Aflatoxins are poisons, which contaminate key African staple crops, such as groundnuts, maize, rice and sorghum. They are produced by some species of soil fungus called Aspergillus that infect growing crops, particularly when they are stressed by heat and drought. Aflatoxins can also accumulate in the grains under poor storage conditions. In 2004, it was estimated that more than 4.5 billion people worldwide are chronically exposed to aflatoxins through dietary sources. Aflatoxins induce liver cancer and cause death in humans and animals. They have been linked to stunted growth in children, immune system suppression and increased susceptibility to diseases such as HIV/AIDS and malaria. In animals, aflatoxins induce feed refusal, target organ toxicities, decreased animal product yield and death.

**PACA is the only partnership of its kind in the world that unites more than 50 organisations from 54 countries in Africa and beyond in the fight against aflatoxins.** It is governed by a multi-stakeholder Steering Committee formed by these partners to oversee the activities of a Secretariat that is domiciled at the African Union Headquarters in Addis Ababa, Ethiopia. PACA has an esteemed, high-quality brand, support from a large, diverse multi-stakeholder community, ability to leverage the established CAADP framework to set priorities, and a neutral, unbiased third party image. Given that PACA is a partnership, activities against aflatoxins are carried out both at Secretariat as well as the partner’s level.

The Partnership for Aflatoxin Control in Africa (PACA) envisions an Africa free from the harmful effects of aflatoxins. Its mission is to support agricultural development, safeguard consumer health and facilitate trade by catalyzing, coordinating and increasing effective aflatoxin control along agricultural value chains in Africa.

**PACA – Spearheading the Fight against Aflatoxins**

PACA has been working with 6 pilot countries namely Gambia, Malawi, Senegal, Tanzania, Uganda and most recently Nigeria, to build their capacity to prevent and control aflatoxins.

Activities have focused on three broad areas namely:

- The Africa Aflatoxin Information Management System (AfricaAIMS);
- The Country-led Situation Analysis and Action Planning (C-SAAP);
- Mainstreaming Food Safety and Aflatoxin Control Action Plans through the PACA initiative in CAADP National Agriculture and Food Security Investment Plans (Mainstream FoodSAC).

**Africa Aflatoxin Information Management System (AfricaAIMS)**

The Africa Aflatoxin Information Management System (AfricaAIMS) serves as a “one stop shop” for aflatoxin information related to health, trade and agriculture sectors. Information on aflatoxins is important to inform policies and interventions, prioritize resource allocation and promote country capacity and awareness on aflatoxin issues. However, aflatoxin information in Africa is inadequate, scattered and difficult to access. The information collected by the AfricaAIMS serves policy makers, regulatory bodies, technical agencies (health, trade and agriculture), researchers, farmers, Civil Society Organizations (CSOs), Non-Governmental Organizations (NGOs), private sector partners along the value chain and other interested parties.
At present, PACA is partnering with seven research institutions namely:

- Chitedze Agricultural Research Station in Malawi
- Plant Protection Directorate of Senegal
- Nelson Mandela-African Institution of Science and Technology in Tanzania
- Department of Food Technology and Human Nutrition, Makerere University in Uganda
- National Agricultural Research Institute of the Gambia
- Kenya Agricultural and Livestock Research Organization in Kenya
- The National Agricultural Quarantine Services of Nigeria

PACA has strengthened capacities of the countries on aflatoxins by:

- Equipping the labs with testing materials
- Providing equipment to support submission of data
- Training 10-20 experts from each country in partnership with the African Union Inter-African Bureau for Animal Resources (AU-IBAR) on sample collection and testing, data analysis and submission.

The institutions are now major testing centres for aflatoxins. The centres are also receiving small grants from PACA to support nationwide surveys to enable generation of aflatoxin prevalence data in key crops, in addition to gathering of related information in the health and trade sectors. The research institutions submit all data to AfricaAIMs portal through the AU-IBAR ARIS II interface, thus increasing the understanding of the aflatoxin situation in the pilot countries. AfricaAIMs also serves as information portal for training materials, guidelines, policy documents, reports and related resources.

**Country-led Situation Analysis and Action Planning (C-SAAP)**

The Country-led Situation Analysis and Action Planning (C-SAAP) seeks to (a) provide empirical evidence on existing aflatoxin prevalence, identify risks and quantify impacts of aflatoxin contamination on the economy, (b) highlight gaps in food safety policy, legislation, standards and regulations, (c) assess awareness of stakeholders associated with key crop value chains, and (d) identify interventions and propose mechanisms of diffusing and implementing aflatoxin control technologies for the benefit of the country. These steps provide information that is built into a comprehensive, feasible, strategic **Aflatoxin Control Action Plan** for country leadership to drive and implement towards the prevention and control of aflatoxins. Existing programs that can integrate aflatoxin control measures and avoid duplication of effort are given priority. The Situation Analysis is critical in aligning aflatoxin control with broader food safety and SPS issues within countries. PACA is currently supporting Gambia, Malawi, Senegal, Tanzania and Uganda in conducting C-SAAP through National Consultants. Nigeria will commence C-SAAP in 2015 with technical support from PACA.

The following have been achieved in PACA pilot countries:

- **Key value chains with aflatoxin issues** identified in Gambia, Malawi, Senegal, Tanzania and Uganda. These include:
  - Groundnuts, maize and rice in Gambia
  - Groundnuts and maize in Malawi
  - Groundnuts, maize and rice in Senegal
  - Groundnuts, maize and rice in Tanzania
  - Groundnuts, maize and sorghum in Uganda

- **Aflatoxin Situation Analyses** documented and validated by the multi-sectoral national Aflatoxin Technical Working Group (ATWG) in Tanzania, Uganda, Senegal and very recently in The Gambia. Malawi and Nigeria will follow shortly.

- **Aflatoxin Control Action Plans** validated in Tanzania and Uganda during national multi-stakeholders’ meetings.

PACA has provided strong leadership and coordination efforts to achieve milestones in C-SAAP through engagement of national consultants, high level country leadership at the ATWGs and Mycotoxin Steering Committee levels, for effective aflatoxin control in Africa.

**Mainstream Food Safety and Aflatoxin Control into CAADP National Agriculture and Food Security Investment Plans (Mainstream FoodSAC)**

The aflatoxin challenge facing countries can only be addressed effectively, sustainably and comprehensively if it is anchored on existing country policy frameworks and structures. PACA, through high level country multi-stakeholder mycotoxin coordinating groups, has been mainstreaming strategic action plans for aflatoxin control and other food safety issues into CAADP National Agriculture and Food Security Investment Plans (NAFSIPs) in the six PACA pilot countries.

Benefits of mainstreaming through CAADP include:

- Easing the process of identifying gaps for aflatoxin interventions in country policies
- Increasing national investments in aflatoxin issues and attracting additional support funds
- Facilitating the alignment of aflatoxin interventions and projects with country priorities through NAFSIPs
- Ensuring the establishment of political leadership and ownership of aflatoxin issues at country level.

**Sharing of Knowledge and Best Practices**

Since 2014, PACA has organized or engaged in several fora to sensitize stakeholders on need for partnership, knowledge sharing and to promote action against aflatoxins on the continent. They include:
Workshop on Revamping the groundnut value chain of West Africa through aflatoxin mitigation (September 2015): PACA recently convened over 100 stakeholders involved in the groundnut value chain in West Africa and across the continent in Dakar, Senegal. Experts, value chain actors, policy makers, development partners discussed the root cause of the aflatoxin problem in groundnut value chain in the region, identified gaps in addressing this problem and charted the way forward to revive the groundnut sector. Participants identified flagship projects and partnerships to effectively deal with the aflatoxin challenge.

Development of ECOWAS Aflatoxin Control Action Plan (ECOACAP) (March 2014–August 2015): ECOWAS, FARA, IITA and PACA co-organized a regional workshop on “The Aflatoxin Challenge in West African States” in Accra, Ghana (18-20 November, 2013). Experts from ECOWAS Member States at this workshop adopted cross-cutting interventions including creating public awareness, building capacity in countries, creating markets for aflatoxin safe commodities and continuous research, as actions to be considered for funding and implementation. Subsequently, the ECOACAP was developed through multi-stakeholder involvement and has been validated in September 2015 at the just concluded Regional Workshop on Revamping the Groundnut Sector in West Africa.

Development of Aflatoxin Action Plan for COMESA (March 2014): PACA partnered with COMESA and USAID in organizing a regional workshop themed “Improving Trade, Health and Food Security through Regional Efforts to Mitigate Aflatoxin Contamination”, in Lilongwe, Malawi. Based on inputs from the workshop, an Aflatoxin Action Plan for the COMESA region is being developed.

Forging Partnerships Against Aflatoxins. The 1st PACA Partnership Platform Meeting (PPM) in Addis Ababa, Ethiopia (October 2014): PACA brought together more than 200 stakeholders from various organizations including policy makers, regulatory and technical agencies in the health, trade and agriculture sectors, researchers, NGOs, CSOs, farmers, value chain and private sector actors, fighting aflatoxins on the continent. The stakeholders reviewed and adopted PACA’s strategy and approaches to reducing aflatoxins on the continent, and committed to engage and deepen partnerships to create synergies around the current mitigation efforts on the continent. Partners exchanged information, shared experiences and lessons on aflatoxin management, nutrition and health, awareness/communication and advocacy, including evidence from recent efforts/studies. A Market Place also provided an opportunity for partners to demonstrate their current work, new developments in the area and progress made in addressing the aflatoxin problem in Africa. There is now far greater cooperation, synergy and harmonization in the fight against aflatoxins in the African continent as a result of PACA’s efforts.

Partnership With the Private Sector in the Fight Against Aflatoxins (October 2014): The private sector has joined the fight against aflatoxins as demonstrated in a side event organized by Mars, Incorporated, PACA, FAO and the World Food Program during the United Nations Committee on Food security (CFS) Session in Rome, Italy. Themed “making a difference in food security and nutrition”, it aimed at increasing awareness of food safety and quality problems and their linkage to food and nutrition insecurity. The event emphasized the role and contributions of the private sector towards food security.


Fighting Mycotoxins in Sorghum (June 2015): FAO, WHO and PACA co-organized regional workshop on mycotoxins in sorghum at the African Union Commission in Addis Ababa, Ethiopia. Results and findings (including analytical and value chain data) from the FAO/WHO project on mycotoxins in sorghum commissioned in four countries (Burkina Faso, Ethiopia, Mali and Sudan) were shared and reviewed. The trio explored further synergies for collaboration including the establishment of National Mycotoxin Steering Committees (NMSCs) in Mali, Burkina Faso and Ethiopia. PACA Secretariat will through the NMSCs find entry points to engage other non-Pilot Countries.

Building Alliances Against Aflatoxins: PACA continues to engage and build alliances with several reputable organizations, continental and global initiatives involved in the fight against aflatoxins to facilitate capacity building, resource and knowledge mobilization and sharing. Such alliances include engagement with Regional Economic Communities in the continent, International Institute of Tropical Agriculture (IITA), Mars, Inc., USAID missions, FAO, WHO, Technical Center for Agricultural and Rural Cooperation (CTA), The Feed the Future Innovation Labs (especially the Peanut and Mycotoxins Innovation Lab), Global Alliance for Improved Nutrition (GAIN), and the recently born African Society of Mycotoxicologists. African Governments and other stakeholders reiterated their support for PACA during a side event organized at the 10th CAADP PPM to discuss the effects of aflatoxins on agriculture, health and trade

PACA has published a number policy briefs:

10 Facts You Should Know about Aflatoxins” provides a short and easy to read overview of aflatoxins. It captures impacts on staple crops, human health and the economy. A range of options available to address the problem through accurate detection, good agricultural practices and processing options, policies and regulations and exposure reduction measures are presented. The brief includes a call to support deepen and expand the impact of work already being done towards an Africa free from the harmful effects of aflatoxins. http://aflatoxinpartnership.org/ uploads/PACA_10f acts_v2.pdf
“Aflatoxins and Stunting: A Summary of Current Research” describes work being done to better understand and show the linkages between aflatoxin exposure and childhood growth stunting. Childhood stunting, a chronic form of growth faltering, is potentially associated with many health problems, including an increased rate of infectious illnesses, impaired learning capabilities and reduced work productivity. http://aflatoxinpartnership.org/uploads/PACAStuntingPolicyBrief.pdf

Mobilizing Political Support to Address Aflatoxins, published as part of Vision 2020 Focus Briefs by IFPRI, this brief provides an overview of how PACA is mobilizing political support for actions to address the aflatoxin problem on the continent. The brief highlights five approaches that PACA uses to win support for advancing its objective of abating the aflatoxin challenge on the African continent. PACA’s Contribution to Result Areas of the Malabo Declaration highlights the role of PACA, as a flagship program of CAADP, in realizing the Malabo Declaration commitments. The Malabo Declaration by African Heads of State and Government in June 2014 made seven specific commitments to achieve accelerated agricultural growth and transformation for shared prosperity and improved livelihoods. This brief shows PACA’s alignment to the Commitment to triple intra-Africa trade in agricultural commodities and services by 2025 and fast track establishment of the continental free trade area. It analyzes of how the contribution is to be made with clear targets on the scale of contribution and timelines.

PACA is sharing information, knowledge and best practice through:

- Quarterly Newsletters feature activities of organizations and projects aimed at controlling aflatoxins on the continent. The Newsletters also offer a popular forum for awareness creation, sharing of spotlight research outcomes, updates on upcoming and on-going project interventions, and invitation to participate in various aflatoxin forums.
- PACA Website shares information and resources from different partners across the globe and is serving as a trusted source of knowledge on aflatoxins in Africa.

RESULTS

As a result of PACA activities at Secretariat and partnership level:

- Aflatoxins are no longer the sole interest of academic institutions. Awareness is increasing among stakeholders and more Governments, donors and development organizations are now interested in aflatoxins. The intervention areas focus on mapping and implementing catalytic actions for mitigating aflatoxins and their impacts on health, agriculture and trade. The buy in is evidenced by the increased number of agricultural, nutrition and food security fora currently discussing aflatoxins amongst other food safety related issues.

- PACA is increasing the sharing of research findings, innovative technology information, prevalence data and best practice by various actors involved in the fight against aflatoxins in Africa.

- More initiatives against aflatoxins have come to life since PACA begun. For example:
  - Since March 2014, EAC has been implementing the Multi-Regional Aflatoxin Abatement Project (MRAAP) whose main goal is to “contribute to food security and safety in the EAC and protect human, animal and plant health”. MRAAP aims to develop an EAC Regional policy on prevention and control of aflatoxin; establish the foundation for a regional bio-control program; build capacity on aflatoxin control and prevention in the region; and enhance levels of awareness on aflatoxin control and prevention in the EAC region. Its activities support the wider PACA Strategy.
  - The Kenyan Government has budgeted Ksh1.5 billion for the prevention, control and management of aflatoxins for 2 years beginning in 2015. PACA expects to see more countries following Kenya’s example.
  - National stakeholder consultations on aflatoxin control have been held in non-Pilot Countries such as Burkina Faso, Mozambique, Zimbabwe and Zambia, amongst others.
  - Establishment of the Aflatoxin/Mycotoxin Steering Committee by Ministerial Decree in the Sudan.
  - There is more information available on the prevalence of aflatoxins in Tanzania, The Gambia, Malawi, Senegal and Uganda through evidence generated by the Situation Analysis.
  - Tanzania and Uganda now have Aflatoxin Control Country Action Plans developed by stakeholders in an inclusive process and mainstreamed within their respective national policy frameworks.

Development Partners

The Bill & Melinda Gates Foundation (BMGF), United States Agency for International Development (USAID) and The Department for International Development for the UK and Northern Ireland (DFID) have all contributed to the development and progress of PACA, as well as so many other partners on and off the continent of Africa.
Partnership for Aflatoxin Control in Africa (PACA): Overview of Intervention and Results

PACA, Secretariat