

better tools, better harvests, better lives



IR maize intercropped with a legume

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IR-maize commercialised in Kenya

IR-maize has been commercialised in Kenya after successful on-farm demonstrations facilitated by AATF, Western Regional Alliance for Technology Evaluation (WeRATE- a consortium of 12 NGOs and six farmer organisations), Kenya Agricultural Research Institute (KARI), the Tropical Soil Biology and Fertility Institute of CIAT (TSBF-CIAT), and Maseno and Moi universities. Over 13,000 farmers in western Kenya have participated in the on-farm demonstrations which began in 2004.

IR-maize, whose trade name is STRIGAWAY® maize, is being marketed as 'Ua Kayongo Hybrid maize' by Western Seed Company (WSC) through a network of over 100 seed stockists in the western Kenya region. Farmers involved in the on-farm demonstrations reported an average increase of 1.1 tonnes per hectare. STRIGAWAY® is a registered trademark of BASF.

IR-maize activities in Southern Africa

In Malawi, AATF, BASF, CIMMYT, ZUM seeds Ltd, Chitedze Research Station and the University of Malawi brought together stakeholders interested in this technology at a meeting held in Lilongwe in March 2007. CIMMYT researchers and development partners have identified the best performing IR-maize varieties whose seed production is underway by ZUM Seeds Ltd in Malawi. The seed company will produce three tonnes of IR-maize in December 2007 for on-farm demonstrations in Malawi in 2008. At the same time, ZUM seeds Ltd has submitted IR-maize varieties to the Technology Clearing Committee of the Ministry of Agriculture for approval and release.

AATF approach to Striga management

Striga plagues an estimated 2.4 million hectares of smallholder maize farmland in SSA. In Kenya, this noxious weed infests over 210,000ha of maize farmland, thereby reducing farm productivity and driving several rural households in this region into extreme poverty. Striga is prolific in seed production with one mature plant producing between 50,000 and 200,000 seeds whose long life of up to 20 years in the soil has aided Striga's persistence in maize fields for years.

To curtail the damage by Striga weeds, AATF promotes an integrated approach to Striga management that encourages combination of different control methods that have demonstrated potential for success and for adoption by smallholder farmers. These approaches involve using seed resistance to systemic herbicides and suicidal germination induced by non-host plants. This requires several partners - farmers, the private and public sectors, policymakers and donors - to work together towards a challenging common goal.

To realise this effort, AATF is facilitating the use of a novel technology that consists of

imidazolinone-resistant (IR) maize seed coated with imazapyr herbicide and encouraging farmers to deploy these IR-maize varieties alongside other appropriate Striga management practices. These complementary packages include crop rotation, where maize is grown in rotation with soybean or groundnuts with the latter acting as trap crops. Such trap crops have capacity to stimulate Striga germination but the weed is unable to attach to the roots as they are non-host crops, thus resulting in suicidal germination of Striga. Another recommended practice is hand weeding of any emerged Striga seedlings before they flower.

The IR-maize technology is based upon inherited resistance of maize to a systemic herbicide (imazapyr) and combines low-dose imazapyr seed coating applied to the IR-maize seed. This technology was developed by the International Maize and Wheat Improvement Centre (CIMMYT), BASF and Weizmann Institute of Science, in collaboration with the Kenya Agricultural Research Institute (KARI), with funding from the Rockefeller Foundation and BASF. (Related links: <http://www.aatf-africa.org/projects.php> ; <http://africancrops.net/striga/>)

IR-maize in Tanzania and Uganda

On-farm demonstrations of IR-maize technology are now under way in Tanzania and Uganda, following its commercialisation in Kenya. STRIGAWAY® maize has been singled out as a potent weapon against Striga, a weed responsible for 20% to 100% maize crop failure in SSA.

In **Tanzania**, the IR-maize is aptly known as 'KK', which stands for 'Komesha Kiduha', a Swahili phrase for 'eradicate Striga'. Deployment of IR-maize in the vast Tanzania targets western, eastern, central and southern regions of the country where Striga weed is endemic. In the initial phase, the Striga Management project will cover Morogoro Rural and Mvomero Districts in Morogoro region located in eastern and central Tanzania, and Muheza, Mkinga and Handeni districts in Tanga region, near the Tanzanian coast. The installation of on-farm demonstrations are being led by Tanseed International Ltd; a local seed company, Ministry of Agriculture extension service, and local NGOs with backstopping from AATF, BASF and CIMMYT.

In March 2007, AATF facilitated the importation of 700kg of STRIGAWAY® maize from Kenya for on-farm demonstrations in Tanzania. This was carried out in collaboration with Tanseed International Ltd, Tanzanian Official Seed Certification Institute (TOSCI) and the Kenya Plant Health Inspectorate Service (KEPHIS). Further, project partners, CIMMYT and BASF, are also facilitating trials for Distinctiveness, Uniformity and Stability (DUS) tests essential for variety registration. At the same time, BASF is pursuing protocols for the official registration of Imazapyr herbicide in Tanzania, so that seed companies will be able to use the herbicide to

coat IR maize seed once it is officially released and production of certified seed permitted.

During the March-April planting season, the on-farm demonstrations were affected by insufficient and erratic rainfall and in some areas, such as Tanga, a serious rodent infestation resulted in a low maize stand of 50-75%. In addition, regulatory issues led to a delay in seed importation from Kenya into Tanzania, but despite this challenge, the partners and stakeholders in the Striga management project in Tanzania planted 365kg of IR-maize seed, corresponding to 365 on-farm demonstrations during the long rains of April-September 2007. Farmers remarked that the IR-maize fields remained relatively clear of Striga, unlike farms planted with the local maize varieties.

In **Uganda**, on-farm trials are under way in the Striga infested districts of Busia, Budaka, Tororo, and Namutumba in eastern Uganda. AATF is facilitating this in partnership with Africa 2000 Network - the lead partner in the deployment phase, Farm Inputs Care Centre (FICA) Seeds Ltd, National Agricultural Research Organisation (NARO), National Agricultural Advisory Services (NAADS) and the Ministry of Agriculture, BASF and CIMMYT. These partners together with local leaders in the target areas facilitated participatory stakeholder sensitisation meetings with 349 farmers. During the planting season of April 2007, 340 on-farm demonstrations were carried out in the four districts instead of the targeted 500. This was due to delays in seed delivery as a result of regulatory issues on the one hand, and erratic rainfall on the other. Importation of seed into Uganda from Kenya was facilitated by AATF, Seed Certification Services (SCS) of Uganda, KEPHIS and FICA Ltd.