



## Concept Note

# Workshop on “Engaging the Health and Nutrition Sectors in Aflatoxin Control in Africa”

March 23 – 24, 2016

at

African Union Commission Headquarters,

Addis Ababa, Ethiopia

***Theme: Mitigating the Health and Nutrition Impacts of Aflatoxins in Africa through Uncommon Partnerships***



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Partnership  
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## BACKGROUND AND RATIONALE

Food safety intersects with food security, nutrition and consumer health. Thus, global quest for safe food continues to increase due to contamination of staples (e.g. cereals, nuts and oilseeds) by natural fungal poisons, mainly aflatoxins. Contamination of food by aflatoxins is a complex issue and predominant in countries/regions with tropical and subtropical climates between the 40°N – 40°S of the equator (e.g. sub-Saharan Africa). This significantly affects agricultural output, availability of safe food, regional and international trade, and impedes consumer/public health; in turn adversely impacting on national economic growth. FAO estimates that about 25% of food crops are contaminated by mycotoxins, especially by aflatoxins<sup>1</sup>.

From the nutrition and public health standpoint, human exposures to aflatoxins could occur through dietary sources, occupational and respiratory sources, or could be through the trans-placental route, breastmilk and complementary weaning food during the very early days of infancy (neonatal exposure) as shown in various studies from Africa<sup>2</sup>. Exposure effects may manifest as acute or chronic aflatoxicoses in human and animal systems<sup>3</sup>. Acute aflatoxicosis is usually characterized by vomiting, abdominal pain and hemorrhaging, acute liver damage, loss of digestive tract function, convulsions, cerebral and pulmonary edema, coma and death. More than 5 billion people in developing countries worldwide are chronically exposed to aflatoxins; the effects include liver cirrhosis, intestinal dysfunction, immune suppression and increased susceptibility to some infectious diseases including HIV-AIDS, and maternal and child health problems such as anemia, malnutrition, stunting, wasting and death<sup>4</sup>. Aflatoxin exposure increases the risk of liver cancer by 30 times in hepatitis B virus (HBV) infected individuals compared to HBV negative individuals<sup>5</sup>. In addition, aflatoxins can interfere with nutrient metabolism especially in children, thus negatively impacting on child growth<sup>6</sup>. Micro-nutrient (e.g. selenium) fortification has, however, been shown to have some protective effects on aflatoxin damage to major target organs in animals<sup>7</sup>. In animals, this toxin reduces production of healthy livestock through ingestion of contaminated feed, causing a decrease in production of milk and eggs, leaving toxic residues in dairy, meat and poultry products, and causing serious illness to animals.

The risk of aflatoxin exposure is greatly aggravated by heavy reliance on aflatoxin-prone dietary staples, low level of awareness of the problem and less coordinated health and nutrition focused

<sup>1</sup>CAST 2003.

<sup>2</sup>Gong et al. 2002; Turner et al. 2003; Gong et al. 2004; Turner et al. 2007; Oluwafemi et al. 2012.

<sup>3</sup>Bondy and Pestka 2000.

<sup>4</sup>Williams 2004; Turner et al. 2012.

<sup>5</sup>Williams 2004.

<sup>6</sup>Watson et al. 2015.

<sup>7</sup>Liao et al. 2014.



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intervention strategies involving stakeholders such as medical experts, public health, veterinary and nutrition professionals, and health-focused civil service organizations. Furthermore, aflatoxin contamination of food crops is often not appropriately regulated within the African continent except for products targeted at international markets. The health risks from exposure to high aflatoxin levels through inhalation of grain dusts or other forms of occupational exposure is less studied and deserve serious attention. Furthermore, policies and guidelines targeting aflatoxin health risks are deficient in most countries on the continent and no clear established synergy among nutrition, health and other sectors working on aflatoxin mitigation.

In view of the aforementioned challenges, participants at the 1<sup>st</sup> Partnership for Aflatoxin Control in Africa (PACA) Partnership Platform Meeting (PPM) held at the AUC identified and suggested harmonization of health intervention efforts, creation of health advocacies and awareness, and adopting multi-sectoral approach to mitigating health risks from aflatoxin exposure as critical steps towards boosting consumer health and economic growth on the continent. PACA-AUC therefore engaged Amref Health Africa, Centers for Disease Control and Prevention (CDC), the Food and Agriculture Organization (FAO), the World Health Organization (WHO) – International Agency for Research on Cancer (IARC), and the Global Alliance for Improved Nutrition (GAIN) to foster and reinforce multi-sectoral linkages on the control of aflatoxins in Africa with the health and nutrition sectors taking the lead.

## **GOAL, OBJECTIVES and EXPECTED OUTCOMES**

### **a. Goal:**

To foster and reinforce multi-sectoral engagements for aflatoxin control, particularly addressing health and nutritional hazards in Africa

### **b. Objectives:**

- Highlight current situation of health and nutritional effects due to aflatoxin exposures among the African populace, and elucidate on the role of nutrition in health-based aflatoxin research.
- Catalogue interventions targeting human and animal health as well as nutrition initiatives and actors in countries.
- Create a platform (proposed as: *Africa Aflatoxin Health and Nutrition Forum*) that would link actors across the three sectors impacted by aflatoxins (with special emphasis on health and nutrition).
- Identify gaps (especially as related to the nutrition sub-component) on current responses in line with the health component of the PACA strategy.
- Develop a roadmap to address the gaps and/or implement the health and nutrition component of the PACA strategy.



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### c. Expected Outcomes:

- Increased awareness among health and nutrition professionals on the burden of aflatoxins in Africa and the role of nutrition in health-based research focused on aflatoxins.
- Authoritative recommendations on integrated approaches or interventions for the health and nutrition sectors in the control of aflatoxin in African countries.
- The *Africa Aflatoxin Health and Nutrition Forum* created.
- Enhanced partnerships and commitments to address implementation gaps in aflatoxin control in the health sector.
- An action plan for the health and nutrition sector response and cross-sectoral engagement developed.

## METHODS

- Plenary presentations
- Brainstorming/Breakout sessions
- Panel discussions

## PARTICIPANTS

Number: 100

Note: The workshop aims at bringing together stakeholders from the health and nutrition sectors but also recognizing the need for engagement with other sectors affected by aflatoxins in order to identify synergies. For instance, health and nutrition may be able to take lead if their advocacy / extension systems are better resourced, but by considering the opportunities to compliment health and agriculture messages or to support food safety staff.

## WORKSHOP ORGANIZING/PLANNING COMMITTEE

- Dr. Abigael Obura Awuor; *Centers for Disease Control and Prevention, Kenya.*
- Dr. Amare Ayalew; *PACA–African Union Commission, Ethiopia.*
- Dr. Chibundu N. Ezekiel; *PACA–African Union Commission, Ethiopia.*
- Mrs. Corey Luthringer; *Global Alliance for Improved Nutrition, USA.*
- Dr. Cris Muyunda; *Pan African Agribusiness and Agro Industry Consortium, Zambia.*
- Dr. David Githanga; *Kenya Pediatric Association, Kenya.*
- Dr. Florence Temu; *Amref Health Africa, Ethiopia.*
- Dr. Joachim Osur; *Amref Health Africa, Kenya.*
- Dr. Martin Kimanya; *Nelson Mandela–African Institution of Science and Technology, Tanzania.*
- Dr. Ramou Njie; *WHO – International Agency for Research on Cancer, MRC Unit, The Gambia.*
- Mr. Rex Raimond; *Meridian Institute, USA.*
- Dr. Sylla Thiam; *Amref Health Africa, Senegal.*
- Mrs. Wezi Chunga-Sambo; *PACA–African Union Commission, Ethiopia.*