

[Home](#) [About Us](#) [News](#) [Media Center](#) [Blog](#) [Farmer to Farmer](#) [Ta](#)

[Home](#) [News](#) [Latest News](#) [Uganda: Sweet Genes Arm Banana Crops](#)

Uganda: Sweet Genes Arm Banana Crops

Tuesday, 15 June 2010 12:10

0 Com

AllAfrica.com / SciDev.Net
Peter Wamboga-Mugirya
June 14, 2010
<http://allafrica.com>

Kampala — Scientists in Uganda have developed GM bananas that show promising resistance to the deadly banana (BXW) disease.

Bananas are Uganda's leading non-cereal crop with some 70 per cent of the population depending on it as staple food. Over US\$200 million has been lost to BXW infestation since 2001. The disease has also been reported in Burundi, the Democratic Republic of Congo, Kenya, Rwanda and Tanzania.

Now, the banana plants modified with two genes derived from sweet peppers (*Capsicum annum*) show resistance to the bacterium *Xanthomonas campestris* pv. *musacearum*.

Principal investigator Leena Tripathi, a Ugandan-based biotechnologist from the International Institute of Tropical Agriculture (IITA) said inserting the genes - plant ferredoxin-like amphipathic protein (PFLP) and hypersensitive response-assisting protein (HR23a) separately in four local banana varieties is giving encouraging results (see GM bananas to fight wilt in Africa).

"In over five years of research, we've been able to insert genes into the East African highland banana varieties used (mpologoma and nakitembe), desserts (sukari ndizi) and brewing (kayinja). From these we've managed to develop varieties that have proved effective in laboratory and greenhouse tests after deliberate exposure to BXW," Tripathi, who works with the Nairobi-based African Agricultural Technology Foundation and the National Agricultural Research Organization (NARO) said. But, she added, they still need to confirm this effectiveness in a field trial.

Patrick Rubaihayo, a crop scientist at the Uganda-based Makerere University lauded the progress but warned of potential risks. "We need to know the molecule that these genes code for."

"My worry is that when a consumer eats large quantities of the modified varieties ... it is likely to be harmful," he said. "Safety should be established before recommending these bananas for human consumption."

But Feng Teng-Yung, a plant pathologist at the Academia Sinica, a Taiwan-based research institute that provided technical support, said they were safe. "Ferredoxin is a naturally-occurring protein in all living organisms," he said. "When we modify any organism, we're only boosting amounts for greater protection against serious infections as bacterial pathogens."

Even if BXW-resistant bananas prove successful in field trials, the absence of a GM law in Uganda will hamper farm biotechnology (see Uganda 'needs biotech law' to save banana sector). The 2008 National Biotechnology and Biosafety Bill presented to the cabinet for approval before it goes to parliament for enactment according to Michael Olupot-Tuke, commissioner for planning and research in the Ministry of Finance, Planning and Economic Development.

<http://allafrica.com/stories/201006141950.html>

[Add New Comment](#)

Type your comment here.

Showing 0 comments

Sort by **Popular now** Subscribe by email Subscribe by RSS

Reactions



TruthAboutTrade 6 days ago

 From Twitter via BackType

Reading: Uganda: Sweet Genes Arm Banana Crops: AllAfrica.com / SciDev.Net Peter Wamboga-Mugirya June 14, <http://bit.ly/d88ZuZ>

Trackback URL <http://disqus.com/forums/>

blog comments powered by **DISQUS**

[Home](#)  [News](#)  [Latest News](#)  [Uganda: Sweet Genes Arm Banana Cro](#)

Paid for by Truth About Trade and Technology
309 Court Avenue, Suite 214, Des Moines, Iowa 50309 - Copyright