



## **EAST AFRICAN COMMUNITY**

# **High Level Stock-Taking Meetings on Implementation of the EAC Regional Strategy and Action Plan on Aflatoxin Prevention and Control**

*February/March, 2020*

## **Summary of Findings**

**EAC SECRETARIAT,  
P.O. BOX 1096,  
ARUSHA, TANZANIA.**

## **1.0 INTRODUCTION**

Aflatoxin contamination poses a serious threat to human and animal health, and to the economies of the EAC Partner States. In February 2018, the 36<sup>th</sup> Council of Ministers approved the EAC Aflatoxin Prevention and Control Strategy and Action Plan (2017-2022). The Council further directed Partner States to mainstream EAC Aflatoxin prevention and control strategy priorities in their national budgets and investment plans. The Council of Ministers also approved nine sets of policy briefs on aflatoxin management. They contain recommendations on interventions required to mitigate impacts and effects of aflatoxin along the food and feed value chains. Development and implementation of the Strategy has been funded by USAID Kenya and East and technically supported by the International Institute of Tropical Agriculture (IITA) and the Partnership for Aflatoxin Prevention and Control in Africa (PACA).

In February and March, 2020, the EAC Secretariat with financial support from USAID Kenya and East Africa convened national forums in four Partner States (Kenya, Uganda, Burundi and the United Republic of Tanzania) to take stock of the progress made in the implementation of EAC Regional Strategy and Action Plan on Aflatoxin Prevention and Control in line with the aforementioned Council directives. The stock-taking covered the first two years of implementation (2018-2019) after approval by the Council of Ministers.

## **2.0 PARTICIPATION**

The meetings were attended by a wide range of stakeholders including Government line Ministries, regulatory agencies, research institutions, the private sector, farmers' association, academia, medical fraternity, the media and the EAC Secretariat.

## **3.0 SUMMARY OF KEY FINDINGS**

Convening of the stock-taking meetings provided an opportunity to interact with stakeholders and gather feedback in a comprehensive, candid and transparent manner. This has not been possible through other means in the past. Partner States specific achievements in aflatoxin prevention and control efforts are summarized in the section below. Common challenges, gaps and recommendations are captured in the last section of this report.

## **4.0 REPUBLIC OF KENYA**

### **4.1 Funding**

The Republic of Kenya has prioritized funding for aflatoxin management interventions. This include a total of Kshs 1.3 billion allocated in the 2015/16 financial year and Kshs 43.7 million allocated to the department of crops in 2019/2020 financial year.

### **4.2 Capacity building**

The national government has been able to cascade aflatoxin prevention and control capacity building efforts to county governments. In the last two years, a total of 336 county Public Health officers and agriculture extension officers from 30 counties have been trained in various aspects of aflatoxin detection and management.

### **4.3 Infrastructure**

Prior to approval of the EAC Aflatoxin prevention and control strategy, the Republic of Kenya in 2016 commissioned a State-of-the-Art regional mycotoxin laboratory at the Kenya Agriculture and Livestock Research Organization (KALRO) Katumani station. The lab supports constant monitoring and surveillance efforts of aflatoxin in the region. In an effort to strengthen capacities in the counties, mini laboratories have been set up in Turkana, Marsabit and Tana River through the support of the World Food Programme (WFP). They will help county Public Health Officers carry out continuous surveillance in cereals and pulses. Kenya is also the first country in the East African Community to construct a plant for manufacturing aflasafe technology. Koppert Biological systems, a private company, was contracted in December 2019, under public-private partnerships to undertake distribution of aflasafe KE01 product in the country.

### **4.4 Deployment of aflatoxin prevention and control technologies**

In preparation of large-scale distribution of aflasafe, about 70 metric tonnes of the technology has been procured and distributed to counties for demonstration to farmers. In strengthening capacities for pre-and post-harvest management measures to minimize aflatoxin contamination, 2,200 medium sized grain shellers, 24 moisture meters and 1500 hermetic bags have been procured and distributed to counties for use by extension officers during trainings. A total of 39 grain driers have been procured and distributed to 24 counties to assist farmers in drying their grains.

Apart from aflasafe, other biological control technologies have been developed and tested. This include the Push-pull technology developed by the International Centre for Insect Physiology and Ecology (ICIPE) in collaboration with KALRO. The technology has been designed to repel stem borers which are known for damaging maize cobs and making them susceptible to aflatoxin contamination.

### **4.5 Institutional and coordination arrangements**

Kenya is striving to come up with a synchronized and functional mechanism on aflatoxin prevention and control. Efforts to strengthen coordination among various agencies is evident. For instance, through the Ministry of Industry, Trade and Enterprise Development and in light of the recent confiscation of unsafe maize products in retail outlets, a multi- agency committee on the management of aflatoxin contamination in food and feed has been formed. An MOU has been drafted between Ministry of Health, Kenya Bureau of Standards and the Council of Governors on sampling and laboratory analysis of mycotoxin contamination in food and feed.

## **5.0 UGANDA**

### **5.1 Institutional arrangements**

The Republic of Uganda has prepared and launched an Aflatoxin Prevention and Control Action Plan aligned to the EAC regional strategy. A mycotoxin Technical Working Group

and Uganda Mycotoxin Steering Committee chaired by the Ministry of Agriculture, Animal Industry and Fisheries has been constituted.

Aflatoxin prevention and control initiatives have been mainstreamed in the food safety intervention areas under both the Agricultural Policy-2013 and the Agricultural Sector Strategy Plan (ASSP) (2015/16 – 2019/20). The upcoming ASSP (2020/21 – 24/25) will deepen & scale up food safety interventions in the sector including aflatoxin mitigation. Uganda Multisectoral Food Security & Nutrition Project (UMFSNP) has integrated aflatoxin issues as part of its nutrition awareness programs in the 15 districts. Potential Scale up of UMFSNP in the second phase after 2020 to additional 75 districts has been planned.

## **5.2 Communication, awareness and capacity building**

IEC for prevention and control of Aflatoxin along all agricultural value chains have been developed and translated into key local languages. The materials have informed awareness campaigns under the Agriculture Cluster Development Project (ACDP). ACDP targets major export commodities including maize, cassava, rice, beans and coffee and has integrated aflatoxin/mycotoxin prevention and control in its activities along the value chains in over 42 districts. A total of 1000 key stakeholders in 24 Districts have been trained.

The Uganda National Bureau of Standards (UNBS) has domesticated EAC standards and also developed standards covering rice, soya bean, maize and beans among others. The standards for maize, beans and groundnuts have been translated into six local languages (Luganda, Runyakitara, Lugbar, Atesot, Luo and Swahili) and awareness is being created among stakeholders. Extension workers in the Northern and Eastern regions of Uganda have been trained on the Aflatoxin Prevention and Control. Through community sensitization campaigns, farmers have been encouraged to use good pre- and post-harvest handling measures including the use of hermetic storage bags.

## **5.3 Research and development**

Research on potential biocontrol technologies is led by the National Agricultural Research Organization (NARO) in collaboration with the International Institute of Agriculture (IITA). Under NARO and IITA collaboration aflasafe strains that are suitable for Uganda have been isolated and await efficacy trials.

In the area of animal health, aflatoxin binders have been developed from local materials in Uganda and await upscaling and commercialization.

## **5.4 Human health interventions**

There is scale-up of immunization efforts against hepatitis B with 93% coverage of children up to 1 year (Expanded Programme for Immunization, 2017).

## **6.0 RWANDA**

### **6.1 Institutional and coordination arrangements**

The Republic of Rwanda has established a Technical Working Group (TWG) on mycotoxin management encompassing representatives from Ministries and Government Institutions, academia and the private sector to oversee and coordinate interventions on the prevention and control of aflatoxin. Currently, the TWG is overseeing the development of a cross-sectoral strategic plan for the control and prevention of Aflatoxin contamination.

## **6.2 Research and development**

Rwanda is implementing a 3-year project (Dec. 2018-Dec. 2021) funded by AGRA and jointly implemented by IITA and Rwanda Agriculture and Animal Resources Development Board (RAB). The main objective of the project is to support the development and commercialization of aflasafe technology. With support from Feed the Future Livestock Systems Innovations Lab/University of Florida the use of binders in animal feeds is being tested with aim of reducing impacts of aflatoxin in livestock.

Several scientific articles emanating from research in a number of areas including aflatoxin contamination in maize flour, detection and quantification of aflatoxin in cassava and maize flour and evaluation of mycotoxins content in soya bean grown in Rwanda have been published.

## **6.3 Funding**

The government has prioritized funding for aflatoxin prevention and control. In the FY 2019/20, over 10 billion Rwandan Francs was allocated for the construction of post-harvest infrastructure (drying facilities, storage facilities and drying machines) all over the country. In the last two years, a total of 912 drying facilities and 153 storage facilities have been constructed.

## **6.5 Communication, awareness and capacity building**

Knowledge enhancement about aflatoxin prevention and control measures has been a key intervention targeting various stakeholders. In the last two years, for instance, 120 Hub farmers and 10 district staff officers have been trained on Aflatoxin contamination causes, risks, detection, prevention and control in maize from Ngoma and Bugeser. Through the training of trainers' approach over 30,000 farmers have been capacitated by Hub farmers on Aflatoxin management. Teaching materials have been developed and translated to Kinyarwanda to create awareness among farmers supported by the Feed the Future Livestock Systems Innovations Lab. A total of 11 radio programs and 12 TV shows on Aflatoxin management have been aired to sensitize the wider public on aflatoxin matters.

## **6.6 Infrastructure**

Ministry of Agriculture and Animal Resources (MINAGRI) has installed mini labs at the borders to facilitate the testing of agricultural commodities for presence of aflatoxin contamination. Inspectors have been trained on sampling and testing and equipped with rapid test kits.

## **6.7 Health interventions**

The Government has successfully rolled-out vaccination campaign against Hepatitis B reaching out to about 90% of the population.

## **7.0 UNITED REPUBLIC OF TANZANIA**

### **7.1 Mainstreaming of aflatoxin matters in national instruments**

The United Republic of Tanzania has performed remarkably well in mainstreaming aflatoxin prevention and control into national food security and safety programs. The National Aflatoxin Control Action Plan and a draft communication strategy have been developed to harmonize prevention and control, outreach and awareness efforts. The Post-Harvest Management Strategy 2019–2029 is in place and incorporates Aflatoxin management issues (capacity building, innovative technologies, storage infrastructure). In addition, the process of reviewing the Plant Protection Act 1997, Plant Protection Regulations, 1998 and the Grazing Land and Animal Feed Resources Act, 2003 is in progress to incorporate Aflatoxin issues. In an effort to strengthen coordination, an MOU has been signed between the Ministry of Agriculture and Tanzania Bureau of Standards to create awareness and develop/review standards, protocols and codes of practice for management of Aflatoxin.

### **7.2 Funding**

The government and development partners have committed funding to support aflatoxin prevention and control efforts. For example, the Tanzania Initiative for Preventing Aflatoxin Contamination (TANIPAC) project was launched in March 2019. It is funded by the Government, the Global Agriculture and Food Security Program (GAFSP) and the African Development Bank to the tune of 33 million USD. The project is coordinated by the Ministry of Agriculture in Mainland and Zanzibar.

### **7.3 Infrastructure**

There is planned procurement of Investigator Machines for Mycotoxin Screening and Testing for Tanzania Agricultural Research Institutions (TARI-Ilonga, TARI-Naliendele) and the Zanzibar Agricultural Research Institute (ZARI).

### **7.4 Research and development**

Aflasafe TZ 01 (a biocontrol product) has undergone testing and registration in the United Republic of Tanzania. Efforts are underway to commence local production and distribution by the A to Z company based in Arusha. The efficacy of the technology has been proven. 400 tests conducted in 11 districts in (Morogoro, Dodoma, Mtwara and Manyara-in 2016/17) confirmed the efficacy of the technology. It is capable of reducing contamination levels reduced by 80 - 90% in maize and groundnuts.

### **7.5 Capacity building, communication and awareness**

Communication and awareness creation on aflatoxin prevention and control has been stepped up. Awareness campaigns on Aflatoxin biocontrol has been created to

approximately 17,059 stakeholders. In addition, various forms of IEC materials have been developed and distributed widely during agricultural shows and international events such as the World Food Day. High level meetings have been held to sensitize policy makers, media campaigns held, training of journalists conducted and information sharing websites have been developed. Farmers' exhibitions have been held and best pre- and post-harvest management practices promoted including the use of hermetic storage bags and metal silos.

In order to build a critical mass of agricultural officers with knowledge and skills in aflatoxin prevention and control, a chapter on aflatoxin causes, health effects and mitigation measures has been incorporated in the National Agricultural Tutor Training module.

## **8.0 OVERALL OBSERVATIONS AND RECOMMENDATIONS**

- a) Enforcement of Aflatoxin prevention and control standards, regulations and legislation are an area of weakness in the EAC Partner States. Development of standalone legislation on aflatoxin management can contribute towards addressing this challenge. At a regional level, there is an opportunity to develop EAC Aflatoxin Prevention and Control Bill and regulations. Adoption of the same by EAC Partner States will facilitate a harmonized approach in aflatoxin management interventions.
- b) In all the four EAC Partner States, there is favourable policy environment and strong political conducive for financing of aflatoxin prevention and control. Buy-in and ownership has been demonstrated through direct funding from the government and investments in the development and deployment of aflatoxin management technologies. This needs to be enhanced further to ensure sustainability in the long run.
- c) Communication and awareness on aflatoxin prevention and control happens to be one of the conspicuous activities undertaken by Partner States. However, more ground needs to be covered in a focused and targeted manner through robust communication strategies. The EAC regional communication strategy provides a good framework to inform Partner States national communication strategies. Approaches to looking at other avenues for education and information dissemination need to be considered, in addition to the agricultural value chain actors.
- d) Efforts to mainstream aflatoxin prevention and control matters in the curriculum of tertiary and higher institutions of learning is laudable. This should be expanded to cover also primary and secondary levels of education.
- e) The bulk of aflatoxin prevention and control interventions is biased towards crops. Through evidence-based advocacy, Partner States should be encouraged to balance and direct investments to other areas that are equally important including impacts of aflatoxin on human health, animal health and trade.
- f) The role of the private sector in aflatoxin management needs to be given more support and prominence through creation of an enabling policy environment. The private sector has demonstrated potential for production, distribution and scaling up of Aflasafe technology. The public-private partnership models applied in Kenya and Tanzania could be replicated and adapted by other EAC Partner States in the development and distribution of aflasafe and other technologies for aflatoxin management.
- g) Regular dialogue and interaction between government agencies and the private sector is necessary to address policy and regulatory challenges associated with

handling of aflatoxin- contaminated grain that impact on the latter. Dialogue with the private sector can be organized through umbrella associations such as the Cereal Millers Association in Kenya.

- h) Effective coordination of multiple actors involved in aflatoxin prevention and control along the value chain is critical to enhance complementarity and reduce duplication of efforts and resources. EAC Partner States are making steady progress in strengthening coordination, but largely this still remains an elusive goal to achieve because of the intricate nature of aflatoxin matters along the food and feed value chains. It is important and necessary that each Partner State designates a lead agency to catalyze and spearhead aflatoxin prevention and control matters. A coordination structure that spells out the mandates, roles and responsibilities of all stakeholders involved in aflatoxin prevention and control efforts can be a useful tool to harmonize interventions and facilitate cooperation.
- i) The stock-taking meetings identified gaps that call for research to be supported in a number of areas. For instance, in the area of animal health, research should be supported to analyze the efficacy and safety of binders on animal feeds. Research findings can also inform development and enforcement of standards for animal feeds. Baseline survey on mycotoxins contamination prevalence in value chains in EAC Partner States needs to be supported as well. This was identified in a number of Partner States including Uganda, Rwanda and Tanzania.
- j) The EAC Aflatoxin Prevention and Control Strategy and Action Plan has about three years of implementation remaining. A lot can be achieved during this period.