Evidences

Study #2782

Projects:
- P343
- P342
- P339

Part I: Public communications

Type: OICR: Outcome Impact Case Report

Status: New

Year: 2018

Tagged as: New Outcome/Impact Case

Title: Aflasafe products to reduce aflatoxin crop contamination are now registered in eight countries—three new countries in 2018

Short outcome/impact statement:
In 2018, Aflasafe products were registered in Ghana, Zambia, and Tanzania — two products per country. Each Aflasafe product contains four native atoxigenic Aspergillus flavus strains. Registration was granted based on results of hundreds of farmer field efficacy trials, in multiple agroecological zones, during multiple years. Aflatoxin reductions in treated crops ranged from 80% to 100% less compared to untreated adjoining crops. Scaling activities in each country have begun and include development of commercialization strategies, manufacturing infrastructure, and technology transfer.
Outcome story for communications use:
Aflatoxin contamination of maize and groundnut infected by Aspergillus flavus and closely related fungi is common throughout sub-Saharan Africa. However, not all A. flavus genotypes produce aflatoxins (i.e., are atoxigenic) and can be used as biocontrol agents to decrease crop aflatoxin content. IITA and partners have developed several biocontrol products under the trade name Aflasafe. Each Aflasafe product contains four native atoxigenic A. flavus genotypes.

Prior to 2018, Aflasafe products were registered for use in Nigeria, Kenya, Senegal, The Gambia, and Burkina Faso. During the course of 2018, six Aflasafe products were approved by regulatory authorities responsible for pesticide registrations for use in Ghana, Zambia, and Tanzania—two products per country. Supporting data for registration included demonstration that the atoxigenic genotypes were native to the target nations, effectiveness in hundreds of farmer field trials, environmental safety, benefits to farmers, possibility to unlock premium markets as a result of treatment, among others. In all cases, aflatoxin reductions in treated crops ranged from 80% to 100% less compared to untreated adjoining crops—the reductions occurred both at harvest and even in poor storage conditions.

Aflasafe products in Ghana, Tanzania, and Zambia are now available for use in a commercial scale. Private sector actors are being mobilized to both receive information on the benefits of using Aflasafe-treated crops for the profitability of their industries (e.g., poultry producers), to be linked to producers of Aflasafe-treated, aflatoxin-compliant crops, and to be informed about both business opportunities to manufacture and distribute Aflasafe and possibilities to unlock domestic and international premium markets when treating crops with Aflasafe. In these three countries, availability of Aflasafe for use at scale will allow farmers across those countries to produce crops complying with aflatoxin standards furthering trade opportunities and income generation for farmers, and both nutrition and health benefits for the consumers.

Links to any communications materials relating to this outcome:
- http://tinyurl.com/yys87tgg
- https://aflasafe.com/aflasafe-where-i-am/
- http://tinyurl.com/y4w4h2zs

Part II: CGIAR system level reporting
Link to Common Results Reporting Indicator of Policies: No

Level of maturity of change reported: Level 1

Links to the Strategic Results Framework:
Sub-IDOs:
- Reduced biological and chemical hazards in the food system
- Reduced market barriers

Is this OICR linked to some SRF 2022/2030 target?: Too early to say
Comment: Aflatoxin management strategies, including use of Aflasafe, are now part of the National Agricultural Investment Plan of Nigeria, Tanzania, Malawi, Senegal, The Gambia, and Uganda. Registration of Aflasafe in Tanzania, and its future large-scale use, will allow fulfilling the objectives of aflatoxin control strategies in those plans. In addition, IITA led the East Africa Community Aflatoxin Prevention and Control Project (APPEAR)—funded by USAID East Africa Regional Economic Integration Office. APPEAR produced 11 multisector technical papers containing key recommendations that now will be possible to be fulfilled in Tanzania with the availability of the two Aflasafe products developed for that nation.

**Geographic scope:**
- Multi-national

Country(ies):
- Nigeria
- Zambia
- Gambia
- Burkina Faso
- United Republic of Tanzania
- Senegal
- Kenya
- Ghana

Comments: Aflasafe products will be registered in the next couple of years in additional nations.

**Key Contributors:**

**Contributing CRPs/Platforms:**
- Maize - Maize

**Contributing Flagships:**
- F3: Food Safety

**Contributing Regional programs:** <Not Defined>

**Contributing external partners:**
- Government of Zambia
- Government of Ghana
- Government of Tanzania
- USDA - U.S. Department of Agriculture
- USAID - U.S. Agency for International Development

**CGIAR innovation(s) or findings that have resulted in this outcome or impact:**
Innovations:

- 156 - Aflasafe product ZM01 and ZM02 for Zambia
- 731 - [updated from 2017] Aflasafe product for Nigeria
- 154 - Aflasafe product GH01 and GH02 for Ghana
- 730 - [updated from 2017] Aflasafe product GH01 and GH02 for Ghana
- 733 - [updated from 2017] Aflasafe product TZ01 and TZ02 for Tanzania
- 729 - [updated from 2017] Aflasafe BF01 product for Burkina Faso and potentially 10 other countries in the Sahel

Elaboration of Outcome/Impact Statement:

Aflatoxin contamination of maize and groundnut infected by Aspergillus flavus and closely related fungi is common throughout sub-Saharan Africa. However, not all A. flavus genotypes produce aflatoxins (i.e., are atoxigenic) and can be used as biocontrol agents to decrease crop aflatoxin content. IITA and partners have developed several biocontrol products under the trade name Aflasafe. Each Aflasafe product contains four native atoxigenic A. flavus genotypes.

Prior to 2018, Aflasafe products were registered for use in Nigeria, Kenya, Senegal, The Gambia, and Burkina Faso. During the course of 2018, six Aflasafe products were approved by regulatory authorities responsible for pesticide registrations for use in Ghana, Zambia, and Tanzania—two products per country [6,7]. Supporting data for registration included demonstration that the atoxigenic genotypes were native to the target nations, effectiveness in hundreds of farmer field trials, environmental safety, benefits to farmers, possibility to unlock premium markets as a result of treatment, among others. In all cases, aflatoxin reductions in treated crops ranged from 80% to 100% less compared to untreated adjoining crops—the reductions occurred both at harvest and even in poor storage conditions.

Aflasafe products in Ghana, Tanzania, and Zambia, Malawi now available for use in a commercial scale. Private sector actors are being mobilized to both receive information on the benefits of using Aflasafe-treated crops for the profitability of their industries (e.g., poultry producers), to be linked to producers of Aflasafe-treated, aflatoxin-compliant crops, and to be informed about both business opportunities to manufacture and distribute Aflasafe and possibilities to unlock domestic and international premium markets when treating crops with Aflasafe. In these three countries, availability of Aflasafe for use at scale will allow farmers across those countries to produce crops complying with aflatoxin standards furthering trade opportunities and income generation for farmers, and both nutrition and health benefits for the consumers.
**References cited:**

References for Innovations and the Statement:

1. http://tinyurl.com/y5d2chxo


**Quantification:** <Not Defined>

**Gender, Youth, Capacity Development and Climate Change:**

*Gender relevance:* 0 - Not Targeted

*Youth relevance:* 0 - Not Targeted

*CapDev relevance:* 0 - Not Targeted

*Climate Change relevance:* 0 - Not Targeted

**Other cross-cutting dimensions:** NA

**Other cross-cutting dimensions description:** <Not Defined>

**Outcome Impact Case Report link:** Study #2782

**Contact person:**

Ranajit Bandyopadhyay
Principal Plant Pathologist
IITA
A4NH
r.bandyopadhyay@cgiar.org