Project Summary

Title	Assessment of the Role of Plant Residues, Cropping Systems and Diversity of Fungal Species on Mycotoxin Contamination of Wheat
PI	Dr. John Wagacha Maina School of Biological Sciences, University of Nairobi, P.O. Box 30197-00100 Nairobi, Kenya Tel: +254-20-4449004 or +254-715693662 Email: maina.wagacha@uonbi.ac.ke
Co-researchers	Dr. Charity Mutegi Kenya Country Coordinator Aflasafe Project International Institute of Tropical Agriculture P. O. Box P.O. Box 30709-00100 Nairobi, Kenya. Tel: +254-20-4223734 E-mail: c.mutegi@cgiar.org Dr. James Muthomi Department of Plant Science and Crop Protection, University of Nairobi P.O. Box 29053-00605 Kangemi, Nairobi, Kenya. Tel. +254-020-3592734-9 ext. 27176 Email: james.muthomi@uonbi.ac.ke
Purpose	The main objective of the project will be to establish the link between wheat cropping systems, fungal diversity and mycotoxin contamination of wheat.
Project Summary	*Fusarium* head blight (FHB) has re-emerged as a devastating disease of wheat and other small-grain cereals throughout the world. Although the disease has received considerable attention in developed countries, research on FHB and associated mycotoxins in East Africa is still at infancy. Although *Fusarium* spp. are known to produce different mycotoxins, in some cases, different species have similar mycotoxin spectrum. Without intervention on *Fusarium* infections and related mycotoxin contamination, there is a danger of compromised food and feed quality. It is therefore important to establish the diversity of mycotoxigenic fungi in wheat production systems in Kenya in order to assess the risk of mycotoxin contamination of wheat and consequently the level of exposure of humans. The proposed project aims at assessing the role of crop residues, cropping systems and diversity of fungal species on mycotoxin contamination of wheat. Jointly done

	with wheat farmers, the project aims at recommending appropriate cropping systems to small-holder farmers and ultimately reduce *Fusarium* inoculum levels, increase wheat yield and improve human and livestock health by reducing exposure to mycotoxins. Two M.Sc. students will directly implement the proposed activities, acquiring skills in mycotoxin analysis and identification of the morphologically complex *Fusarium* species. The project will publish a brochure that can be used by wheat farmers and extension personnel while communication to the scientific community will be through publications in peer-reviewed Journals.
Country and Specific Location(s)	Nakuru and Mau Narok – of Kenya
Participating Institutions	University of Nairobi International Institute of Tropical Agriculture
Start Date	September, 2012
End date	August, 2014
Amount of Funding	US$ 59,888