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# Aflatoxins: A Threat to Competitiveness of EAC Agricultural Produce and Products in the Domestic and International Markets

## EXECUTIVE SUMMARY

In the EAC Region, food crops and their products that are produced, consumed or traded in large quantities with high degree of susceptibility to aflatoxin include maize, groundnuts, cashew, and sesame.

The potential economic and trade-related impacts of aflatoxin contaminated products in domestic and international markets can be significant.

The contribution of market losses to the total economic impact depends on the extent to which the domestic market differentiates aflatoxin-contaminated products. If the domestic market does not differentiate aflatoxin-contaminated products, the market losses from the contamination will be minimal. Among EAC Partner States, in Kenya, the awareness about aflatoxins is high, signaling that domestic market impact will be higher than in other countries.

The EAC Partner States are losing trade and general market accessibility due to sale of aflatoxin contaminated foods. Aflatoxins are barriers to trade, notwithstanding the health implications to the consumer upon sustained consumption of aflatoxin contaminated foods above the tolerable levels. Similarly, livestock such as poultry, pigs, and cattle are also impacted negatively by aflatoxins.

In order to address the impacts of aflatoxin contaminated produce to trade, this policy brief recommends that EAC Partner States provide: adequate human and financial resources to enforce aflatoxin standards in conjunction with Sanitary and Phytosanitary (SPS) measures; put in place an enabling environment to attract informal cross border traders to confidently engage into formal trade systems; a harmonized testing protocol for use by relevant stakeholders along the food value chains; and a credible "aflatoxin safe" certification that will expedite movement of intra-regionally traded aflatoxin prone commodities and products to reduce time spent in border clearance procedures.

## THE PROBLEM

Trade in Aflatoxin contaminated agricultural produce and products above EAC permissible levels can result into adverse economic losses.



*Aflatoxin-contaminated groundnut kernels*

The crops commonly affected by aflatoxins include cereals (maize, sorghum, millet, rice wheat), oil seeds (groundnuts, cottonseed, sesame) root crops (cassava) and nuts (cashews, Brazil nuts, pecans, walnuts, pistachio nuts), and spices (particularly chilies), and products made from these crops.

Market losses in trade can be viewed into both domestic and international market losses. In the international market, the impact results from inadmissibility or rejection of products by the international market and from inability to compete in international markets.

In the domestic market, the direct economic impact of Aflatoxin contamination in crops results mainly from a reduction in marketable volume (and potentially higher price), revenue loss by domestic producers or distributors, and losses incurred from livestock disease and mortality.

Among the EAC Partner States, awareness about Aflatoxin contamination is high in Kenya, signaling that domestic market impact will be higher than in other Partner States. Nonetheless, there is no stand alone policy on Aflatoxin prevention and control among EAC Partner States, hence calls for a need to develop harmonized approach on prevention and control of aflatoxin along the value chains.

## SIZE OF THE PROBLEM

The current EAC harmonized standard for maximum allowable levels of aflatoxin is 10 ppb. However, there are cases of agricultural produce being destroyed because of non-conformity to this standard. For example; in 2014, 13,992 metric tons of aflatoxin contaminated maize was destroyed in Kenya (Figure 1). The consignment could not neither be consumed nor traded due to contamination levels above the tolerable national levels (MoH/MoALF Kenya 2014).

Enforcement of regulations and standards on aflatoxin within the EAC Partner States is inadequate and therefore unable to know the empirical magnitude. However, if the regulations are enforced domestically, the estimated overall loss for the EAC Partner States based on the overall production is high. Kenya and Tanzania each produce large quantities of maize (3.4 and 4.3 million metric tons, respectively). In the highest scenario of maize prevalence, over 2 million metric tons of maize would be lost in each of these countries (FAOSTAT, 2011).

In 2011, maize prices in the EAC Partner States ranged from \$283 to \$406 per metric ton (FAOSTAT). The largest impacts were for Uganda, which had the highest maize exports in 2011, followed by Kenya. Trade values lost in Uganda ranged from \$1.7 million to \$10.3 million. In Kenya, trade values lost ranged from \$656,700 to \$3.9 million. In Tanzania, the trade values lost ranged from \$218,100 to \$1.3 million while in Burundi and Rwanda the trade values lost ranged from \$9,400 to \$56,400 and \$12,700 to \$76,200 respectively (UN Comtrade 2011).

## CAUSE OF THE PROBLEM

Inadequate regulatory frameworks, including poor enforcement and coordination mechanisms, and noncompliance to staple food standards are the main causes of the failure to access markets. This may be associated with low level of awareness and poor regulation of domestically traded products. In addition there are multiple actors in enforcing the set regulations. To address these issues, it calls for identification of roles and strategic linkages between the actors. Involvement of the private sector and capacity building of the players along the value chains on Good Agricultural Practices, should be enhanced in order to reduce the volumes of contaminated produce and hence safe food commodities accessing the markets.

## POLICY OPTIONS/RECOMMENDATIONS

**POLICY OPTION 1: Provide adequate human and financial resources at national and regional levels to enforce aflatoxin standards in conjunction with Sanitary and Phytosanitary (SPS) measures. There is need for each Partner State to allocate budget lines for aflatoxin prevention and control interventions.**

Most failures are resulted from low consideration to provide human and financial resources to enable the translation of policies and commitments into actions.

**POLICY OPTION 2: Partner States should invest in sensitization of business operators on the benefits of formal trade system. This will attract informal cross border traders to confidently engage into formal trade systems.**

Over half of domestic and cross border trade are conducted informally and is unregulated.

**Policy Option 3: Put in place a harmonized testing protocol for use by relevant stakeholders along the food value chains.**

There are many actors with different mandates who are involved in regulating foods and food products. These actors use different procedures and processes in determination of the safety of the food and food products. As such the process becomes cumbersome and unstandardized.

**Policy Option 4: Develop a credible "aflatoxin safe" certification mechanisms/procedure that will expedite movement of intra-regionally traded aflatoxin prone commodities and products to reduce time spent in transiting borders.**

certification and labeling of aflatoxin tested foods as "aflatoxin safe" will assist regulators in facilitation of cross border trade. Further, labeling will enable the consumer to make informed choices.

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