

DROUGHT-TOLERANT MAIZE

PROFILES of PROGRESS



Left: Sharifa Numbi stands in her family's maize field in Morogoro. Since planting Tanseed's drought-tolerant Tan 250 maize, Numbi has seen crop yields increase dramatically, helping her build a new house. Right: Numbi and her family strip corn kernels from their cobs outside their home in Mkambarani Village (Tanzania, 2010).

For Sharifa Numbi, a smallholder farmer in Tanzania, maize is life.

Maize nourishes her family at every meal. It's also her main source of income, giving her money to send her children to school, visit the doctor, and put a roof over her head.

But the impacts of climate change are threatening this life-giving crop for Numbi and millions of other African farmers. Severe droughts in recent years have scorched millions of hectares of maize across the continent, pushing farming families like Numbi's into poverty and hunger.

"It's been very difficult to keep practicing farming when the weather is not good," says the 37-year-old mother of two.

New varieties of maize, however, are giving her something once unimaginable: insurance against hunger.

The maize varieties can withstand drought, allowing them to thrive—even when there is no rain.

Developed by the Mexico-based International Maize and Wheat Improvement Center (CIMMYT) and the International Institute of Tropical Agriculture (IITA), with the support of the Bill & Melinda Gates Foundation and a broad range of other partners, these drought-tolerant maize varieties are giving African farmers powerful tools to adapt to the changing climate.

More than 2 million smallholder farmers in Africa are already realizing the benefits of higher yields and incomes from these new maize varieties. By 2016, the drought-tolerant maize program is expected to boost maize yields by as much as 30 percent, benefitting up to 40 million people in 13 Sub-Saharan African countries.

"We have been working hard, and the harder we work, it gives us more hope that in the future maybe we can be better off."

—Sharifa Numbi, smallholder farmer in Tanzania

After struggling through several droughts over the last decade, Numbi planted drought-tolerant maize in 2009. Her crop yield tripled from 15 bags (1.5 tons) per hectare to 45 bags (4.5 tons) per hectare. Thanks to bumper harvests, Numbi has plenty of maize to feed her family plus some extra to sell in local markets. She earned enough money to pay school fees for her two children, finish a new mud brick house, and build a chicken coop.

Now she has her eyes on expanding her farm and sending her children to college. "We have been working hard, and the harder we work, it gives us more hope that in the future maybe we can be better off," she says.

By 2016, the drought-tolerant maize program is expected to boost maize yields by as much as **30 percent** for up to **40 million** African farmers.



Left: Government workers facilitate a farmers meeting to promote drought-tolerant maize (DTM) seeds (Morogoro, Tanzania, 2010). Center: A farmer purchases seed at Tanseed International, which provides seeds and training to small farmers in over a dozen surrounding districts (Morogoro, Tanzania, 2010). Right: Maize grown from Tanseed seeds (Morogoro, Tanzania, 2010).

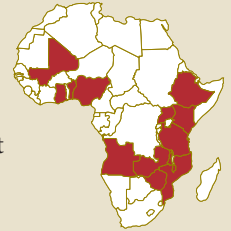
Drought-Tolerant Maize for Africa

Goal: To help farmers in Sub-Saharan Africa living in drought-susceptible areas increase their maize productivity by more than 30 percent.

Progress: More than 2 million smallholder farmers in Africa are already realizing the benefits of higher yields and incomes from these new maize varieties. By 2016, the drought-tolerant maize program is expected to boost yields by as much as 30 percent, benefitting up to 40 million people.

Partners: International Maize and Wheat Improvement Center (CIMMYT), International Institute of Tropical

Agriculture (IITA), The Howard G. Buffett Foundation, Swiss Agency for Development and Cooperation (SDC), the German Federal Ministry for Economic Cooperation and Development (BMZ), the International Fund for Agricultural Development (IFAD), the United States Agency for International Development (USAID), the Eiselien Foundation, University of Hohenheim, national agricultural research systems, seed companies, NGOs, and universities.



<http://dtma.cimmyt.org>

A 2010 study by CIMMYT and IITA found that widespread adoption of recently developed drought-tolerant varieties of maize could boost maize harvests in 13 African countries by 10 to 34 percent and generate up to \$1.5 billion (U.S.) in benefits for producers and consumers.

“Our improved maize varieties are helping farmers improve their productivity and generate more income and fight hunger and malnutrition,” says Isaka Mashauri, CEO of Tanseed International, a Tanzanian seed dealer working with CIMMYT to produce drought-tolerant maize seeds.

Getting these improved maize varieties into the hands of African farmers like Numbi is the product of more than two decades of research and involves a broad coalition of partners, from governments and NGOs to seed dealers and farmers. The most important members of this partnership, however, are the farmers themselves. Improved crops can’t help farmers unless farmers want to use them. That’s why drought-tolerant maize varieties are all subject to review by

African smallholder farmers before they are sold.

The farmers have not been afraid to let their opinions be heard. In Malawi, the government introduced various improved maize varieties for farmers to test out in their fields. Of these, the farmers preferred an early maturing drought-tolerant variety over others. In a year of severe drought, early maturing drought-tolerant varieties offer added insurance against starvation. Malawi’s ministry of agriculture officials took note, and last year the government endorsed the variety preferred by the farmers, encouraging thousands of farmers to use it in the country’s drought-prone areas.

The benefits of drought-tolerant maize are also making it increasingly popular among farmers in Tanzania. The tall, healthy stalks of maize rising from Numbi’s fields are one of its best advertisements. Whenever other farmers stop to admire her maize, Numbi says, “I advise them to adopt this variety if they really want to change their lives.”

Guided by the belief that every life has equal value, the Bill & Melinda Gates Foundation works to help all people lead healthy, productive lives. In developing countries, it focuses on improving people’s health and giving them the chance to lift themselves out of hunger and extreme poverty. In the United States, it seeks to ensure that all people—especially those with the fewest resources—have access to the opportunities they need to succeed in school and life. Based in Seattle, Washington, the foundation is led by CEO Jeff Raikes and Co-chair William H. Gates Sr., under the direction of Bill and Melinda Gates and Warren Buffett.

For additional information on the Bill & Melinda Gates Foundation, please visit our website: www.gatesfoundation.org.

© 2010 Bill & Melinda Gates Foundation. All Rights Reserved. Bill & Melinda Gates Foundation is a registered trademark in the United States and other countries.