

Uganda grains carry cancerous substances, scientists warn

Finding. According to a new study, 60 per cent of the maize, groundnuts, soya beans and sorghum sold on the market have got high levels of aflatoxins which cause cancer.

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KAMPALA. Makerere University researchers have warned that Ugandans are at risk of contracting liver cancer and hepatitis B after several food crops have been found to contain high levels of fungi-produced toxic chemicals called aflatoxins.

The sampled food crops include maize, millet, sorghum and cowpeas, which make up part of daily diet of several communities in the country.

Prof Archileo Kaaya, the head of Makerere's Department of Food and Technology, said research conducted on grains between 2000 to date found that 60 per cent of the maize, groundnuts, soya beans and sorghum sold on the market have got high levels of aflatoxins with carcinogens substances that produce cancer.

"Groundnuts are more contaminated than maize, and sorghum is even worse, especially the new variety called epur pur, which is known for brewing beer," Prof Kaaya said.

The aflatoxins come as a result of farmers drying their produce on bare ground yet during the period of drying; rain comes and wets the grain, thereby increasing the chances of the grains getting aflatoxins.

The researchers advised farmers to dry their produce on dry surfaces as soon as they are harvested and also store them in dry places to avoid contamination.

The findings were revealed yesterday in Kampala during a dissemination workshop on development of a biological mycotoxin-binder for improving the safety of livestock feeds and animal productivity by Makerere University's College of Veterinary Medicine, Animal Resources and Biosecurity (CoVAB).

Prof Kaaya said they have man-



At work. Women winnow millet in Kabwohe, Bushenyi District recently. A new research has revealed that grains such as millet, maize, groundnuts, soya beans and sorghum sold on the market have high levels of aflatoxins which cause cancer. PHOTO RACHEL MABALA

aged to quantify all the staple foods and animal feeds where they suspect aflatoxins can be a problem.

"We have found out the levels can be as high as 1,000 parts per billion (the number of units of mass of a contaminant per 1000 million units of total mass) compared to the 10 parts per billion allowed by the East African standards," he said.

In animals, aflatoxins are said to cause the same effect as in humans and the findings indicate that the majority of the rotten grains are used to make animal feeds that get toxicated and when an animal eats them they can also die or the toxins can end up in milk or eggs and meat.

"So the grains that you think have been thrown away end up in milk and meat and in addition to causing liver cancer, they are also associated with the effects of enhancing hepatitis B virus," Prof Kaaya said.

"They are also linked to stunting in children...remember these are our staples and we start giving them [children] these very early during the process of weaning throughout life," he warned.

As an intervention, the Makerere

scientists under the stewardship of the National Agricultural Research Organisation (NARO) funded by the World Bank in 2014, initiated the biological aflatoxin binder research to come up with a product that can counter aflatoxins.

Dr Jesca Nakavuma, the principal research investigator, said upon realising that aflatoxins could not be avoided given the country's environment, they launched a research into the product expected to be ready in one-and-a-half years once they secure funding. The product comprises

LOW ALTITUDE ZONES MOST AFFECTED

The research found that grains from higher altitude zones such as Mbale, Bulambuli and Kapchorwa districts were less contaminated compared to those from the low altitude areas such as Mayuge, Kamuli, Mubende and Masindi districts.

The higher the temperature, the higher the rainfall and the more the moulds are encouraged to grow and the more they produce the toxins, the scientists warned.

yeast and bacterial is meant to reduce the availability of aflatoxins in the animal feeds.

"Our animals are consuming feeds that contain aflatoxins. It is only ruminants like cows and goats which have bacteria within their stomachs with microorganisms that can break them [aflatoxins] down, but for our chicken, which are mainly fed on these commercial feeds, there is high risk of them having products containing aflatoxins," Dr Nakavuma said.

The animals that are fed naturally on grass, the scientist say, are safe while those supplemented on commercial feeds are at risk of consuming aflatoxins.

Grains from low land areas are at higher risks of getting contaminated with aflatoxins because the temperatures are quite high since majority of the micro-organisms enjoy tropical environment where temperatures are higher.

The scientists said babies are more exposed to aflatoxins because they can also get the toxins through their mother's milk and through HIV-positive patients because the toxins also reduce the immune system.