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AflaZ - New safety aspects on aflatoxin-producing fungi in maize
fields near Nairobi/Kenya

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Aflatoxins are among the most toxic substances produced by fungi and contaminate various foods. In particular, the warm, humid climate of Sub-Saharan Africa and other related regions in the world provides optimal growth conditions for aflatoxin-producing *Aspergillus* species, which can lead to food and feed heavily contaminated with aflatoxins, sometimes resulting in outbreaks of aflatoxicosis with numerous deaths.

AflaZ, which stands for "Zero Aflatoxin", is a multidisciplinary research project coordinated by the Max Rubner-Institut (MRI) in Karlsruhe, Germany. Together with scientists from the MRI locations Detmold and Kiel, the Friedrich-Loeffler-Institut, the Julius-Kühn-Institut, the University of Koblenz-Landau, and project partners in Kenya, KALRO (Kenya Agricultural and Livestock Research Organization) and EAFB (Eastern Africa Farmers Federation), the formation of aflatoxin on maize and its transfer to milk are being investigated and strategies developed to reduce fungal growth and aflatoxin formation.

During the project period, interesting scientific results have already been achieved by the project partners involved. Among other things, the Department for Safety and Quality of Fruit and Vegetables was able to show that aflatoxin M₁ is not only present in milk, as it is often assumed. In addition, laboratory experiments have demonstrated the effectiveness of blue light irradiation in inhibiting the growth of *A. flavus* and *A. parasiticus* on stored maize and the use of the mycoparasitic fungus *Trichoderma afroharzianum* as a biocontrol organism against aflatoxin-producing fungi. On-site support to Kenyan farmers involved in the project throughout its duration, such as regular training in Kenya on the project results in maize cultivation with biocontrol fungi (AflaZ trial fields), harvesting with subsequent drying of the maize, and storage of the crop using the developed prevention methods, has already resulted in reduced aflatoxin contamination and thus increased food safety for the Kenyan population.