



CASE STUDIES: EXTENSION

CASE STUDY 1: Extension and Quncho in Ethiopia

Tef is the main Ethiopian cereal grown on 2.5 million hectares annually, and serves as a staple food for more than 50 million people. The major constraint in tef husbandry is its susceptibility to lodging (where the plant is unable to support its own weight and may fall over or snap) that results in low productivity, about an average of 1 tonne per hectare. Scientific research on improved varieties and management practices of tef have, until recently, been little adopted by farmers. The improved higher yielding varieties tend to produce dark seeds that are unappealing to consumers. In addition to poor extension work, farmers have been reluctant to adopt the improved varieties.



Ethiopian women harvesting Tef. Credit, Apollo Habtamu, ILRI

Debre Seit Agricultural Research Centre (DZARC) developed a hybridisation by crossing 2 improved pure-line varieties (DZ-01-974 and DZ-01-196). The resulting hybrid, Quncho combines popular a white seed colour from DZ-01-196 with the higher yields from DZ-01-974. From 2006 to 2009 the number of farming households using Quncho increased from 300 to 7,741¹ due to the development of a variety better suited to farmer's preferences and improved agricultural extension.

DZARC and their partners also developed and used a novel agricultural extension approach to improve adoption rates. First, a complete package of recommended cultural management practices along with the new variety was provided, rather than just the seeds alone. An important part of the package was training provided to farmers by DZARC, with regular follow-up sessions and supervision. Second, the new variety was demonstrated on-farm in large plots of $\frac{1}{4}$ hectare using a fast 1 year extension approach, rather than using small demo plots over 3 to 4 years, so that farmers were able to see the impact of the new variety and methods on yields more immediately. Farmers were given the initial seed by DZARC on a 'revolving seed loan,' a scheme that permits them to repay in equivalent amounts of seed after harvesting. This way, the farmers receive not only seed, but also a guarantee against the uncertainties regarding the performance of the new crop and associated technology.

CASE STUDY 2: Farmer trainers in Uganda

Cassava production was revitalised in Uganda through the introduction of 6 disease resistant varieties, produced using techniques such as conventional breeding and hybridisation with local varieties to be resistant to cassava mosaic disease (CMD) and brown streak virus, with support from the Maendeleo Agricultural Technology Fund (MATF), local government and donors. MATF trained farmers to become trainers themselves whilst providing the new



Cassava. Credit, H.Tufan, International Programs



trainers with technical backup throughout the process. From each group of farmers, 1 contact farmer (CF) and 1 extension link farmer (ELF) were trained. These 2 farmers would then grow demonstration plots of cassava that were also used for multiplication and distribution of cassava to the other farmers.

The project led to increased knowledge amongst farmers on improved production methods, including soil and water conservation. Farmers reported that they had come to know each other better and their relationships became more reciprocal, suggesting the project helped to build social capital. Furthermore, CFs and ELFs provided a platform for other NGOs to disseminate information on a range of subjects such as HIV/AIDS, gender equality, and conservation. Women in particular reaped financial benefits through the sale of cassava, and 43% of new adopters during a 1-year extension phase were women. The resulting increase in income was invested in other household needs, such as school fees for their children and poultry projects.²

CASE STUDY 3: Emilia Abibo Savio, Agrodealer, Sussundenga District, Mozambique

In 2008 the Alliance for a Green Revolution in Africa (AGRA) started to support Emilia's small shop through the Mozambique Agrodealer Development project. The project offers business management training and helped Emilia acquire a good understanding of best agronomic practices.

Emilia's customer-base was growing to around 150 customers, so she decided to build a bigger shop. Emilia also received advanced business management training and boosted her sales by training farmers on integrated soil fertility management, the targeted and precise use of chemical fertiliser, and selecting appropriate seeds, herbicides and pesticides. Input sales increased from 2 tonnes of seed and 7.4 tons of fertiliser during 2009-2010 to 65 tonnes and 54 tonnes of seed and fertiliser respectively, in the 2014-2015 season. Emilia's monthly sales now amount to US\$1,000.



Emilia Abibo Savio. Credit, A4I

Emilia continues to receive support from AGRA and the African Fertilizer and Agribusiness Partnership (AFAP) to access finance to expand her business. Emilia now serves 300 farmers and used her profits to buy a sunflower processing machine to produce and sell sunflower oil for cooking. She now owns 60 hectares of land of which more than half is used to grow maize, sesame, fruits and vegetables.³

¹ Assefa, K, Aliye, S, Belya, G, Metaferia, G, Tefera, H & Sorrells, ME 2011, 'Quncho: the first popular tef variety in Ethiopia' *International Journal of Agricultural Sustainability*, vol. 9, no. 1, pp. 25-34.

² Roothaert, RL & Magado, R 2011, 'Revival of cassava production in Nakasongola District, Uganda' *International Journal of Agricultural Sustainability* vol. 9, no. 1, pp.76-81.

³ Glatzel, K 2015 'Emilia and her farmers' 5 May 2015. *One Billion Hungry: Can we feed the world? A Blog by Agriculture for Impact* Available from: < <http://canwefeedtheworld.org/> > [29 June 2015].

