



Empowering Female Farmers to Grow Nutritious Foods and Earn Income with Climate-Resilient Technologies

In a remote, mountainous region in southeastern Bangladesh, called the Chittagong Hill Tracts (CHT), families have traditionally grown most of their food, either in gardens near their homes, or in more distant fields using slash-and-burn agriculture called *jhum*. Resettlement, large-scale commercial agriculture, and deforestation have forced people to cultivate on fewer available plots, resulting in decreased soil fertility. This, residents say, combined with chronic water scarcity and increasing occurrence and strength of disasters, has resulted in lower farming yields and less available food for their families.

The Sustainable Agriculture and Production Linked to Improved Nutrition Status, Resilience and Gender Equity (SAPLING) is a five-year, USAID-funded program to improve gender-equitable food security, nutrition and resilience of vulnerable people in the CHT through a multi-sector approach designed to increase household food availability, promote maternal and child health and nutrition, and improve household and community resilience to shocks and stressors. SAPLING works more than 50,000 households in Bandarban District, home to at least a dozen ethnic groups, with their own languages, cultures, religions and traditions dating back hundreds of years, including a strong identify with *jhum* agriculture for approximately half of the population. SAPLING is working with households to adapt traditional farming practices to be more climate and disaster-resilient, using low-cost, organic methods and focusing on increasing yield of diverse, nutritious foods year-round in small spaces through better soil, crop, and water management.

Ukra Ching Marma, mother of three children, lives in Ubasui Karbari Para in Bandarban Sadar where she leases a plot of land near her home to cultivate nutritious vegetables using techniques she learned from SAPLING. Her efforts are rewarded with a bountiful production that provides nutritious foods to feed her family year-round and an income by selling surplus produce. *"I want my children to be educated and my garden production helps meet the cost of education. It gives me immense pride as I work for myself in the garden leased by me. Sometimes I even engage a couple of day laborers during the busy season,"* said Ukra. During producer group sessions, Ukra learned about the nutritional benefits of the different vegetables she is growing with seeds from SAPLING. Now, she encourages her children to eat vegetables she proudly grows in her own garden and makes sure they are eating a variety of vegetables and other foods every day. She says her children enjoy watching vegetables of different colors grow under their mother's care.



Ukra Ching Marma, SAPLING participant and mother of three, surveys vegetables in her garden. Ukra has learned climate-resilient ways to increase her yield and, with new knowledge on nutrition, feeds the nutritious foods she grows to her children, shares with her neighbors, and sells surplus for income to pay for her children's education. **Photo by Oli Chowdhury, Helen Keller International, November 3, 2018, Bandarban District, Bangladesh.**

Adapted farming technologies allowed Ukra to grow a larger, more plentiful harvest with less cost, in less space, using less water and seeds, and less work than traditional *jhum* production. Last season, her pumpkin patch was overflowing, and she sold approximately 100 kg to help pay for her children's education and re-invest in her garden. Using methods she learned from SAPLING, Ukra has stored seeds to plant in the coming year and expects a repeat performance for her pumpkins, as well as cucumbers, leafy greens, and other crops. Ukra is proud to be able to share produce with her neighbors, helping them have access to nutritious foods and maintaining strong social ties. *"I have learned about vermi-composting and managed to boost yield by applying the method. I would like to continue to apply improved practices learned from SAPLING and am grateful for the support provided by SAPLING. At the same time, I want to build up a bright future for my children by supporting their education from my increased income"*, explains Ukra.

