PACA Partnership for Aflatoxin Control in Africa | Partenariat pour la lutte contre les aflatoxines en Afrique | Parceria para o controle das aflatoxinas na África | الشراكة من أجل التحكم في الافلاتوكسين في أفريقيا

Aflatoxin Partnership Newsletter

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Message from PACA Program Manager

Dear PACA Community Members,

The entire PACA Secretariat is pleased to offer the third PACA Newsletter in 2014. PACA has a lot of exciting news to report. In June, PACA conducted a successful Inception Workshop for Pilot Country Activities. In this newsletter, you will read about the many PACA activities now underway to support governments and their stakeholders working on aflatoxin control in Gambia, Malawi, Senegal, Tanzania, and Uganda. My sincere thanks go out to the tremendous PACA staff at AUC and partners in the pilot countries.

I am pleased to report that PACA is completing an in-depth strategy refinement process. Based on recommendations from its Steering Committee, the PACA Secretariat engaged a management consultant, Monitor-Deloitte, to carry out strategy refinement. Monitor-Deloitte has submitted draft recommendations which cover the following topics:

- PACA Secretariat's mission, value proposition, and narrowed focus
- Secretariat's optimal roles in supporting RECs and national governments
- Categories of activities for the Secretariat to support at the continental, regional, and country levels
- Optimal structure, capabilities and resources for executing its strategy and implementation of activities

In order to fully consider the recommendations, the PACA Steering Committee and Secretariat will conduct a Roundtable Discussion with select stakeholders on Tuesday, 26 August, and discussion with the PACA SC meeting on 27-28 August in Entebbe, Uganda. The refined strategy will be presented to the full PACA community at the PACA Partnership Platform Meeting on 7-9 October 2014 in Addis Ababa, Ethiopia.

Thank you for your continued partnership in achieving an Africa free from the harmful effects of aflatoxins!

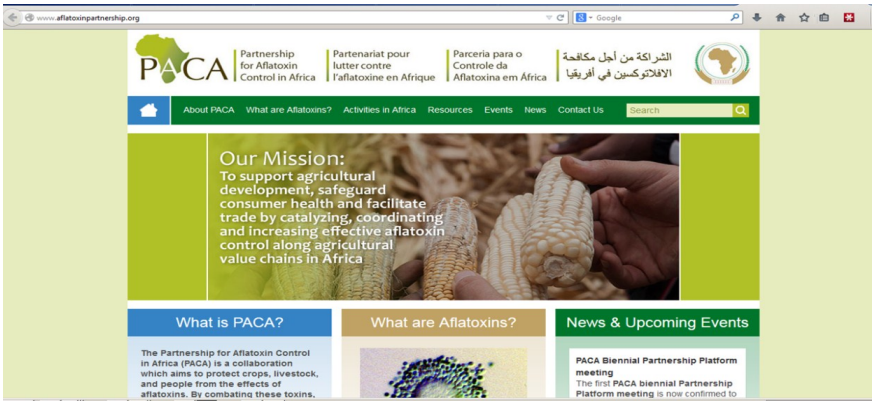
Kind regards,

Amare Ayalew (PhD)
Program Manager, PACA

PACA Launches Its New Website

For the past few months, PACA has been developing a new website as part of full transition of the Secretariat to the African Union Commission. The PACA website 2.0 was launched on the margins of the PACA Pilot Country Activities Inception Workshop in Dar Es Salaam, Tanzania on June 11, 2014. The website was fully demonstrated to the participants of the meeting who appreciated the website's high-quality content and easy navigation. PACA's new website will serve as the main platform where PACA shares information on aflatoxins and aflatoxin control efforts in Africa. The website will also share regularly updated information on its past and planned work, including important news and events. The website will be hosted within the African Union Commission where its member states would access locally relevant information on aflatoxin. This website serves as trusted source of content for aflatoxin and related issues in Africa, including a comprehensive document library. The website contains information on PACA, including information on PACA governance, the 2013 strategic planning efforts and recent activities in five pilot countries. An interactive map contains information on various ongoing research and aflatoxin prevention and control activities.

To see the new PACA website, please visit: www.aflatoxinpartnerhsip.org



PACA Partnership Platform Meeting

PACA is organizing its first Partnership Platform Meeting on 07-09 October 2014 at the African Union Commission headquarters in Addis Ababa, Ethiopia. The Partnership meeting will bring stakeholders together to:

1. Embrace the refined PACA Mid-Term Strategic Plan as a driving instrument for attainment of results and impact;

2. Share implementation progress, challenges and receive input from stakeholders to enhance the effectiveness of PACA's current activities;

3. Exchange information, share experiences and lessons in aflatoxin mitigation and management, including evidence from recent studies;

4.Identify and deepen partnerships to create synergies and strengthen programs aligned with the PACA Strategy and Mid-Term Strategic Plan; and

5. Engage all stakeholders to support all efforts in the fight against a-flatoxins on the African continent.

The three days meeting will involve plenary sessions where stakeholders will review the progress of PACA since its inception and discuss the way forward including PACA pilot country activities, regional action plans as well as concrete steps in action planning for aflatoxin control on the continent. The Platform Meeting will also have technical track sessions where focused discussions on topics related to specific value chains will be facilitated. Ed Rege, a renowned facilitator from PICOTEAM East Africa will be facilitating the conference for all three days.

An exciting keynote speech will be delivered, and select high level and technical speakers will provide important context and set the scene, including information on how aflatoxin control fits into the larger landscape of food safety in Africa.

Additionally, the conference will organize an elaborate Market Place that provides an opportunity for groups to illustrate their current work, new developments in the area and progress made in addressing the aflatoxin problem in Africa.

The PACA Partnership Platform Meeting will bring together the full array of stakeholders involved in the management of aflatoxins, including the African Union Commission, Regional Economic Communities , national governments, the private sector, health organizations, regulators, civil society groups, and development partners.

The Partnership Platform Meeting is expected to serve as a springboard for fruitful collaborations and partnerships, building on the successes and lessons learned from best practices and ongoing initiatives.

To register for the PACA Platform Meeting, please visit https://www.surveymonkey.com/s/PACAPPM2014.

News and Information on Aflatoxins

PACA Organizes to Launch Country Activities in Gambia, Malawi, Senegal, Tanzania and Uganda

PACA, working with Regional Economic Communities, selected five pilot countries to roll out aflatoxin control activities using criteria agreed upon during the 10th CAADP Partnership Platform in March 2014. PACA is pleased to announce The Gambia, Malawi, Senegal, Tanzania, and Uganda as the first batch of pilot countries.

An Inception Workshop on PACA Pilot Country Activities was held on 10-11 June 2014 in Dar es Salaam, Tanzania. The workshop focused on review and discussion of the planned activities for 2014. At the workshop participants agreed on the methodology and timeline for implementation of activities in the pilot countries. The workshop was attended by food safety authorities, academia and line ministries of all five pilot countries (from the health, trade and agriculture sector) as well as the corresponding Regional Economic Community representatives. During the meeting, member states and Regional Economic Communities recognized the importance of adequate and reliable information on aflatoxins to inform policy and aflatoxin mitigation interventions. The Africa Aflatoxin Information Management System (AfricaAIMS), which is under development, was therefore welcomed and endorsed. Africa AIMS will generate reliable home-grown data to inform policies in the countries where it is implemented.

Each pilot country will undertake a country-led food safety and aflatoxin situational analysis and action planning to create empirical evidence on existing aflatoxin prevalence, legislation, policy and regulation, management practices and other existing control mechanisms that can effectively inform interventions.

The country led situational analysis will enable pilot countries to catalyze strategic actions by informing country leadership across stakeholder groups about necessary actions they can take; identify existing programs that can integrate aflatoxin control measures; and avoid duplication of effort.

It will also provide the necessary input to align aflatoxin control with broader food safety and SPS issues between countries.

One of the major outcomes from the situation analysis will be the development of a national aflatoxin mitigation strategy which will have prioritized intervention areas that will be mainstreamed into the National Agriculture and Food security Investment Plans (NAFSIPS) of pilot countries. This process will ensure that aflatoxin mitigation interventions in country are coordinated and anchored within the CAADP structures in country. Additionally, the NAFSIP reviews will enable member states to increase investments in aflatoxins as well as assist pilot countries to mobilize resources from private sector and donors to implement priority areas as identified in the national aflatoxin strategy.

The African union Commission, Regional Economic Communities, and member states endorsed a roadmap for implementing country activities at the Workshop; many of these activities are currently underway.

PACA Starts Implementing Three Major Activities in Five Pilot Countries

After the successful completion of the PACA Pilot Country Activities Inception Workshop in June, PACA, COMESA and SADC held roundtable discussions in Malawi, Tanzania and Uganda to get input and endorsement from government officials on the implementation of activities. These were proposed by pilot country experts at the Inception Workshop on PACA Pilot Country Activities held on 10-11 June, 2014. These three countries are among the five pilot countries that PACA will be focusing on in 2014. The meetings were attended by representatives of each government, the African Union Commission, the respective Regional Economic Community, and civil society groups to discuss the implementation process of proposed activities in the countries. During the roundtable discussions, the delegates acknowledged the ongoing work in the countries and recommended actions for further strengthening current programs. The representatives agreed on the implementation strategy, method and timeline proposed by experts at the Workshop. They also recognize PACA's 2014 activities as fully supporting current aflatoxin programs and activities in the countries. PACA's activities are also believed to contribute to the Malabo Declaration adopted by the 23rd Ordinary Session of the African Union Heads of State and Government in June 2014. Following roundtable discussions in Malawi, Tanzania and Uganda, the countries have agreed to implement the following activities that are supported by PACA:

1. Establish Africa Aflatoxin Information Management System (AfricaAIMS);

2. Country-led aflatoxin and food safety situation analysis and action planning;

3. Mainstream aflatoxin control through the PACA initiative in CAADP National Agriculture and Food Security Investment Plans (NAFSIPs).

Roundtable discussions for The Gambia and Senegal are scheduled to take place on 11 -12 August and 14-15 August

Aflatoxin Management: Food sector perspective

Based on a presentation by Mr. Klutse Kudomor at the ECOWAS workshop

The aflatoxin challenge is not only impacting governments, farmers and consumers but also the private sector. The private sector is a major player in the control and management of aflatoxins. In order to supply its customers with food that is safe from any contaminants, Nestlé takes several measures to ensure proper agricultural and storage practices are used by its suppliers.

During the ECOWAS workshop on the aflatoxin challenge in West African States, Mr. Klutse Kudomor, a procurement manager of agriculture raw materials for Nestlé Central and West Africa, stressed that generally, consumers demand that suppliers provide good quality and safe food products that are also nutritional, affordable and convenient for purchase. Consequently, these demands positively affect the food value chain and agricultural practices. Mr. Kudomor stated that most African countries' farming systems are unable to meet the growing demands of consumers due to some characteristics of the Continent's agriculture sector and concerns about food availability outweighing food safety, thus hindering effective management and control of aflatoxin in countries. In order to meet consumer demands, Mr. Kudomor highlights the need for quality trainings that build farmers 'capacity to ensure safety and reliability of food and raw materials. Nestlé provides trainings to farmers in several areas in order to produce safe foods.

UPCOMING EVENTS

07-09 October 2014| PACA Partnership Platform Meeting Addis Ababa, Ethiopia

10-12 November 2014 | The World Mycotoxin Forum 8th Conference

The World Food Programme Conducts "Action Research" Trials to Reduce Food Loss in Sub-Saharan Africa

The World Food Programme of the United Nations conducted an action research trial in two African countries: Burkina Faso and Uganda from August 2013 to April 2014, with a vision of reducing food losses in Sub-Saharan Africa. Although this project doesn't have a direct focus on aflatoxins, advances in storage and drying is one of the major activities that can reduce aflatoxin in key commodity value-chains in Africa. The main objectives of the trial were to:

- Provide empirical evidence on how improved post-harvest management practices may result in reduced food losses compared to traditional farming

- Provide empirically based evidence to understand the effectiveness of utilizing new technology for drying, processing and storage of crops on gains for smallholder farmers compared to traditional farming methods.

- Reduce post-harvest losses of grains, pulses and legumes of participating farmers by over 70%, leading to increased household food security, nutrition and incomeI

- Increase the ability of participating low-income farmers to decide on the percentage of their harvest to retain and the timing of when surplus product can be sold

- Increase the ability of smallholder farmers and small/medium-scale traders to link to quality oriented market, thereby increasing the overall marketable of quality grain, individual financial returns and improving the food security of participating communities.

The trial began in August 2013 in Burkina Faso and Uganda with 400 smallholder farmers participating in the post-harvest education workshops. The first two stages of the trial were considered preparatory stages where farmers received capacity development support and new handling and storage technology. The trial included the use of six new technology storage options: Super Grain Bags, Zero Fly Bags, plastic silos, metal silos (medium and large), GrainSafes, improvements to traditional granaries. The final stage of the trial was field monitoring and trial evaluation where representative crop samples were taken from both traditional and new storage units on each farm. The samples were inspected for any physical or biological degradation and any damaged product was removed. After careful inspection, the weight of the undamaged grain was calculated and information recorded. This was repeated three times in 30 days intervals.

In all participating farms of both countries, the results of the trial were very clear. The new technology storage clearly outperformed the traditional storage. The new technology storage used in all farms enabled farmers to retain 98% of their harvest regardless of the type of crop and duration of storage.

At the end of the trial, the research was able to meet all of its objectives by:

- Producing empirical evidence to support improving post-harvest management practices and employing new technology for drying, processing, and storage of crops.

- Reducing post-harvest losses of crops by well over the targeted 70%

- Enabling farmers to have the luxury of choosing when surplus product could be sold

- Linking the smallholder farmers to quality-oriented markets.

The new storage technologies used in this trial, apart from the improved traditional granaries, recorded nearly 0% losses over the 90 day period. Based on the results of this trial, the World Food Programme intends to undertake another project starting in 2014 that aims to increase the number of farmers able to benefit from these technologies and share the technologies in other countries.

Pictures from WFP paper

The Importance of Diet Diversification to Reduce Aflatoxin Exposure

By Dr. Benoit Gnonlonfin*

Aflatoxin contamination in crops poses a significant challenge to food and nutrition security and human health in Africa. Aflatoxins are toxic compounds that are known to cause cancer in humans. Chronic exposure to these toxins can result in liver cancer and immune suppression in humans. Consumption of aflatoxin contaminated foods can result in aflatoxin poisoning (aflatoxicosis). Aflatoxins are also believed to affect child growth. Aflatoxins are found in staple food commodities in Africa such as maize, groundnuts, sorghum, rice, spices, milk, etc.

Aflatoxin exposure can be reduced through various means especially by diversifying diet with foods high in phytoalexins. Phytoalexins are compounds in plants that have a defense function to threats or stressors. Some are formed as a defense response of many plants to stress (drought, salt, and cold), wound, viral infection or invasion by bacterial or fungal pathogens. Accumulation of such compounds has been correlated with resistance to microbial attack and other stress.

These phytoalexins can be found in many plants in the plant kingdom including families of Araceae (maple family), Convolvulaceae (Morning Glory family), Euphorbiaceae (spurge family), Rubiaceae (coffee, madder, or bedstraw family), Tiliaceae (flowing plants family), as well as different species, and genera at different concentration across plant parts.

Phytoalexins play a key role in human health. They have properties that can regulate blood pressure and boost immune systems. There is evidence that phytoalexins decreased the levels of serum thyroid hormones and glucose as well as hepatic glucose-6-phosphatase activity, hence their potential to regulate hyperthyroidism and hyperglycemia. They also increase the activity of antioxidants which help in clearing toxins from the human body. Most phytoalexins possess antibacterial and antifungal properties. A number of plant pathogenic and non-pathogenic fungi are inhibited by these phytoalexins at different concentration.

Aspergillus flavus, A. parasiticus and other related Aspergillus species responsible for aflatoxin production are inhibited by the presence of these phytoalexins in plants. For example, phytoalexins are found in high concentration in cassava and cassava by-products. Ultimately, the inhibition suppresses fungal growth and reduces aflatoxin production. Food commodities with high levels of phytoalexins, such as sweet cassava roots, have been proven to be aflatoxin free. A number of such food commodities are found in Africa where aflatoxin is a major concern. Diversifying ones diet to include these types of foods (sweet cassava roots, sweet potato, vegetables, and fruits) can help to minimize exposure to aflatoxin, thus reducing the health effects due to aflatoxin contamination.

Furthermore, a study using dietary data from Tanzania, researchers estimated the effect of crop diversification on child growth. It was estimated that diet diversification has a positive and significant impact on child nutritional status particularly for girls and child height in general. Therefore, access to a greater quantity of these types of foods will lower the risk of exposure by lowering the intake of foods contaminated with aflatoxins. Access to foods with better 'health value' would include replacing foods with high mycotoxin (aflatoxins) risk with those of lower risk.

The Importance of Diet Diversification to Reduce Aflatoxin Exposure – continued

However, it is important to note that diet diversity and exposure risk can also be driven by sociological and economic factors. Changing dietary preferences where there are no economic constraints can be a matter of social marketing, awareness, and health improvement and significantly lower aflatoxin exposure. However, in the African context where economic constraints do exist especially at farmer's level, diet diversification could pose significant challenges.

*Dr. Benoit Gnonlonfin is the PACA technical officer at the African Union Commission.

"AFRICA FREE FROM THE HAMRFUL EFFECTS OF AFLATOXINS"

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