



humanitarian news and  
analysis  
a project of the UN Office for  
the Coordination of  
Humanitarian Affairs

Back

Print report

## KENYA: "Good" mould to the rescue



Photo: Wikimedia Commons

The Kenya government announced in May that some 2.3 million 90kg bags of maize were contaminated with aflatoxin - file photo

NAIROBI, 7 June 2010 (IRIN) - A deadly fungus that has **blighted** thousands of tonnes of maize in Kenya could be defeated by introducing a less dangerous cousin to crops while still in the field, say scientists.

"The bio-control technology works by introducing strains of the *Aspergillus flavus* fungus that do not produce the aflatoxin, or 'the good guys', into the affected fields, which outcompete and drastically reduce the population of the poison-producing strains, or 'the bad guys'," according to a statement released by the Agriculture Research Service of the United States Department of Agriculture (USDA-ARS), the Africa-based International Institute of Tropical Agriculture (IITA), and African Agricultural Technology Foundation (AATF).

Symptoms of the poison produced by these "bad guys" include swollen stomach and legs, fatigue, yellowing eyes, liver cancer, reduced immunity and even death. Aflatoxin has killed at least 200 people in Kenya since 2004, according to government figures.

In May 2009, the Kenyan government announced that some 2.3 million 90kg bags of maize were contaminated with aflatoxin (the term is a contraction of "A. flavus toxin"), largely because an unexpected bumper crop and heavy rains had prevented farmers from drying the grain sufficiently to prevent the formation of the moisture-loving poison.

James Muthomi, a plant pathologist at the University of Nairobi's department of plant science and crop protection, welcomed the announcement, but offered some caveats.

"Much of the [research] work has been done under controlled conditions," he told IRIN.

Before releasing the technology on to the Kenyan market, Muthomi said, published data on its effectiveness in various field conditions should be made widely available.

"Different fungi express differently under different environments," he said.

"The atoxigenic *Aspergillus flavus* isolates that have already been proved to control aflatoxin contamination may first require some tests to prove that (a) their effectiveness is retained under the Kenyan conditions, (b) that the 'foreign' atoxigenic strains cannot mutate into toxigenic strains under Kenyan environment, and (c) that there are no chances the 'foreign' can recombine with the Kenyan toxigenic strains to produce even worse strains than what we already have in Kenya.

"How many countries have adopted the technology? How widespread has the technology been used in those countries?" are among the questions Muthomi said should be addressed.

While the technology has been tested in Nigeria, the "good" strain advocated for use in Kenya is native to that country, according to the scientists behind the initiative.

"A single application of this biopesticide two to three weeks before maize flowering is sufficient to prevent aflatoxin contamination throughout and beyond a cropping season and even when the grains are in storage," Ranajit Bandyopadhyay, a plant pathologist with IITA, said in the statement.

"These atoxigenic strains are also carried in the grains from the field to the stores," he said. "So, even if the grains are not stored properly or get wet during or after harvest, as is happening this year, they continue to prevent aflatoxin contamination during the post-harvest period."

Since Kenya is one of the world's hotspots for aflatoxin, the researchers have called upon the government and the private sector to partner with them and make the biocontrol option available to the farmers to save their harvests from



Photo: Jane Some/IRIN

A maize crop in the Rift Valley province: A team of scientists have developed a biocontrol method to prevent maize from aflatoxin contamination - file photo

future aflatoxin contamination.

js/am/mw

**Themes:** (IRIN) [Early Warning](#), (IRIN) [Food Security](#)

[ENDS]

**Report can be found online at:**

<http://www.irinnews.org/Report.aspx?ReportId=89390>

[This report does not necessarily reflect the views of the United Nations]

Services: [Africa](#) | [Asia](#) | [Middle East](#) | [PlusNews](#) | [Film & TV](#) | [Photo](#) | [Radio](#) | [Weekly](#) | [Live news map](#) | [Interviews](#) | [E-mail subscription](#)

Copyright © IRIN 2010

The material contained on [www.IRINnews.org](http://www.IRINnews.org) comes to you via IRIN, a UN humanitarian news and information service, but may not necessarily reflect the views of the United Nations or its agencies.

All IRIN material may be reposted or reprinted free-of-charge; refer to the IRIN copyright page for conditions of use. IRIN is a project of the UN Office for the Coordination of Humanitarian Affairs.