



Feed the Future Country Fact Sheet

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Climate-Smart Farming Creates Opportunity for Entrepreneurship in Tanzania



Fortunatus Flavian

Yohana Issaya at his maize farm in Ndurugumi, in Kongwa District, Tanzania.

Every day in Tanzania, truckloads of grain make their way across the country's many agricultural trade routes, transporting crops to market. Just three miles off a highway to Dodoma, Tanzania's capital city, sits the village of Ndurugumi, where smallholder farmers struggle to eke out a living despite their proximity to one of Tanzania's most important grain market routes.

In the village's semi-arid climate, farmers are constantly concerned with soil moisture and erosion. Even small fluctuations in temperature and rainfall can mean the difference between their families having food or going hungry. Without the benefit of modern farming technologies or strategies to increase production, farmers typically rely on low-yielding practices such as cutting down and burning vegetation to clear fields for planting ("slash-and-burn" agriculture). They are often ill-equipped to face the effects of climate change, and few have access to improved seeds or organic fertilizers that can boost their crop yields.

Yohana Issaya is one of these farmers, and until recently his story was similar to that of many others in the area. Having grown maize since childhood, he was used to life on the precipice of crippling poverty. His family's once-per-year harvest would yield only three or four bags of maize per acre—barely enough to feed them. Even in "normal" years with no drought or other crises, March through June were typically lean months. It wasn't unusual for the family to have to make ends meet by selling off the very assets that could have been lifelines out of poverty, such as livestock and ploughs.

All that changed during the 2012-2013 cropping season, when a Feed the Future project introduced improved maize varieties and climate-smart farming techniques to Issaya and more than 1,200 other farmers in the region. With such limited means, many farmers can be hesitant to take a risk on unfamiliar approaches to production, but that year Issaya made the bold decision to plant a new maize variety, one that was tolerant to drought and matured earlier than conventional maize.

He couldn't believe the payoff: Instead of the usual four bags of maize he would harvest in previous years, the new variety more than tripled his yield to 14 bags per acre. Encouraged by this success, Issaya continued to use the drought-tolerant maize seeds for the next year's cropping season, and this time he took it a step further with new land and water management practices. Using tied ridges, a simple seasonal water-harvesting technique he learned from Feed the Future, he was able to prevent runoff and help more water soak into the soil, allowing silt and organic matter that would have otherwise washed away to nourish his maize crop. Again, his harvest markedly increased, this time to 18 bags per acre. While some of his neighbors had to rely on food aid and other government assistance that year to survive until the next harvest season, Issaya had enough to feed his family and sell the surplus for additional income.

Having left subsistence agriculture behind, today Issaya is an agricultural entrepreneur. "I have considerably increased my livestock holdings," he says. "I have a thriving guinea fowl egg and chicken business, which has improved the nutrition of my family and added extra income. I do not have to sell my assets anymore."

Perhaps even more important, Issaya is in a better position to sustain these gains over the long term now that he can adapt to the pressures of climate change. "Drought-tolerant seeds, soil and water management techniques have eliminated the "hunger gap"—the period during which my family ran short of food," he says.