Genetic techniques yield nitrogen efficient maize, benefits for small Kenyan farms

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis.

Nancy Shibona, a small-scale maize farmer from Kenya, is a widow and her family's bread winner. Shobona grows a nitrogen-use-efficient (NUE) type of maize. The variety was developed by the Improved Maize for African Soils (IMAS) project, an alliance led by the International Maize and Wheat Improvement Center (CYMMIT).

She tells SciDev.Net that she is happy with the variety because it is improving her life economically and socially. "I will sell some to earn money so that I can pay my children's school fees and save some for my children's [consumption]," she says. Shibona is one of many small-scale farmers in Kenya who achieved higher maize yields in September this year despite having poor soils, and hardly using fertilisers.

Biswanath Das, a maize breeder at CIMMYT, says one major challenge affecting smallholder farmers in Sub-Saharan Africa (SSA) is low-fertility soils, including those with poor nitrogen-supplying capacity.

After decades of cultivation without replenishment, much of East Africa's soil is degraded and nitrogen depleted, a key macronutrient for maize production. Das adds that the high costs of fertiliser in East Africa means that most farmers continue to apply insufficient amounts of fertilisers.

According to Das, the IMAS project has been working with public and private sector partners in East Africa to develop and fast-track the adoption of NUE varieties in the region.

These NUE varieties yield up to 30 percent more than existing conventional varieties under nitrogen stressed conditions that typify African maize growing conditions. Seeds will be availed to seed companies at royalty-free — meaning that the seed will become available to farmers at the same cost as other improved maize seed.

Read full, original post: Smallholders gaining from nitrogen-efficient maize