

Fighting Striga with 'Ua Kayongo' hybrid maize

For many years now, Kenyan farmers in Nyanza and Western Provinces have suffered from the parasitic weed striga as it destroys their cereal crops, particularly maize. Striga has invaded approximately 200,000 hectares of Kenyan cropland resulting in losses of about Sh800 million each year. It is also the major contributor of food insecurity among thousands of households in west Kenya as it causes massive yield losses of their major staple food.

A new maize technology that kills the parasitic weed striga is being tested in farmers' fields of Nyanza and Western Provinces. Farmers in this Striga-infested region recently received test kits of herbicide-treated hybrid maize seed known as Ua Kayongo (striga killer).

The hybrid seed was produced through the joint efforts of BASF, a supplier of agro-chemicals, the International Maize and Wheat Improvement Center (CIMMYT), the African Agricultural Technology Foundation (AATF) and local seed companies - Kenya Seed and Western Seed.

The test kits containing 1 kg of IR maize seed, 1 kg of Diammonium Phosphate (DAP), 1kg Urea and 1 kg of Calcium Ammonium Nitrate (CAN) fertilizers were distributed to approximately 1400 farmers by Kenya Agricultural Research Institute, (KARI), local seed companies and several Non-Governmental Organizations that are committed to helping farmers control striga, or kayongo as it is best known by farmers. The new approach to overcome striga involves treating a new maize hybrid, Ua Kayongo, with small amounts of Strigaway™ herbicide.

This revolutionary maize technology known among scientists as Imazapyr Resistant (I-R maize) or the Clearfield system literally kills the germinating striga seeds as they attempt to infect the maize plants. It is based upon naturally occurring herbicide resistance of maize that was first identified by researchers at BASF, a supplier of agro-chemicals, and was

later incorporated into Kenyan maize varieties by African plant breeders at CIMMYT and KARI. The herbicide has now been registered for use in Kenya and commercial seed companies are multiplying the hybrid seed for commercialisation during the short rains 2005-2006.

Preliminary results suggest that that every two-kilogram package of Ua Kayongo seed planted in striga infested soils will increase crop yields up to 80 kg compared to the currently available maize varieties. Research findings by KARI indicate that not only are maize yields improved through this technology, but the population of striga seeds remaining in the soil is greatly reduced.

The African Agricultural Technology Foundation (AATF) was recently established to facilitate access by African farmers to appropriate technologies for the improvement of agricultural productivity. One of its identified priorities is the introduction of I-R maize technology to the farming communities of west Kenya and other parts of sub-Saharan Africa that are affected by striga.

AATF is a not-for-profit Foundation promotes public-private partnerships for the transfer, development, production and distribution of proprietary agricultural technologies that would otherwise not be accessible to smallholder farmers of SSA especially due to intellectual property rights.

It also facilitates institutional coalitions throughout the agricultural value chain to ensure the right technologies are delivered to farmers.

The process of technology development, government approval and marketing requires many years, and often the final products remain inaccessible to the intended beneficiaries due to various constraints such as intellectual property rights.

Through negotiations with the owners of useful new technologies, target users and governmental regulatory agencies, AATF accelerates



Striga-infested farm maize

the delivery of needed technologies to poor farmers, while at the same time ensuring that the concerns of those developing new technologies and the beneficiaries are addressed.

AATF's activities include the control of parasitic weeds and insect pests in staple food crops such as maize and cowpea, enhancing the nutritional quality of cereals, improving the productivity of banana, plantain and cassava, control of mycotoxins in food grains, alleviating drought in cereals, building sustainable seed systems and the control of locusts and grasshoppers in Africa.

These problems cover a wide geographic area and the technologies required include chemical, mechanical and biological solutions. A key to AATF's approach is to foster strategic

partnerships between researchers, private industry, government officials and rural development specialists in a manner that improves the lives of African small-scale farmers.

The partnership formed to fight striga in Kenya using I-R maize technology serves as an example of how successful the partnership approach can be.

BASF has provided Strigaway free-of-charge to crop breeders and seed companies who then produced, treated and packaged seeds for widespread field testing by grassroots farmer groups coordinated by national NGOs and KARI.

These field tests are backstopped by 12 Ua Kayongo demonstration sites and 120 farmer-managed field experiments designed to assess the yields and economic returns resulting from different approaches to striga management.

The partnership is currently organizing farmer field days to be conducted in June and is hosting a traveling workshop in July across the striga-infested areas of Western Kenya that will introduce agricultural scientists and rural planners from Kenya and elsewhere in Africa to the IR maize technology.

For the first time, Kenyan farmers will have a key tool required to fight striga in their fields.

For more information on the partnership to fight striga, please contact:

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