CONTEXT OF MILK CONTAMINATION

Contaminated milk with AFM1

AFB1 ---> AFM1

Consumers’ exposure

Low milk production
FOCUS PROJECT

Feed Processors: ↑ Aflatoxins

Feed Vendors: ↑ Aflatoxins

Dairy Farmers: ↑ Aflatoxins

Milk Contamination with AFM1

WHAT TO DO?
ENHANCE PROJECT RWANDA

Examine on-farm use of mycotoxin binders/sequesters in dairy feed as a strategy to reduce aflatoxin excretion in milk.

Document relevant seasonal fluctuations of aflatoxin contamination in feeds, feed ingredients, and milk (and contributing factors) to inform RwaFDA policy standards and their implementation.

Educate consumers and dairy farmers about aflatoxin contamination and prevention in dairy feed and milk.
Dairy Producer
1. USE OF AFLATOXIN BINDERS/SEQUESTERS

- **BINDERS**: Substances that bind to aflatoxins and hinder their absorption
  - Decrease their bioavailability
  - Decrease the AFM1 secretion in milk
Experimental Design

1. Distribution of pelleted dairy feeds containing binders to selected farmers participated in the FOCUS project for a period of 6 months

2. Collect feed and milk samples in 4 rounds

3. Analysis of Aflatoxins in feeds and AFM1 in milk

Expected Results: Evidence-based research for the application of binders and reduction of AFM1 in milk in Rwanda
2. HAZARD ANALYSIS FOR AFLATOXIN IN DAIRY FEED AND MILK

Generated Data (FOCUS and ENHANCE projects)

Hazard Analysis

Determine Risk-based Preventive Controls

Determine the Margin of Exposure

Results used by RwaFDA for development and implementation of policy

**Expected Results:** Identify bottlenecks to achieving control over aflatoxin contamination of dairy feeds, and subsequently milk
3. AWARENESS CREATION OF AFLATOXIN EFFECTS AND PREVENTION MEASURES

- Development of teaching materials to raise awareness of aflatoxin dangers in collaboration RwaFDA
LEVERAGE PROJECTS

• Aflatoxin-Control Challenge in Africa Award – Efficacy of Cold Plasma in Degrading Aflatoxins – Kizito Nishimwe
  o 3rd Partnership for Aflatoxin Control in Africa (PACA) Partnership Platform Meeting

• Training and Certification Program on Sampling, Testing and Grading for the Grain Value Chain in the East African Community Region
  o USDA-FAS SCRP Project

• Enhancement of Safety and Value Addition on Agricultural Products in Rwanda
  o To reduce postharvest losses in maize for improved food and feed safety through the use of integrated management strategies
  o To reduce postharvest losses in fruit & vegetables by promoting proper handling and small-scale processing technologies
  o To improve milk and meat quality by enhancing awareness on hygiene and sanitation among the value chain actors

• Consortium for Innovation in Post-Harvest Loss and Food Waste Reduction
  o Foundation for Food & Agriculture Research and Rockefeller Foundation
  o ISU, UMD, WUR, VC, UN, KNUST, SU, ZU, SP