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Women's empowerment through household food and nutritional security: A case study from high hills of Uttarakhand

Renu Jethi¹, Asmita Jalal², Nirmal Chandra³ and Pratibha Joshi⁴

Mrs. Pooja Karki who hails from a tiny village of Baitholi in high hills of Berinaag block, Pithoragarh district in Uttarakhand has now become the role model for other farmers of the area. She has improved the financial and nutritional situation of her family by adopting improved practices of vegetable cultivation, mushroom cultivation, vermicomposting, honey bee rearing and vegetable seedling production under protected conditions.

Like other farm families in the hill region of Uttarakhand, Mrs. Pooja Karki was earlier practicing traditional subsistence farming and produced food enough to sustain the family for three to four months in a year and was dependent on the market for food for rest of the period of the year. The financial conditions of the family forced her husband to migrate from the village in search of livelihood, leaving behind the wife Pooja, two children and old parents. Now it was her responsibility to manage the family. She was engaged in agricultural activities such as producing wheat, rice, finger millet, soybean, colocasia along with livestock management for their livelihood like most of the other women in the village. As agriculture productivity was very low, she was forced to purchase most of the household needs like cereals, pulses and vegetables from the local market. She was growing very few vegetables of local variety in their backyard in a traditional way. It was found that household dietary diversity was very low as cereals and roots & tubers were the main food groups consumed by them in their daily diet.

An opportunity for change

She came in contact with scientists of ICAR-VPKAS, Almora in 2018 and was trained in vegetable cultivation practices, mushroom cultivation, vermicomposting, honey bee rearing and vegetable seedling production under protected condition. Although she was educated only up to 8th standard, she was very eager to learn about nutrition, the importance of growing fruits-vegetables and other improved agricultural technologies to enhance nutritional status. Under the NMHS project “Strategies to improve health and nutritional status

of hill farm women through technological interventions”, nutri-gardens were designed for 100 m² to 200 m² of land in the backyard. Layout and crop allotment in nutri-gardens were modified depending on climatic and seasonal changes. More than 16 types of vegetables along with fruit plants rich in various micro-nutrients were grown in nutri-gardens. She took a keen interest in the demonstration of model nutri-garden in her backyard with a land area of 200 m² which is enough for meeting the daily micro-nutrient requirement of her family. She has worked almost single-handedly on her land to achieve the right mix of farming and other allied activities.

More than a vegetable grower

Now after getting training, Mrs. Karki follows the proper scientific guidelines of growing vegetables. In the very first season she was able to obtain a good yield of vegetables more than sufficient for home consumption. She also sold vegetables in nearby local markets. Then gradually other nutrition-sensitive agricultural interventions were also introduced such as- vermicomposting, fruit plantation, honey bee rearing and mushroom cultivation. In the initial phase, women of the area were hesitant to grow and consume mushrooms due to their traditional thinking. Mrs. Pooja Karki was one of the first women to grow mushroom at her home. She not only included it in her diet but also was able to produce enough for selling at local market. She encouraged other women of the area for the cultivation of mushroom and now most of the women of the area have adopted it. She has also started bee-keeping which will not only provide honey for nutritional security but will help in

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Vegetable production in nutri-garden



Nursery raising of vegetable crops



Mushroom production for nutritional security



Bee keeping



Vermi-composting from farm waste



Produce from nutri-garden

pollination to enhance vegetable productivity. Earlier farmers of the area used to purchase seedlings of inferior quality from local markets which has a very high mortality rate. She has learnt nursery preparation of vegetable crops and is instrumental in providing seedlings of improved varieties of vegetables to fellow farmers. She has installed HDPE vermi composting bed in her backyard to generate vermi compost from farm waste.

She is now able to sell a good quantity of individual fresh vegetables in the local market. According to her, she is harvesting 12-15 kg of particular vegetables in 2-3 days interval regularly in every season. By providing a fresh supply of vegetables, she easily got some fixed shops in the local market to dispose of her vegetables. Moreover, some families of nearby areas are also giving her advance demand for fresh vegetables. She can now sell vegetables to customers directly from her nutri-garden.

Conclusion

She has attended all the training programs, field days and exposure visits to learn scientific agriculture related technologies. By developing a nutri-garden in their backyard space their family

vegetable consumption raised highly and she is able to earn her own income with a very limited 200m² backyard areas. She grabbed the opportunity to move out of her traditional farmer and housewife role. Mrs. Pooja Karki is very happy to become a part of this project. Pooja's thriving farm has ensured that her family has plenty to eat round the year. She has gained the respect of her fellow farmers. She is now a successful farmer in a time period of one year who also helps and leads other women in the village. Her work and her success motivate not only the farmers of her village but the nearby villages also. Other farmers from nearby villages stop by her farm for peer-to-peer exchange and learn from her efforts towards food and nutritional security.

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