

## **An Innovative Approach: Establishment of Small Orchard and Beans intercropping for sustainable livelihoods of tribals' farmers.**

Tribals share a special bond with the forests they dwell in. The forests of Tamil Nadu are home to various tribal communities and primitive tribal groups. Our village of interest, Bejjalatti in Erode district, is a Sholiga dominated area where tribal farmers mainly engage in agricultural activity for almost 6-7 months of the year.

Ragi and maize are the major Kharif crops. Initially, the tribals used to cultivate Ragi as the main crop along with lab lab and mustard as intercrops. The area is mostly comes under rain-fed farming.

Myrada KVK came up with the idea of establishing orchards in a bid to improve the quality of life of the tribals in the region. The climatic conditions along with other related factors such as soil type, rainfall, water availability and market potential were considered before zeroing in on the type of orchards that were to be developed in the region. Based on the above mentioned considerations, three fruit bearing trees were chosen. The chosen ones were Amla, Mango and Citrus. Apart from this, trees bordering the plots were also to be planted which included silver oak, tamarind and cassia species.

In order to provide the initial impetus, Myrada KVK helped in the establishment of participant groups in the village and through discussions with the participant group, it was decided to set up a revolving fund to help farmers deal with the initial fund crunch. Farmers took an initial loan of Rs.1500 per acre from the participant group corpus for the purchase of seeds and once the harvest was completed and the farmers have sold their produce, they were required to return the money, along with a minimum service charge, back to the revolving fund. This system was designed to keep the community cushioned when it comes to critical fund availability.

**The monetary effects of having orchards can be felt only after a few years and till that it is essential to provide the farmer with sustained income in order to keep the interest alive.**

Three things were essential to keep the orchard development programme alive in this region – one, the farmer must be made to stay back in his field after the Kharif harvest; two, he should be remunerated accordingly so that he doesn't leave his field during the winter

season and three, till the orchards bear fruit, the farmers should be provided with an alternate source of income for the period they stay in their farms during the non-cropping season.

After a thorough study of the economics and the climatic conditions of the region, it was chosen that a vegetable crop would be sown during Rabi season. Crops such as blackgram and pulses were considered but the chosen crop was beans. Beans was best suited as the crop thrives in hill areas and being a short duration crop, the vegetables can be harvested within 90 days filling the income vacuum during the Rabi months.

Beans sowing starts in late April and all the farmers in the village complete their last picking by mid July. When optimum conditions prevail, an average of 1.5 to 2 tonnes of beans can be harvested in an acre at the end of the season.

Based on first hand data drawn from 25 farmers of Bejjeletti village, it was found that the total yield after four pickings was 49,985 kg. On an average, farmers were able to harvest around 1800 – 2100 kg of beans from their one acre plot.

The highest yield from a single plot was that of farmer Manian. The yield from his one acre plot was found to be 2480 kg, fetching the farmer a gross income of Rs. 55,830. After deducting the input costs, the net income of this particular farmer was found to be Rs. 48,480.

All the farmers uniformly spent Rs.1500 on seeds and Rs.1650 on fertilizers. Labour costs varied from farm to farm and fell into the bracket of Rs.3500 to Rs.4000 on an average. Overall, the total expenditure on the crop for a period of three months was between Rs.5000 and Rs.7000 on an average. Whereas, the net income per farmer (after input cost deductions) varied between Rs.30000 and Rs.45000.

This is a huge sum, given the fact that the tribal's move out of their village during this season looking for casual employment outside.

Some of the visible effects of the intervention are:

- **Reduced or No Migration; Stable Income:** After the introduction of this project, tribals do not venture out after the Kharif harvest. They have taken up cultivation of beans between April and June, which usually, was not the case.
- **Participation of the women-folk:** The women have evinced great interest in tending to their farms and taking care of the entire process right from sowing till the vegetable

crop is harvested. As a consequence the orchard has also been saved as the farmers tend to take care of the trees along with the beans crop.

- **Reduced Interference from wild animals:** Wild animals are also kept at bay as the villagers maintain tight vigil when the crop is in the field. If the fruit trees were planted in isolation, there is a good chance for it to be run over by wild animals if farmers do not maintain the same amount of vigilance as they would if a crop is sown.
- **Critical Availability of Water:** Water availability issues had been a hindrance initially. Since the entire area is rain fed, long rain-less periods can spell doom. Only farmers who had their lands along the stream used to take up vegetable cultivation, that too, only in a small scale. After the introduction of community irrigation, glitches with respect to water availability for the beans crop, in addition to the fruit trees is taken care of. When rains fail during critical periods, irrigation from a perennial stream close by comes to the rescue.

The bountiful harvest of the beans intercrop has encouraged farmers to take up agricultural activity between the months of April and July. This has come as a saving grace for the fruit trees as the farmers stay in the village to tend to the trees and water them regularly.

One of the woman farmers from the village, Chennanjamma, aptly expressed, “When one person is seen watering the saplings, everyone else follows”; women folk actively engage themselves in farm activities and watering fruit trees is no longer seen as a burden.

Myrada KVK promoted 5 communities managed resource centres (CMRC) where the seed availability and technical information is timely provided to the tribal communities. By seeing the success of Bejilatti village, more than 10 tons of seeds have been procured by CMRCs every year, now the crop is being cultivated by most of the tribals and it is become a practice among the tribals. This has also lead to increased agricultural production, food security and improved quality of life of tribal families in the region.

