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Integrating Gender and Nutrition within Agricultural Extension Services

Technical Note
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Infant Feeding and Exposure to Aflatoxins

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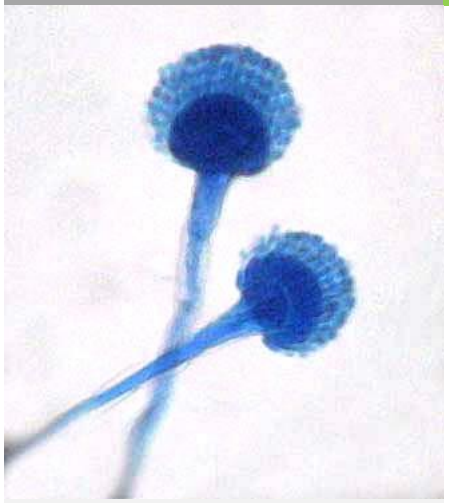

Aspergillus fungus (Carlos de Paz)

Aflatoxin mold on peanuts (IITA)

Best post-harvest practices for reducing aflatoxins

- Avoid damage during harvest
- Store crops in clean, low humidity, low temperature environment with adequate airflow
- Avoid insect/pests
- Clean storage units prior to loading new produce
- Sort out shriveled, damaged and moldy seeds before storage

Introduction

Aflatoxins play an important role in household health and nutrition.

Aflatoxins are fungal toxins produced by *Aspergillus flavus* and *Aspergillus parasiticus*. Aspergillus is a common form of mold that can colonize and contaminate food before harvest or during storage, especially following a drought or prolonged exposure to a high-humidity environment.

Aflatoxin exposure in children can lead to stunted growth, developmental delays, and issues with immune suppression and increased susceptibility to infectious disease. Longer-term exposure to aflatoxins increases the risk for liver and gallbladder cancer. Factors that increase the risk of aflatoxicosis include limited amounts of food, environmental conditions that favor mold growth on food, and limited regulation and oversight for aflatoxin monitoring and control.

Exposure to fungal toxins in weaning foods

Children are the most vulnerable to aflatoxin exposure and aflatoxicosis during the weaning process. Direct exposure to aflatoxins occurs primarily through consumption of contaminated staple foods (maize, peanuts, millet, peanuts, rice, sorghum) and through animal products (eggs, milk, and meat) from animals that have consumed aflatoxin contaminated feed. Aflatoxin metabolites in milk and meat are generally less toxic than aflatoxins directly consumed in staple foods, however aflatoxins have been detected in infant formula, dried milk, and cheese.

Reducing infant and young child exposure to aflatoxins

- Extended breastfeeding (exclusive breastfeeding until 6 months and continued breastfeeding to 2 years)
- The best strategy is prevention of initial contamination—boiling and cooking weaning foods does not reduce the level of aflatoxins in the food
- Follow best practices for reducing aflatoxin contamination during post-harvest and storage
- Storing foods in low-humidity environments to reduce fungal growth (this includes infant formula, dried milk and cheese)
- Sorting out poor quality, damaged, or moldy seeds in food stores and avoiding use/consumption of moldy or damaged seeds
- Proper disposal of contaminated crops and foods to avoid aflatoxin consumption by animal and contamination of animal products

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