

TROPICAL LEGUMES II

PROFILES of PROGRESS



Temegnush Dhabi is improving her family's life by growing an improved variety of chickpea as part of the Tropical Legumes II project (Ethiopia, 2012).

Temegnush Dhabi's two-hectare farm in East Shewa in central Ethiopia looks very different today than it did three years ago. Back then, she grew mostly teff, a popular type of cereal grown in Ethiopia. Teff fetched a reasonable price at market, but demanded hard labor and expensive fertilizer.

Then, in 2008, she joined a project where she tested improved varieties of chickpeas. Pleased with the results from one of the high-yielding, drought-tolerant, and pest-resistant varieties she tested, Temegnush divided her land into two and started planting chickpeas on one half. Today, chickpeas are her main crop, and it is flourishing, meaning more income for her family.

"I would never have thought chickpea could bring me such high returns," says 50-year-old Temegnush, scooping her hand into the recently harvested legumes. "I started sowing the improved chickpea variety three years ago, and it was the best decision I made. Not only do I get better harvests, but it needs very little labor and fertilizer compared to growing cereals."

Temegnush noticed other benefits. In addition to helping her test the improved seed varieties "risk free," the project also gave her invaluable farming advice, including information about crop rotation, how to obtain improved seed and manage her crop, and marketing techniques. According to Temegnush, these skills are making a real difference. Also,

like other legumes, chickpea boosts nitrogen in the soil, making it more fertile and reducing the need for fertilizer.

"I started growing wheat on the land after having harvested the chickpea and found that I needed half the amount of fertilizer I used to need to get a good yield of wheat."

Chickpea is also more water-efficient than teff, which is valuable given the challenges of scarce and unpredictable rainfall in this region.

"I started sowing the improved chickpea variety three years ago, and it was the best decision I made."

—Temegnush Dhabi, Ethiopian farmer

Temegnush is one of nearly a quarter million smallholder farmers in sub-Saharan Africa and South Asia directly reaping the benefits of these new legume varieties through the Tropical Legumes II (TL II) project, which started in 2007. Working in 10 countries, the project has brought improved varieties of six major grain legumes to smallholder farmers, and much-needed farmer education programs.

"The key driver for this project is that we look at the needs and solutions in a holistic way," says Tsedeke Abate, TL II project coordinator. "We work with farmers, agrodealers, market traders, and local government to ensure that training and tools, such as high-yielding seed varieties, are provided for sustainable impact."



Left: Temegnush in her store. Center: Posing with Tsigeredaa Negesu, a government agriculture development agent. Right: Temegnush standing with her ox, which she was able to buy with the additional income she earned. (Ethiopia, 2012)

Tropical Legumes II

Goal: To improve the livelihoods of smallholder farmers in drought-prone areas of sub-Saharan Africa and South Asia through improved productivity of six major legumes: chickpea, common bean, cowpea, groundnut, pigeonpea, and soybean.

Countries: Ethiopia, Kenya, India, Malawi, Mali, Mozambique, Niger, Nigeria, Tanzania, and Zimbabwe

Partners: Jointly implemented by the International Crops Research Institute in the Semi-Arid Tropics (ICRISAT), the International Center for Tropical Agriculture (CIAT), and the International Institute of Tropical Agriculture (IITA), in close collaboration with partners in the national agricultural research systems of target countries in sub-Saharan Africa and India.

Progress: More than a quarter million smallholder farmers in sub-Saharan Africa and India are already realizing the benefits of higher yields and incomes from improved tropical legume varieties and farming practices.

Since 2007, TL II has:

- released more than 50 new varieties that help farmers address drought as well as insect and disease resistance, increasing yields between 18 and 124 percent
- facilitated the production of nearly 93,000 metric tons of seed, and set up sustainable delivery channels for the seed to reach small farmers
- trained more than 235,000 farmers, extension agents, and technicians about new seed varieties; and assisted in farmer adoption
- sponsored 37 graduate and Ph.D. students to conduct research on legumes
- trained national research organizations' staffs, and helped equip the organizations with up-to-date equipment



www.icrisat.org/tropicallegumesII/Background_Rationale.htm

Across Ethiopia alone, more than 14 percent more farmers are growing these improved varieties. In Karnataka in southwest India, the number of farmers growing improved varieties increased by more than 33 percent after the TL II project began.

This “chickpea revolution” shows how agricultural production and productivity can significantly increase when innovations are adapted to farmers’ needs, when local research and extension systems are working, and when all stakeholders work together to meet a healthy market demand.

“The high yields and market value of chickpea last season meant I could buy a second pair of oxen. I lend these to neighboring farmers,” Temegnush says. “I’m no longer seen as a poor widow but a successful farmer. I am also able to send all six of my children to school. So it’s not just my income but also my social status that has improved.”

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