FSF+ Learning Series:
Better seeds and practices for climate change adaptation and self-sufficiency

Above: CARE Ethiopia's FSF+ team at the Farmer Training Center in South Gondor Zone, Amhara Region, northern Ethiopia. (photo credit: G. Shaw, shaw.communication@gmail.com)

CARE Ethiopia's Food Sufficiency for Farmers Project

The Food Sufficiency for Farmers Project (FSF) was established to aid rural, smallholder farmers in diversifying their income; enhancing agricultural production quality; and building greater resistance and resilience to economic and other potential shocks. FSF also included gender components to address barriers to women's economic empowerment for marginalised rural women.

Enhancing food production in Ethiopia

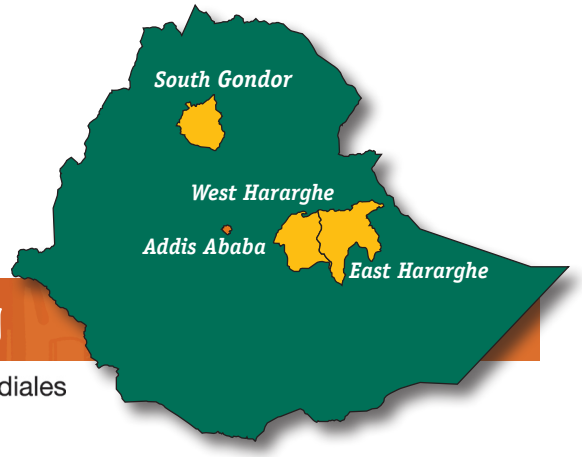
With considerable shortages of certified seed in Ethiopia, the timely distribution of quality seed at appropriate quantities remains a challenge nearly every planting season throughout the country. In order to mitigate this underlying cause of food insecurity, CARE Ethiopia recognized that enhancing quality seed production would yield an abundance of opportunity for smallholder farmers, and female farmers in particular. Building the knowledge and skills of local farmers to produce early maturing, disease resistant and weed tolerant varieties would inevitably increase communities' incomes, as well as significantly contribute to climate change adaptation and disaster risk reduction (DRR).

Subsequently, FSF+ initiated a pilot seed multiplication intervention in partnership with the Government of the Federal Republic of Ethiopia's (GFDRE) Bureau of Agriculture (BOA), and the Integrated Seed Sector Development Program of Haramaya and Bahir Dar Universities. This exercise targeted beneficiaries currently enrolled in the GFDRE's Productive Safety Net Program (PSNP), as well as other vulnerable households who have access to a minimum of .5 hector of land, and were interested in better farming practices.

As such, a total membership of 300 farmers in Ebnat, Kurfachele and Doba Woredas participated in this pilot. Furthermore, a seed advisory committee was established between the many partners and the Zonal Office of Agriculture.

For their part, as participants of the Seed Multiplication Intervention, FSF+ beneficiaries received a 1-day technical training (and later a 1-day refresher training) on land preparation methodologies, and appropriate techniques for improved agriculture yields. Participants were further introduced to concepts surrounding the strategic selection of crop varieties that best suited their land, grouped into local seed associations and were connected to cooperative unions for enhanced input and output market linkages. Finally, participants had access to improved maize, wheat, haricot bean and mung beans with which they could enhance their previously under-productive crops.

After the training, the majority of participants reported an average of 6 to 8 times growth in yields in their first year alone.



Right: Map of Ethiopia, with FSF+ programming zones highlighted as well as the country's capital city, Addis Ababa

Global Affairs Canada
Affaires mondiales Canada

The pedagogy of the intervention

CARE Ethiopia's seed multiplication intervention essentially shared basic agricultural knowledge, introduced certified seed and facilitated market-linkages to increase smallholder harvest yields and better prepare local farmers for climate change adaptation. Ultimately, what made a difference for these CARE beneficiaries was good agricultural science, better farming methodologies and enhanced business practices.

Step 1. Selection of crop varieties

Seed varieties proved adaptable to the specific agroecology were selected by various woreda agriculture offices and in consultation with farmers. The varieties were then procured from Ethiopia and Oromia Seed Enterprises.

Step 2. Selection of potential kebeles

After identification and pairing of kebeles and crops, suitable clusters of farmlands were selected by Development Agents, extension supervisors and woreda agronomists. Clustering was considered the most efficient method for enhancing crop productivity, and so a basic criteria for selecting smallholder seed multiplication farmers.

Step 3. Formation of local seed groups and clustering

Each cluster of farmers was encouraged to participate in local seed businesses and later to form groups to implement improved agronomic practices, better crop variety selection and more efficient fertilizer usage. The formation of seed groups also allowed for more advantageous market leverage when both buying inputs and selling outputs.

Step 4. Train farmers, DAs, site supervisors and experts

A two-day detailed seed multiplication training was implemented with farmers – 100 in each field office – and included site supervisors and experts from the woreda agriculture offices. The training was facilitated by experts from Integrated Seed Sector Development, Agriculture Office and the Declared Quality Seed Control Office. Training topics consisted of the aforementioned improved agronomic practices, improved crop variety selection and better fertilizer usage, as well as gender roles in local seed business, seed-food and nutrition linkages and quality seed production.

Step 5: Market Linkage

Local seed groups continue producing quality seed varieties with ongoing technical support from various organizations. These groups were also linked with Cooperative Unions for input and output market linkages. Quality seed production was monitored and certified by Haramaya University, Quality Seed Control Office (Gondar office for Ebnat Woreda) agriculture offices.

How this initiative affected beneficiaries...

Before being enrolled as beneficiaries in CARE Ethiopia's FSF+ project, both Tariku Ado and Fitig Kassaw were farmers who were struggling to produce enough crop to feed their families and to make real profit from their agricultural work. After a 2-day training on better agricultural techniques, as well as access to a small quantity of enhanced seed, both experienced an enormous turnaround at harvest.

For her part, Fitig went from producing around 1,500 kg of a diversity of crops on her farm to over a 4,500 kg harvest. Likewise, Tariku saw his yields grow from 2,000 kg to nearly 8,000 kg in the first year. What exactly was behind such dramatic change for these two farmers?

Technical methodologies such as row planting, appropriate fertilizer use, independent planting, planting preparation, pest management, crop thinning and how much to plant, all made a huge difference. Another significant change in their planting outcomes was an increased commitment to better agricultural practices. *"Traditional practices just have you broadcast (toss) seeds, mix crops and never thin maturing plants,"* says Tariku. *"The new approaches were much more work planting side-by-side, and we were pretty skeptical in the beginning,"* he adds. *"But the differences were clear, day after day we could see serious improvements in our fields."*

Chiming in, Fitig is quick to point out what these differences really mean, *"It was hard work, but we started to see more production, and now, we eat properly. Before, we ate once a day. Now, we eat twice a day,"* notes the mother as she breastfeeds. Considering another important perspective of this work, Fitig further speaks to another value of the intervention, *"Regardless of what happens with the climate in South Gondor, we have more certainty of producing enough for breakfast, lunch and dinner,"* she concludes.

Climate change adaptation is a big part of this initiative. Not only focusing on greater production, the seed multiplication intervention teaches and demonstrates agricultural practices which prepare farmers for environmental shocks.

Below: Tariku Ado (left) and Fitig Kassaw (right), proud participants of FSF+'s seed multiplication intervention, South Gondor Zone, Amhara Region, northern Ethiopia. (photo credit: G. Shaw, shaw.communication@gmail.com)