



DELIVERING TO MARKET RESILIENT NEW MAIZE VARIETIES IN WESTERN KENYA

The Problem

- Many smallholder farmers in western Kenya experience low and declining crop productivity.
- At less than 1.6 tons/ha, the productivity of maize is far below the world average of 2.5 tons/ha.
- Small-scale farmers, the main producers of maize in this region, bear the brunt of low productivity due to crop diseases and Striga weed, which is found in up to 400,000 hectares of farmland.
- The ramifications are huge with estimated annual losses of \$10million to \$38million.

The Innovative Solution

Through the development and introduction of new, resilient maize varieties which are resistant to foliar diseases and Striga weed, Maseno University is working to improve productivity, raise household incomes and boost food security in Western Kenya. The innovation is highly appealing to farmers as it was developed using participatory testing approaches that took into account farmers' preferences on the crop's taste, time taken to mature, and resistance to foliar diseases and Striga. Furthermore, Maseno EH10 maize variety has a genetic mechanism for resistance to foliar diseases and is therefore natural. Maseno EH12 and Maseno EH14 - the new Striga-tolerant varieties - are more affordable than the current resistant varieties developed using prevailing chemically-induced approaches.



Striga-resistant variety of maize under test in western Kenya by Maseno University Seed Unit

About the Award

Following an open and competitive process in 2014, Maseno University was among seven innovations which won a seed funding and technical assistance award from USAID, through Feed the Future Kenya Innovation Engine.

- Award duration:** Aug 2014 - Aug 2015
- Award Amount:** KES 4.9million (\$56,228)
- Technical Assistance:** Staff planning, financial controls and systems development, business planning, and partner strategy development.
- Target Counties:** Kisumu and Siaya
- Targeted Value Chain:** Food staples

About the Innovator

Prof. Mathews Dida studied agriculture with the aim of eradicating the Striga weed, which often destroyed the maize crop on his family's farm when he was growing up, threatening their food security and livelihood. Dida worked at the Tech University of Texas until 12 years ago when he returned home and joined Maseno University where he now heads the Seed Unit. After 10 years of dedicated laboratory work and field trials, Dida has developed five locally-adapted hybrid maize varieties, improved varieties of finger millet and sorghum, and two new hybrid sweet cassava varieties.



Goals under the Award

- Test and introduce to market at least two new Striga weed-resistant maize hybrids to improve productivity, raise household incomes and boost food security in the region, which has a population of almost 15 million people.
- Improve maize productivity in western Kenya by 20 to 50 percent by promoting adoption of the new varieties.
- It is anticipated that in 5 years, after initial market introduction of the new maize varieties, at least 30,000 farmers will be planting the new variety of seed in an estimated area of at least 30,000 hectares.
- These new products will contribute towards improving the livelihoods of poor rural farmers in the region, who are predominantly women. These farmers often cannot afford to use recommended inputs and soil health management techniques, and are therefore most affected by biotic stresses such as Striga weed.
- Other indirect beneficiaries will be seed stockists and agro-dealers who will make profits from sales of the new varieties. Others will be grain millers and marketers who will access adequate quantities of grains.

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**Innovation Champion Prof. Dida
inspects the new maize varieties
under test in the field**



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