



## EMPOWERING TRIBAL COMMUNITY THROUGH VEGETABLE CULTIVATION IN THE MOUNTAIN SLOPES OF MALABAR REGION IN KERALA

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**E**mpowering people inhabiting in remote areas like tribal settlements is possible only through improving their family income and nutritional security. However, this kind of job becomes tedious when the tribal settlements locate in steep mountain slopes with no proper transportation facilities. However, cases from the south-western Indian state Kerala shows that it is possible when different local government bodies work harmoniously to address various issues of their locality.

Many times, problems of remote location population remain unresolved due to their inaccessibility to state and central government programmes. When the state department of agriculture announced programmes to convert fallow lands to cultivable lands in Kerala many local government bodies across the state hold their hand together to make some changes in their locality. The case of tribal vegetable cluster locates in the mountain slopes of Malabar region is just one example.



### FARMING IN VARINGILORA MALA AND INTERVENTION BY NARIKKUNI KRISHI BHAVAN

Varingilora mala (Malayalam word *mala* means hill in English) is a remote tribal settlement spread in an area around 70 acres in the Narikkuni Grama Panchayath of Kozhikode district in Kerala. This is the only tribal settlement of the Panchayath and inhabitants of this village are 45 families of *Karimpalan* tribal community. Traditionally they are farmers who practice rainfed agriculture and cultivate crops like roots and tuber crops for family consumption and rarely market surplus of their farm produce for money. They also do allied agricultural activities like backyard poultry and livestock farming. Many of them work outside their locality as daily paid labours as well as under the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA) to sustain their livelihood.

To improve family income of the tribal population, Krishi Bhavan\* of Narikkuni gram Panchayath decided to promote vegetable cultivation in tribal farmlands in 2018 and identified 5 acres of barren land locate in the steep sloped hills of Varingilora mala (Figure 1). The land had poor irrigation and transportation facilities, so converting that to cultivable form was challenging with the limited schemes of Krishi Bhavan. Narikkuni Gram Panchayath extended their help by providing labourers to clean and plough the land through MGNREGA scheme. Narikkuni service cooperative bank provided financial support for mechanical fencing of the cleared land to protect crops from wild animals.

A tribal cluster for vegetable cultivation was formed under the monitoring of Krishi Bhavan including one member each from 36 tribal families. Vegetable cultivation was purely rainfed because of limited irrigation facilities and 36 members of the cluster worked together starting from the land preparation till marketing the produce. These farmers raised different types of vegetables, fruits and tuber crops like okra, *amaranthus*, cow pea, cucumber, coleus, and water melon that had considerable market value in the locality. The crops were fertilized mainly using organic manures like cow dung, vermicompost, neem cake and peanut cake. As the soil type is Laterite in the hill slopes lime was also incorporated to soil before planting to improve soil properties. Almost all inputs except cow dung were provided by the Krishi Bhavan through various agricultural schemes of the state government.



Figure 1. View of the barren land locate in the hill slopes of Varingilora mala before converting it into a farmland for vegetable cultivation



Figure 2. View of Okra plants in the hills slopes of Varingilora mala

\*Krishi Bhavans are grass root level organizations under the Kerala state department of agriculture development and farmers' welfare; work for improving the agriculture situation of each Panchayath by imparting knowledge and skill related to innovative agricultural technologies to farmers as well as enabling easy access of farmers to various agriculture related schemes of the state government.



In the month of May, the cleared land was prepared for planting by incorporating lime and cow dung manure with soil, and allocating specific areas for growing different types of vegetables. Seedlings of vegetables were purchased from agro service centre by the Gram Panchayath utilizing their '*Janakeeyam Plan Fund*' before the onset of southwest monsoon. Planting of vegetable seedling were done in the first week of June with the start of monsoon rains. Different types of oil cakes were also incorporated with soil at the time of planting. For all these land management practices implements like garden spades and hand shovels were only used.

Though the members of tribal cluster were farmers they did not have much knowledge in cultivating vegetables. Hence, the officers of the Krishi Bhavan made frequent field visits to the farmland for monitoring the crops and give timely recommendations for crop management like intercultural practices, management of pests and diseases. Harvesting of vegetables started from the month of August (Figure 3).

### MARKETING AN PROFIT SHARING

Rainy season vegetables have a very good market in Kerala as the harvesting coincide with the four days long state festival '*Onam*', where the entire state population prepare pure vegetarian meal called '*Onam Sadhya*'. More than ten vegetable preparations are served with rice especially on the second day called '*Thiruvonam*'. Farmers group utilized different marketing channels to get the best price for their vegetables. Mostly, harvested vegetables were sold directly to consumers at farm gate price. Surplus vegetables sold through Krishi Bhavan's weekly market, retail shops and nearby wholesale markets (figure 4 & 5).



Figure 3. First harvest of vegetables by the President of Narikkuni Gram Panchayath



Figure 4. Direct selling of fresh harvest to consumers at farm gate



Figure 5. Weekly vegetable market organized by the Krishi Bhavan



In the 2020 season, the Varingilora mala vegetable cluster could generate a net profit of ₹3,60,000.00 from selling surplus vegetables. That helped each member farmer to earn an additional income of ₹10,000 for their family other than availing fresh vegetables in each picking to meet the daily food requirement of their family.

#### **RECOGNITION FOR THE DEVELOPMENT MODEL**

The development model of Varingilora mala tribal vegetable cluster was widely appreciated across the state when the success story was reported by leading news channels of Kerala like Media One and Asianet News. Further, efforts taken by the local organizations and farmers recognized when the vegetable cluster received the 2020's state agriculture award for the 'Best Tribal Cluster'.

#### **CONCLUSION**

The agrarian economy of a country like India can be revamped only through the development of its underprivileged population. For this, grass root level agricultural organizations play the most important role. Being in touch with local people they can identify the real problems of agrarian societies and can come up with best working solutions that match with local resources, for specific regions and communities. Agriculture development models like that of vegetable cluster in Varingilora mala is a replicable one anywhere if farmers and other agricultural stakeholders put their efforts together for a better rural economy and thus a better India

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