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REAL ECONOMY NEWS ONLINE

Kenyan group moves ahead with drought-tolerant maize innovation

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Published: 25 Apr 08 - 0:00

T he Kenya-based African Agri- cultural Technology Founda-tion (AATF) has announced a public–private partnership to develop drought-tolerant maize varieties for Africa.

The partnership, known as Water Efficient Maize for Africa (Wema), was formed in response to the effects of drought on small-scale farmers and their families.

Frequent drought leads to crop failure, hunger and poverty, and the AATF expects that climate change will worsen the problem.

The Bill and Melinda Gates Founda- tion, and the Howard G Buffett Foundation have contributed R370-million to the project.

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AATF announced the project at the end of a two-day planning meeting, which included representatives from each of the countries participating in the project, namely South Africa, Kenya, Uganda and Tanzania.

These partners will use biotechnology to develop African maize varieties, with the long-term goal of making drought-tolerant maize available royalty-free to African small-scale farmers.

The benefits and safety of these maize varieties will be assessed by national authorities, according to the regulatory requirements in each country.

“This partnership fits well with the AATF mandate of facilitating innovative public–private partnerships that bring to smallholder farmers in Africa the tools needed to increase productivity for better food and income security,” says AATF executive director **Mpoko Bokanga**.

The AATF will work with the nonprofit International Maize and Wheat Improvement Centre (Cimmyt); the private agricultural company, Monsanto; and the various national agricultural research systems in the participating countries to facilitate the project. In South Africa, this will be the Agricultural Research Council.

“Drought is a source of suffering and food insecurity for many people in Uganda,” says National Agricultural Research Organisation of Uganda director-general Dr **Dennis Kyetere**.

“Drought causes up to 100% crop failure in Uganda in some instances.”

Maize is the most widely grown staple crop in Africa, and is the main food source for more than 300-million Africans.

Over the next five years, Wema will develop the new maize varieties, incorporating the best drought-tolerance technologies available internationally.

Cimmyt will provide conventionally developed drought-tolerant high-yielding maize varieties that are adapted to African conditions, as well as expertise in conventional breeding and testing for drought tolerance.

Monsanto will provide proprietary germ plasm, advanced breeding tools and expertise. Additionally, Monsanto and BASF will provide drought-tolerance transgenes that they have developed through their collaboration.

These contributions will be provided without royalty.

The national agricultural research systems, farmers' groups and seed companies participating in the project will contribute their expertise in breeding and regulatory issues, and will be responsible for country-specific implementation, including project governance, testing, germ plasm evaluation, seed production, and distribution.

It is estimated that the maize pro-ducts developed through WEMA over the next ten years could increase yields by 20% to 35% under moder-ate drought conditions, compared with yields for current varieties.

The AATF believes this increase will translate into about two-million additional tons of food during drought years in the participating countries.

The first conventional varieties developed by Wema could be available after six to seven years of research and development.

The transgenic drought-tolerant maize hybrids should be available in about ten years.

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The AATF's three key donors are the Rockefeller Foundation, the UK Department for International Development, and the US Agency for International Development.

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