Pennagaram taluk in Dharmapuri district of Tamil Nadu, located on the western side of the Eastern Ghats, is unique in its geographical settings with undulated topography. The district with a hilly terrain limits the benefits from the flow of Cauvery river. The region suffers from acute water scarcity, affecting farming as well as consumption.

Groundnut is the major crop grown under rainfed conditions, along with intercrops like redgram, cowpea etc. These crops are not only a source of income to farmers but also serve as an important source of protein for the family and the livestock. However, over the past two decades, farmers have been facing challenges like frequent crop failures and increased production costs, resulting in low yields and low incomes. Also, with indiscriminate use of chemicals, not only is the soil health affected, but the ecosystem also degraded. Moreover, if monsoon fails in an year, farmers go in for finger millet, a hardy crop of rainfed regions. During such years, the households and the livestock are deprived of protein intake.

To address this situation and help farm families have access to nutrition sources, AME Foundation implemented a kitchen garden programme in 20 villages in Pennagaram taluk. This programme, as a part of Dharmapuri Farm Initiative (DFI), is supported by Srivats Ram Foundation, Chennai.

Initial efforts

A close assessment of existing ground situation was done through a PRA. Large number of farmers, especially women participated, assessed the present situation and explored opportunities for future growth. Improving groundnut cultivation was seen as an entry point, to further expand activities like kitchen gardening.

Initially, around 25 young women from 20 villages were intensively trained on cultivating groundnut on ecological agricultural methods. These trainings were also used to enhance their facilitation skills during Farmer Field Schools (FFS). These trained women, along with AME staff, co-facilitated FFS in each of the 20 villages. Around 400 women farmers got trained in groundnut cultivation using sustainable agricultural practices, through the season-long FFS.

Setting up kitchen gardens

With a good groundnut harvest, the women were eager to learn many more things which could be of support to their families. This was the time when the idea of kitchen gardens for improved nutrition security was introduced. Women were enthusiastic to learn, especially during the off-season when they had no crop to grow. Thus, they were trained on establishing low cost kitchen gardens using eco-friendly methods.

Initially, women established kitchen gardens with 13 types of vegetable seeds in their backyards (Table 1). They started getting good harvests of vegetables and greens, which were used for consumption. Little surpluses were shared with the neighbours and also sold in the local markets. With growing access to vegetables on a daily basis, these families stopped buying vegetables from the market helping them save around Rs.2100, every month. In a month, each family could harvest 6-9kgs of brinjal; 7-9kgs of ribbed gourd; 10-14kgs of bhendi; 4-6kgs of bitter gourd in their backyards. Around 40% of this was sold by which they received an income of Rs.2000-2400. As a part of the programme, around 400 farmers established kitchen gardens in an area of 100 to 150sq.ft. in their homesteads.

After the initial enthusiasm in growing vegetables, women were faced with water shortage by which they could not continue or spread this activity. Vegetable growing was also dependant on rainfall and failure of monsoons affected kitchen gardening. To overcome this, women thought of reusing the waste water from

Recycling kitchen waste water in vegetable gardens

Women in rainfed areas in Dharmapuri are switching over to kitchen gardens, which provide nutrition to the family as well as money. By recycling the limited water available, these women have shown that it is possible to grow vegetables all round the year.

Nutrition gardens

Women lead the way

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Women in rainfed areas in Dharmapuri are switching over to kitchen gardens, which provide nutrition to the family as well as money. By recycling the limited water available, these women have shown that it is possible to grow vegetables all round the year.
the kitchen. They made an assessment of the quantity of waste water coming out of kitchen and it amounted to 40-50 liters per day. Instead of wasting this water, they started directing it to the kitchen gardens. To make the best use of the little available resource, the water was filtered and poured into a drum of 50 liter capacity. The drum was fixed with drip-lets to irrigate the root zone of vegetable plants. Another innovative method was also tried out. One litre water bottles were used to irrigate creepers through drip method. By using these methods, water loss through evaporation and seepage were controlled, thus enabling efficient use of water. Now, almost all the farm families are recycling kitchen waste water to grow vegetables.

The entire family, including men and children are now interested in kitchen gardens. While men help in fetching water for the garden, erecting fence etc., women are involved in nurturing and protecting the plants by installing yellow sticky traps, and taking up activities like watering and harvesting. Young children also render support to their mother, during free time.

There is a visible change in food consumption patterns. The family diet now includes more variety of vegetables. There is an improvement in the health status as well. Women say that with increased intake of greens (fibres) they no longer have digestive problems.

Kitchen garden activity was taken up during the off seasons, i.e., from January to June during the initial two years (2010-11, 2011-12). Women have now extended it to the main cropping season as well, thus ensuring access to vegetables, all round the year.

**Spreading success**

The success of 400 women farmers has grabbed the attention of many in all the villages. Around 300-500 more households across 20 villages have taken up this activity.

These women also had an opportunity to exhibit their knowledge on vegetable growing during the inaugural function of International Year of Family Farming (IYFF) event, organised at Bangalore. The women displayed various types of vegetables of homestead garden and shared their experience.

For these women, kitchen gardens paved a way for building nutritional security to their families while helping them earn reasonable income. Also, women are relieved of the drudgery from travelling a distance of 10-15 kms for buying vegetables. Most importantly, these homestead gardens have become a source of strengthening family and social bonding.

J Krishnan

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**Table 1: Kitchen garden monthly output**

<table>
<thead>
<tr>
<th>Vegetables</th>
<th>Quantity of Harvest (kg)</th>
<th>Kept for family use (kg)</th>
<th>Given to neighbours (kg)</th>
<th>Quantity Sold out (kg)</th>
<th>Income through sale (Rs.)</th>
<th>Savings on buying (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radish</td>
<td>15-25</td>
<td>5-6</td>
<td>1-2</td>
<td>10-15</td>
<td>150</td>
<td>200</td>
</tr>
<tr>
<td>Beetroot</td>
<td>10-15</td>
<td>5-8</td>
<td>1-2</td>
<td>5-8</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Snake gourd</td>
<td>10-15</td>
<td>3-5</td>
<td>1-2</td>
<td>4-5</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Ribbed gourd</td>
<td>8-10</td>
<td>10</td>
<td>1-2</td>
<td>5</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Bitter gourd</td>
<td>5-8</td>
<td>2-3</td>
<td>1</td>
<td>2-3</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Tomato</td>
<td>25-30</td>
<td>10</td>
<td>1-2</td>
<td>10-15</td>
<td>400</td>
<td>200</td>
</tr>
<tr>
<td>Bhendi</td>
<td>15-25</td>
<td>5-6</td>
<td>1-2</td>
<td>10-15</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Brinjal</td>
<td>10-15</td>
<td>3-5</td>
<td>1-2</td>
<td>8-10</td>
<td>300</td>
<td>200</td>
</tr>
<tr>
<td>Greens (4 types)</td>
<td>20-30</td>
<td>10</td>
<td>1-2</td>
<td>8-15</td>
<td>250</td>
<td>200</td>
</tr>
<tr>
<td>Pumpkin (4-5nos./head)</td>
<td>60-70</td>
<td>30</td>
<td>0.5</td>
<td>50</td>
<td>300</td>
<td>200</td>
</tr>
<tr>
<td>Carrot</td>
<td>5-10</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2400</strong></td>
<td><strong>2100</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Greens in homestead garden