultural implements have played a crucial role in reducing the drudgery of farming and enhancing the capacity of women farmers in carrying out their farm operations.

As a part of this programme initially multi crop threshers were provided to 10 women farmer groups belonging to Mungi, Nyalkal, Mirzapur (N), Mirzapur (B) and Malkapur villages. This helps them save threshing charges and also helps them earn more grain by hiring the thresher to others. While the Department of Agriculture of the Government of AP provided 50% subsidy in the purchase of this machinery, the remaining part was provided under the present project. In each village women's groups contributed Rs.6000 for purchase of a bullock cart to transport the threshers from one field

to another. Use these machines for threshing was started in Khariff season of 2001. Once threshing in the fields operated by women's groups is over, these threshers are rented out to others either in the village or in the neighbouring villages. The successful operation of these threshers has led to an increased demand for them. Following this 6 more multi-crop threshers were given to 24 groups in 8 villages with subsidy from the Government. Apart from the threshers other agriculture implements like improved iron ploughs, power sprayers, seed drillers, and seed treatment box are being made available to women farmers' groups. 97 iron ploughs were given to ten groups and 440 manual weeders were given to 35 groups.

#### DETAILS OF GRAIN PROCURED ON HIRING OUT MULTI – THRESHERS (Quintals)

S.No	Groups	Village	Khariff-Jowar	Chick-Pea	Rabi-Jowar	Wheat
1	Vennela & Gautam Mahila Sangham	Mirzapur(N)	22	7		1.25
2	Ambedkar & Vennela Mahila Sangham	Nyalkal	35	6		0.6
3	Ambedkar & Banthi Poovu Mahila Sangham	Mungi	11	4	10	0.5
4	Malle Poovu & Gautam Mahila Sangham	Mirzapur(B)		0.75	16	5
5	Vennela & Banthi Poovu Mahila Sangham	Malkapur		1.8	11	3

#### Groups Given Multi-Crop Threshers July 2001

1. Chamanti Puvvu Mahila Sangam Irzapur (N)
2. Goutam Kumar Mahila Sangam Irzapur (N)
3. Ambedkar Mahila Sangam Nyalkal
4. Vennela Mahila Sangam Nyalkal
5. Vennela Mahila Sangam Malkapur
6. Chamanti Puvvu Mahila Sangam Malkapur
7. Banti Puvvu Mahila Sangam Mungi
8. Mariamma Mahila Sangam Mungi
9. MallaPuvvu Mahila Sangam Mirzapur (B)
10. Goutam Mahila Sangam Mirzapur (B)

#### Groups Given Multi-Crop Threshers Sept' 02

1. Amba Bai Mahila Sangam Ratnapur
2. Mariamma Mahila Sangam Ratnapur
3. Mallanna Mahila Sangam Ratnapur
4. Subham Mahila Sangam Kollur
5. Nemali Mahila Sangam Kollur
6. Mariamma Mahila Sangam Kollur
7. Jyothi Mahila Sangam Satwar
8. Sangeetha Mahila Sangam Satwar
9. Ambedkar Mahila Sangam Satwar
10. Ambedkar Mahila Sangam Siddapur
11. Manjeera Mahila Sangam Siddapur
12. TuljaBhavani Mahila Sangam Siddapur
13. Arunodhya Mahila Sangam Ramtheertham
14. Goutam Mahila Sangam Ramtheertham
15. Bheeranna Mahila Sangam Ramtheertham



Traditional method of crop post-harvest operations



Reducing drudgery in farming - Multi-thresher in use at Nyalkal mandal

16. BharatMata Mahila Sangam Rukmapur
17. Ashok Mahila Sangam Rukmapur
18. Ambedkar Mahila Sangam Rukmapur
19. Shanti Mahila Sangham Chillapally
20. Goutam Mahila sangham Chillapally
21. Durga Bhavani Mahila Sangham Chillapally
22. Navadanya Mahila Sangham Kakkorvada
23. Gulabi Mahila Sangham Kakkorvada
24. Banti Puvvu Mahila Sangham Kakkorvada

#### 2.10 MICRO CAPITAL ASSISTANCE

Lack of adequate capital is an important constraint facing the women farmers in productively using the resources owned by them or to access productive inputs like land. While informal credit involves usurious interest rates drawing its users in to a debt trap, formal credit agencies through the cumbersome and intimidating paper work involved keep the potential beneficiaries away from using it. Micro Capital Assistance (MCA) part of this project attempts to address this by providing necessary capital to the women farmers. 100 groups were provided with MCA. Under this each group is entitled to receive Rs.35,000 as assistance for its economic activities. In September 2000, 12 groups were given assistance. In December 2000, 9 groups and in December 2001, 22 groups and in May 2002, 12 groups were given assistance. In September 2002, 34 groups were given assistance. In March 2003, 11 groups were given assistance. The details of assistance provided is given in Annexure-2.

S.No	Village	Fallow Land	Land lease	Seed Development	Inputs
1	Mirzapur (N)	48	10	3	26
2	Nyalkal	23	7	5	24
3	Malkapur	--	5	3	21
4	Mungi	18	9	8	28
5	Mirzapur (B)	5	7	4	58
6	Ratnapur	28	-	2	42
7	Giniarpally	--	-	2	48
8	Kollur	21	-	3	34
9	Ramatheertham	--	-	-	49
10	Tatpally	44	-	1	32
11	Siddapur	--	-	1	29
12	Rukmapur	19	-	2	38
13	Ibrahimpur	--	-	3	35
14	Satwar	32	5	4	34
15	Islampur	--	-	5	29
	<b>Total</b>	<b>238</b>	<b>43</b>	<b>46</b>	<b>527</b>

Groups have received Rs.35,000/-, 89 MCA groups rotated their assistance thrice and 11 groups used it for the first time. Financial assistance was given to hire bullocks or tractors for tilling the lands owned by women farmers, seeds, fertilisers, weeding, pesticides, fallow land development, seed multiplication, and leasing in lands. Revolving the funds by some groups has ensured that the amount will again be advanced to them during the next crop season. Till now the funds were used to bring 854 acres under cultivation. 338 acres of fallow land were developed of which 43 acres were leased in by 18 groups. 46 acres were used for seed development while inputs were purchased for cultivating 1127 acres.

**ANNEXURE - 1**

**MAHILA SANGHAMS ORGANISED BY CENTRE FOR ENVIRONMENT CONCERNS  
PHASE - 1**

S.No	Group	Village	Mandal	S.No	Group	Village	Mandal
1	Cham antipuvu Mahila Sangham	Mirzapur(N)	Nyalkal	31	Bhavani Mahila Sangham	Mirzapur(B)	Nyalkal
2	Gautam Kumar Mahila Sangham	Mirzapur(N)	Nyalkal	32	Parameswari Mahila Sangham	Nyalkal	Nyalkal
3	Vennela Mahila Sangham	Mirzapur(N)	Nyalkal	33	Mallanna Group	Ratnapur	Nyalkal
4	Ambedkar Mahila Sangham	Nyalkal	Nyalkal	34	Mallepuvu Mahila Sangham	Mirzapur (N)	Nyalkal
5	Vennela Mahila Sangham	Nyalkal	Nyalkal	35	Jagaadamba Mahila Sangham	Mungi	Nyalkal
6	Velugu Mahila Sangham	Nyalkal	Nyalkal	36	Bharata mata Mahila Sangham	Ibrahimpur	Nyalkal
7	Vennela Mahila Sangham	Malkapur	Nyalkal	37	Ashoka Mahila Sangham	Ibrahimpur	Nyalkal
8	Cham antipuvu Mahila Sangham	Malkapur	Nyalkal	38	Manjeera Mahila Sangham	Malkapur	Nyalkal
9	Banthipuvu Mahila Sangham	Malkapur	Nyalkal	39	Jyothi Mahila Sangham	Satwar	Jarasangham
10	Banthipuvu Mahila Sangham	Mungi	Nyalkal	40	Sangeeta Mahila Sangham	Satwar	Jarasangham
11	Mariam ma Mahila Sangham	Mungi	Nyalkal	41	Manjeera Mahila Sangham	Islampur	Jarasangham
12	Ambedkar Mahila Sangham	Mungi	Nyalkal	42	Samata Mahila Sangham	Islampur	Jarasangham
13	Mallepuvu Mahila Sangham	Mirzapur (B)	Nyalkal	43	BhavaniMata Mahila Sangham	Giniarpally	Jarasangham
14	Gautam Mahila Sangham	Mirzapur (B)	Nyalkal	44	Bheeranna Mahila Sangham	Ramtheertham	Nyalkal
15	Dhanalaxmi Mahila Sangham	Mirzapur (B)	Nyalkal	45	Dhastagiri Mahila Sangham	Rukmapur	Nyalkal
16	Amba bai group	Ratnapur	Nyalkal	46	Chamanthi Mahila Sangham	Tatpally	Nyalkal
17	Mariam ma Group	Ratnapur	Nyalkal	47	Shirdi sai mahila Sangham	Ramtheertham	Nyalkal
18	Sri Shakti Mahila Sangham	Giniarpally	Jarasangham	48	Vijailaxmai mahila Sangham	Nyalkal	Nyalkal
19	Shanti Mahila Sangham	Giniarpally	Jarasangham				
20	Subham Mahila sangham	Kollur	Jarasangham				

**PHASE. 2**

S.No	Group	Village	Mandal	S.No	Group	Village	Mandal
1	Bhagya Mahila Sangham	Satwar	Jarasangham	21	Arunodaya Mahila Sangham	Kollur	Jarasangham
2	Mybu Subhani Mahila Sangham	Satwar	Jarasangham	22	Mariamamma Mahila sangham	Giniarpally	Jarasangham
3	Mariamamma Mahila Sangham	Islampur	Jarasangham	23	Manjeera Mahila Sangham	Nyalkal	Nyalkal
4	Mariamamma Mahila Sangham	Ramtheertham	Nyalkal	24	Chamanti Mahila Sangham	Nyalkal	Nyalkal
5	Bharat Matha Mahila Sangham	Rukmapur	Nyalkal	25	Chamanti Mahila Sangham	Kakkorvada	Jarasangham
6	Shakti Mahila Sangham	Siddapur	Jarasangham	26	Bhoomitali Mahila Sangham	Jonagama	Jarasangham
7	Bhavani Mahila Sangham	Mungi	Nyalkal	27	Moulali Mahila Sangham	Medapally	Jarasangham
8	Ambedkar Mahila Sangham	Mirzapur (B)	Nyalkal	28	Shanti Mahila Sangham	Chillapally	Jarasangham
9	Mariamamma Mahila Sangham	Mirzapur (B)	Nyalkal	29	Goutam Mahila sangham	Chillapally	Jarasangham
10	Goutam Mahila Sangham	Malkapur	Nyalkal	30	Durga Bhavani Mahila Sangham	Chillapally	Jarasangham
11	Mariamamma Mahila Sangham	Malkapur	Nyalkal	31	Bhoomitali Mahila Sangham	Medapally	Jarasangham
12	Goutam Mahila Sangham	Nyalkal	Nyalkal	32	Chamanti Mahila Sangham	Medapally	Jarasangham
13	Tuljabhavani Mahila Sangham	Nyalkal	Nyalkal	33	Tulja Bhavani Mahila Sangham	Medapally	Jarasangham
14	Ambedkar Mahila Sangham	Ratnapur	Nyalkal	34	Rytu Mitra Mahila Sangham	Atnur	Nyalkal
15	Bhavani Mahila Sangham	Ratnapur	Nyalkal	35	Dhana Laxmi Mahila Sangham	Atnur	Nyalkal
				36	Vennela Mahila Mahila	Atnur	Nyalkal
				37	Navadanya Mahila Sangham	Kakkorvada	Jarasangham
				38	Gulabi Mahila Sangham	Kakkorvada	Jarasangham
				39	Banti Puvvu Mahila Sangham	Kakkorvada	Jarasangham
				40	Santoshi Mata Mahila Sangham	Jonagam	Jarasangham
				41	Bhavani Matha Mahila	Jonagam	Jarasangham

**Status of Land Up-gradation implemented in CEC Project Area, 2002-2003**

S.No	Village	Acreage	Development Interv
1	Mungi	35	Removal of bushes, Deep plo Application of mix of fly ash, manure and single super phos with preparation of small plot tree plantation
2	Mirzapur N.	26	Removal of bushes, Deep plo trenching, two water storage pits for plantation and farm demonstration.
3	Nyalkal	24	Removal of bushes, Deep plo trenching, two water storage water harvesting structure and plantation.
4	Malkapur	19	Removal of bushes, Deep Plo Contour Trenching, and wat structures
5	Mirzapur(B)	20	Bush clearance, stone remova plough, Contour trenching a storage structures.

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**Status of Land Up-gradation implemented in CEC Project Area, 2002-2003**

S.No	Village	Acreage	Development Interv
6	Rukmapur	19	Removal of bushes and rocks plough, Contour trenching a storage structure
7	Tatipally	20	Removal of bushes, deep plo contouring of land & trenchi storage structures
8	Giniyarpally	25	Removal of bush and stones, contour trenching and one w structure
9	Ramtheertham	22	Ploughing and contour trencl started while one water storag completed
10	Siddapur	46	Ploughing and Contour trenc begun and two water storage completed
11	Kakkarwada	20	Planned work and execution
12	Ratnapur	12	Ploughing and Contour Tren started, water storage structur

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Women Farmers going around the Kisan Mela held in June 2003 at Zaheerabad



Examining items at the Solar and IPM stalls in the Kisan Mela



Women farmers standing in front of sorghum crop in Mirzapur village



Addressing the gathering at the Kisan Mela in June 2003



A view of the gathering at the Kisan Mela held in June 2003



Women farmers standing in front of sorghum crop in CRIDA

