Crop Diversification through Horticultural Nurseries - Initiative for Economic Empowerment of Women Farmers

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Background

While agriculture is the predominant occupation in the Bundelkhand region, the land available for cultivation is less compared to other agricultural zones of the country. Chitrakoot district lies on the southern fringe of Uttar Pradesh, bordering Madhya Pradesh. The net sown area of the district is 174,000 ha, out of which the irrigated area is 46,000 ha. The land is mostly irrigated through canals. Due to the limited availability of water, farmers follow a comparatively safer option of cereal-based cropping systems, which require less irrigation and inputs compared to horticultural crops. However, adopting horticultural crops has the potential to diversify production and offer livelihood and nutritional security in the region. Establishing nurseries that can provide good-quality planting material is a pre-requisite to fulfil this potential.

Advantages of Nurseries

For growers: Nurseries under a net house can be established on a small piece of land – even farmers with small land-holding can start their own. Raising seedlings in plug trays allows effective use of the space thus generating higher income. Growers get a better price as seedlings are healthy and disease-free.

For Users: Users (here referring to farmers) get healthy seedlings that are uniform in growth and free of pests and diseases. Farmers can extend the planting in the field for a longer period, providing an opportunity to produce seed, especially of vegetable crops that require longer to be produced. Raising horticultural crops through quality seedlings is particularly beneficial in areas with hard soils, such as Chitrakoot and Satna.

Our Approach: Establishing Commercial Nurseries

To promote diversity in farmers' fields and ensure a successful harvest, Bioversity International with the help of ICAR and local partner is developing **sample nurseries in net houses** for farmers in Chitrakoot district.

An important aspect of this work is generating awareness among farmers on the importance of raising quality seedlings in nurseries in plug trays. Bioversity International provides women farmers in Self Help Groups (SHGs) with an erected net house for production of quality planting material. Additionally, we also provide other accessories like plug trays and coco peat to the farmers. Women farmers are trained

Raising of seedings in plug trays
Credit: Bioversity International / A. Gupta

Top image: Nursery in a net house
Credit: Bioversity International/ N. Sharma

on advanced nursery management technologies such as soil solarization, irrigation, sowing, fertilization, raised beds, and pest and disease management.

"For intensive farming, we prefer to buy the seedlings of vegetable crops from commercial nurseries. The advantage is that the seedlings grown in nurseries are healthy and uniform."

Anil, farmer from Chitrakoot

"Cost of hybrid seeds is very high nowadays so germination of each seed is essential. At the same time, each farmer cannot establish net house nurseries. Therefore, buying seedlings of vegetable and flower crops from commercial nurseries economizes the cost of their cultivation."

Mithilesh, farmer from Chitrakoot

Our Progress

In Banadi and Balrampur villages of Chitrakoot district, the SHGs have been trained to manage the commercial nurseries of brinjal, gourds, tomato, chilli, melon, cauliflower, cabbage, drumstick, etc. The nursery can also be used to raise seedlings of flowers and fruit trees. Normally, farmers make advance booking with the nurseries for their seedlings.

Women from Self Help Group sowing seeds in plug trays
Credit: Narendra Singh

Some farmers prefer to give their own seeds, which makes the seedlings cheaper. Nursery owners also keep seedlings ready to be sold at the market when prices are favourable. The farm science centre KVK Ganiwa, imparts technical know-how and updates on demand of seedlings in the nearby areas.

Looking Ahead

Of the five proposed nurseries in the project, three are already functional while the remaining two will be established in the next year.

At each site, 15-20 women farmers of the SHG will participate in the project activities. Each nursery will provide planting material to approximately 50 farmers.

Traditional method of raising a nursery
Credit: Narendra Singh

The SHGs will be responsible for raising nurseries and selling plants and seedlings. To ensure the sustainability of the project, half of the first season's sale will be used to cover the next season's expenses. The remaining half will be shared equally among the SHGs members. During the second year of the initiative, half of the cost will be provided through the project. From the third season onwards, SHGs will manage all the expenses for running the nurseries. In addition to the expected running costs, 20% of the net income will be saved for the next season. To expand the nursery, all members of the SHGs will deposit 10% of their net income in a common account.

The established nurseries will be a prototype in the area. The success of this initiative is likely to encourage other farmers to start their own nurseries. Replication of the intervention will generate more income for growers, and more diversity will be available in farmers' fields.

Self-Help Groups (SHGs) are a novel and innovative organizational set-up in India for women empowerment and livelihood security. It is a group of rural resource-poor women farmers who have similar socioeconomic background and a desire to work collectively for their individual, social and economic upliftment. They voluntarily decide to save and contribute to a common fund known as Group Corpus. Members agree to use this corpus fund to uplift their families and community socially and economically.

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