



Scientists unravel solution to maize poisoning

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By Roselyne Obala

Scientists have developed a cost-effective, safe, and natural method to prevent aflatoxin poison formation in maize.

The biocontrol technology works by introducing strains of the *A flavus* fungus that does not produce the aflatoxin.

The fungus out competes and drastically reduces the population of the poison-producing strains.

Two scientists identified strains of the good fungus native to Kenya and can now be used to control aflatoxin contamination in the country.



Peter Cotty of the Agriculture Research Service of the United States Department of Agriculture (USDA-ARS) and Ranajit Bandyopadhyay, a plant pathologist with the Africa-based International Institute of Tropical Agriculture (IITA) identified the strains.

According to Dr Bandyopadhyay, a single application of this biopesticide two to three weeks before maize flowering is sufficient to prevent contamination.

When in storage

"*A flavus* strains are either toxigenic (produce aflatoxin) or atoxigenic (do not produce aflatoxin). Our bio-control technology makes use of carefully selected atoxigenic strains that can safely out compete and virtually eliminate their toxic relative, effectively reducing contamination of the maize grains in fields," he said.

It is impossible to detect aflatoxins in maize or flour with the naked eye and caution is called for especially in affected areas. [PHOTO: File/STANDARD]

The expert says the technology's ability to continue working even when the grain is in storage ensures safety of maize.

He added: "These atoxigenic strains are also carried in the grains from the field to the stores. 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 post-harvest period."

Aflatoxin is a silent killer that causes liver cancer and suppresses the immune system. It also retards growth and development of children.

People exposed to high aflatoxin concentrations experience liver failure and rapid death.

From 2004 to 2006, nearly 200 people died after eating highly contaminated maize.

Currently, the country is again grappling with high levels of aflatoxin contamination that has rendered at least 2.3 million bags of maize in Eastern and Coast provinces unfit for human and livestock consumption. At least one person has been reported dead after consuming contaminated maize.

The researchers are now calling upon the Government and private sector to partner with them and make this option and other management practices available to farmers.

Meanwhile, a parliamentary committee has petitioned the Government to rescind the decision to buy maize contaminated with the deadly aflatoxin at reduced prices.

Two members of the Agriculture committee John Mututho and Victor Munyaka said farmers deserved better prices for the maize.

"It is demoralising that farmers are now getting a raw deal for their maize. They will incur massive losses," said Mr Munyaka.

The Government plans to purchase maize contaminated with aflatoxin at Sh1,000.

The move has sparked outrage from leaders from Eastern, North Eastern and Coast provinces who are also demanding for better prices.

Yesterday, Mututho and Munyaka who spoke to reporters at Parliament buildings said the Government had become insensitive to the plight of maize farmers.

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