



Case study II: Journey of a women from a school teacher to a commercial farmer

Laxmi Karki, age 36, is a female commercial vegetable farmer from Panauti-4, Khatri Gaun, Nepal. With a bachelor's degree she was a primary level teacher in a boarding school and transitioned from teaching to commercial vegetable farming six years ago. Her decision was supported by her husband, an army officer living away from home. She took up farming due to the limited opportunities in her teaching career. She is engaged in commercial vegetable farming on a leased 0.25 ha (5 ropani) land, costing NRs. 50,000 annually. She is the second person in her village to adopt tunnel farming. At present, she has 35 tunnels each with 12m*5m size. In her first year, she successfully grew and sold tomatoes at Rs. 90 to Rs. 100 per kg, followed by cauliflower cultivation. Despite the COVID lockdown, she managed to sell her produce locally and in the capital city Kathmandu, located about 35 km from her village. Although she encountered challenges in acquiring supplies like wires and ropes for tomato staking during the pandemic, her production and marketing was not much affected.

Ms. Karki maintained regular contact with agriculture extension officers from the municipality to receive advisory services for vegetable production. However, she always felt lacking the disciplinary expert consultation service from the municipal level and has faced the problems relating pest management and have little access to new agricultural technologies. Two years ago, she met the researcher team from the National Agricultural Policy Research Centre (NAPRC) of the Nepal Agricultural Research Council (NARC) during a training session titled “Tomato Farming Technology, Insect Pest Management, and Value Chain” at the Panauti Municipality office, organized by NAPRC under the RATES/AFACI project. She found the training very informative, learning about tomato cultivation practices from nursery establishment to harvesting. She learned using coco peat and trays for nursery establishment. However, due to high costs incurred in coco peat, she had grown seedlings in nursery beds as well. Now, she grows half of her seedlings in trays with coco peat and the other half in nursery beds. In the training, she additionally gained valuable knowledge about disease and pest management for tomatoes and the importance of record keeping. She started keeping records of pesticide costs and labor usage. For tomato cultivation, she employs 10-15 labors per season.

She is extremely pleased with the researcher-extension-farmer interaction envisioned by the RATES/AFACI project to evaluate the effectiveness of the Research and Development

(R & D) model. She believes this interaction has been instrumental in addressing her problems related to vegetable production. She feels fortunate to have been selected by the municipality to receive the training provided by NAPRC and to be in the WhatsApp group. The regular monitoring of her field by experts keeps her motivated. She is an active member of a WhatsApp group for the expert advisory services where she and other vegetable farmers can directly consult with experts and receive immediate solutions to their problems.

From NAPRC, she received seeds of the Srijana and Khumal Hybrid (K2) varieties of tomato. She is continuously receiving expert advisory services from entomologists and pathologists from NARC via WhatsApp as well as field visit. She is pleased with the frequent field visits and monitoring by the extension officers from the municipality and the scientists from NARC. She recounted an incident when her tomato crop started wilting and she sought help from the municipal office. The deputy mayor and extension officers conducted a field visit, identified the problem as Fusarium wilt, and confirmed it by sending samples to NARC. They recommended using Bavistin (0.1%), which saved her crop. Later, entomologist Mr. Sudeep Upadhyay (Scientist) from NARC visited her farm when her transplanted tomato crop was just a month old. To control Tuta, she had sprayed Karma's Magic (Diflubenzuron 20%EC) @ 0.5-1ml/liter of water twice at the interval of 10 days. However, the entomologist recommended alternating pesticides, such as using Emamectin benzoate @ 0.33g/liter of water after the initial Karma's Magic application, for better effectiveness. He also advised that Neem-based pesticides are effective at the initial stage of Tuta. The NAPRC team provided Ms. Karki with four Wota T pheromone traps, four Tuta lure and eight yellow sticky traps. The entomologist demonstrated how to install pheromone traps. Additionally, he suggested using Roger @ 1.5ml/litre of water or Thiamethoxam 25% WG @ 0.5 gram per liter water to control whiteflies.

Ms. Karki earns a substantial income from vegetable cultivation, allowing her to cover daily household expenses and pay for her daughter's school fees in a boarding school where she is in class six. Her gross profit from vegetable farming is around 6-7 lakhs per year, with a net profit of about 3-4 lakhs per year after deducting production and lease costs. Additionally, she is able to provide regular employment to two people. Ms. Karki's success as a commercial vegetable farmer demonstrates the viability and profitability of commercial agriculture. Her ability to generate a substantial income not only supports her household expenses and her daughter's education but also contributes to the local economy by providing employment opportunities. Her gross and net profits from vegetable farming highlight the economic potential of adopting modern farming techniques and leveraging agricultural training and support services via researcher-extension-farmer interaction.

Glimpse of the case study II



