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“Management of land use systems for enhanced food security:
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Aflasafe Technology in Zambia: Upscaling and Dissemination through On-Farm Trials for Wide Uptake and Utilisation

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Abstract

Zambian smallholder farming communities are highly reliant on maize and groundnuts, as staples and cash crops. Although yields of both crops increased in recent years, grain quality remains poor due to pre- and post-harvest contamination with aflatoxins. Aflatoxins produced by certain species of *Aspergillus* are toxic and cancer causing substances. Consumption of aflatoxin contaminated foods has negative health impacts and their presence prevents farmers' access to markets due to stringent regulatory standards. To combat this, an aflasafe biocontrol product was developed at the International Institute of Tropical Agriculture (IITA) in collaboration with USDA's Agricultural Research Service (ARS), Zambia Agricultural Research Institute (ZARI) and the National Institute for Scientific and Industrial Research (NISIR). On-farm efficacy trials indicate that the aflasafe product is highly effective in reducing aflatoxin loads in both crops by over 80 %. Thus the product has great potential in minimising the ill effects, enhancing food security, trade, as well as raising farmer incomes. However, it is required to scale up aflasafe utilisation. This study identified constraints hindering aflasafe scaling up and adoption by smallholder farmers in Zambia. Through consultative workshops with various stakeholders key factors threatening aflasafe upscaling, dissemination and adoption were identified. These include among others: i) lack of awareness regarding the negative health and trade impacts; ii) lack of aflasafe manufacturing capacity and market distribution channels; iii) lack of incentives for aflatoxin-free grains, iv) non-existent permit for commercialising the aflasafe product in Zambia; and v) inadequate extension staff to reach more farmers. Thus for this biocontrol product, approved production facilities and improved awareness and access to the product by removing constraints to dissemination and adoption is required.

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framework of the German Initiative ONEWORLD - No Hunger! and its Green Innovation Center in Zambia.

Keywords: Aflasafe, aflatoxin contamination, Development Cooperation, German Initiative ONE-WORLD - No Hunger, GIZ, Green Innovation Center, IITA