

## Nutritional Security of farmwomen through Nutri-gardens

**The Challenge:** Prevailing malnutrition in rural areas of Uttarakhand and particularly in hill districts is a serious issue. The crop productivity in the hilly areas of Uttarakhand is low due to scattered land holdings, low soil fertility and mostly rainfed agriculture. Farmers are still practising traditional subsistence farming comprising of mainly cereal crops which cannot sustain farm families for more than three to four months in a year. There is a large-scale migration of men towards plains, due to which the rural areas contain significantly higher female population and has led to demographic imbalance in the region. An imbalance diet and inadequate nutrient uptake coupled with strenuous physical tasks results in malnutrition among women farmers of hill region. As per National Family Health Survey 2015-16, 42 percent of women in Uttarakhand have anemia including 31% with mild anemia, 10% with moderate anemia and 1% with severe anemia. Low nutritional status makes women more prone to certain ailments.

**The Solution:** One of the solutions to this prevailing problem can be “Local need meet locally”. Climatic conditions of hill region are suitable for seasonal and off seasonal vegetable and fruit production, which are rich in micronutrients. Keeping these facts in view the institute introduced some technological interventions to improve health and nutritional status of farm women in hills. Concept of nutri-garden was initiated in Pithoragarh and Uttarkashi districts to encourage women to cultivate healthy food crops in their backyards. A well planned nutri-garden ensures regular supply of fresh vegetables rich in nutrients. Fruits and vegetables are rich source of vitamins, minerals, protein and carbohydrates which are essential in human nutrition.



Nutri-garden at farmer's field

**The Application:** Anthropometric analysis of women and the information about their dietary diversity was collected for analysis of nutritional status. To demonstrate nutri-garden, an area of 100200 m<sup>2</sup> was selected at the backyard of their home. The initial necessary inputs, seed kits of different diversified vegetable groups, fruit plants and scientific knowledge were provided to them. Some other interventions were also introduced in their nutri-garden such as demonstration of nursery preparation, installation of poly tunnels, and preparation of vermi-compost and gender friendly farm tools and seedling trays to meet out protein requirement, mushroom cultivation was

introduced. To enhance pollination among vegetables and for production of honey, bee box was installed.



**Impact:** Initially 20 farm women were involved in establishing nutri garden but gradually the number of respondents has been increased and reached up to 80 farm women. The main objective of this model is to achieve nutritional security and the empowerment of farm women through increased participation in vegetable cultivation practices and earn by selling the excess produce in local markets. These interventions have helped farm women to get balanced nutritional food in addition to saving their hard-earned money. This concept of nutri-garden will diversify the area intensified by wheat-rice/finger millet rotation besides improving livelihood of the people.