

## CADP initiative on aflatoxin management in the maize value chain

**Donor:** Commercial Agriculture Development Project of the Federal Ministry of Agriculture and Water Resources (CADP)

**Timeframe:** 2011 - 2012

**Background:** In Nigeria, food quality and safety issues resulting from aflatoxin contamination present a serious obstacle to programs designed to link farmers to markets. Significantly high levels of aflatoxins occur on maize in Nigeria. The economic impact of aflatoxin extends beyond the farmer and significantly hampers the profitability of the livestock industry. The need for aflatoxin management is increasingly being recognized in the market by the food and feed sectors, and large private sector food companies are making direct interventions to manage aflatoxin contamination. One of these private sector-championed initiatives is Nestlé's 'shared value' project, which ensures local supply of raw materials of adequate quality instead of costly imports and which in the process improves quality of farmer produce for home consumption. Aflatoxin contamination can be minimized with a variety of pre- and post-harvest tools, of which biocontrol is among the most cost-effective methods with the potential to offer a long-term solution to the aflatoxin problem. The International Institute of Tropical Agriculture (IITA) has worked with more than 100 farmers to assess the efficacy of aflasafe in partnership with Kaduna State Agriculture Development Project (ADP) in 2009 and with the Commercial Agriculture Development Project of the Federal Ministry of Agriculture and Water Resources (CADP) in 2010. Aflatoxin reduction was 80% in 2009 and nearly 90% in 2010 in maize. Biocontrol is an input-driven intervention for the management of aflatoxins. Efforts were made to link the pioneer farmers who used aflasafe to premium markets, but more work is required in this direction.



One of CADP's 23 signpost in Kaduna State encouraging farmers to become a commercial farmer, featuring aflasafe (photo by CADP)

**Project summary:** This project focuses on a multi-pronged approach for aflatoxin management. Aflatoxin awareness among farmer communities enables them to value the need for aflatoxin management. Aflasafe adoption by farmers is the main pillar, because it dramatically reduces pre-harvest aflatoxin contamination. Training of CADP staff and key farmers on good pre- and post-harvest practices for aflatoxin management is essential. Aflatoxin testing of maize is implemented for identifying suitable utilization channels based on contamination levels. Warehouses are developed for aggregation of maize and to empower farmers. Finally, market linkages are created that link farmers with appropriate value chain participants.

### Objectives

- to select farmers who are interested in the aflatoxin management program and have them treat their fields with aflasafe, under the guidance of trained CADP staff
- to develop optimal and mutually agreeable aflasafe distribution channels in partnership between farmers, CADP and IITA
- to train farmers and CADP staff on pre- and post-harvest methods to manage aflatoxins
- to sample and analyze maize from aflasafe adopters for aflatoxins, and share results with farmers to demonstrate the safety of their harvest and advise on potential markets as a function of aflatoxin levels
- to train farmers on maize grain handling to meet the quality and traceability requirements of the premium markets
- to implement warehouse facilities that will reduce post-harvest contamination and act as aggregation points
- to develop market linkages through stakeholder meetings so that aggregators and processors are linked with aggregated, high-quality produce from participating CADP farmers
- to increase awareness about the health risks of aflatoxin contamination, especially among women and children

### Outputs

- farmers achieve >80% reduction in aflatoxin contamination by using aflasafe and other aflatoxin management practices
- more than 85% of farmers who receive training adopt aflatoxin management practices and produce maize that meets Nigerian aflatoxin standards for human food and poultry feed
- 50% of farmers use aflatoxin analysis to channel their maize through appropriate channels
- at least 2,000 farmers, traders, and people in rural communities become aware of aflatoxin and its health impact
- 40% of farmers are linked to the poultry value chain of CADP, NFRA and NEPC for sale of maize

**Major partners:** Ahmadu Bello University, Commercial Agriculture Development Project of the Federal Ministry of Agriculture and Water Resources (CADP), Doreo Partners, International Institute of Tropical Agriculture (IITA), National Agricultural Extension, Research & Liaison Services (NAERLS), Nestlé

**Target country:** Nigeria

**Crop:** maize