# Terms of Reference

SV NAREN – Sector Project Sustainable Agriculture

PN: 15.2187.1-001.00

For external expertise to review, harmonize and update

Existing reports on

“Feasibility study: “Mycotoxin analysis with focus on rapid methods 1 & 2”

### Background

The Sector Project Sustainable Agriculture is mandated to further the availability of knowledge in core areas in sustainable agriculture. The problem of Aflatoxin contamination during food production and along food chains is a topic that forms part of the core area Food and Nutrition security and safety. Various initiatives within GIZ have been undertaken in the past on behalf of the Federal Ministry for Economic Cooperation and Development BMZ. Notably the support to “Aflasafe” development through the German support to the Global Agricultural Research Partnership – CGIAR / IITA and commissioning of a feasibility study on “Mycotoxin Analysis with focus on rapid methods 1 & 2”. This analysis of existing test options available has raised the interest of the Partnership for Aflatoxin Control in Africa - PACA.

PACA is a partnership that unites over200 organizations from54countries in Africa. It comprises public and private sector & non-state actors. PACA is coordinated by a Secretariat at the African Union Commission and governed by a multi-sector Steering Committee. One of the roles of PACA is to aggregate evidence, gather knowledge, and disseminate information. PACA is focused on producing results at country-level. The partnership therefore especially works with a number of governments in pilot countries and also with continental and regional coordinating bodies, e.g. AU, ECOWAS, COMESA.

In dialogue with the NAREN team PACA has expressed its interest in publishing the overview of methodologies available for aflatoxin analysis as part of its knowledge management and information mandate.

### Aim of the contract

The contract is about updating the “feasibility” study elaborated by Prof. Dr. Florian J. Schweigert under BioAnalyt GmbH for GIZ GmbH. The aim of this contract is to harmonize contents of the two reports “Mycotoxin analysis with focus on rapid methods Vol. 1 & 2” into one concise overview document. At the same time the information contained will be reviewed and updated to include any recent developments after the draft reports now available have been produced. For example Helica Biosystems which is based in the USA offers an ELISA Kit which the BecA ILRI hub in Nairobi used for extensive aflatoxin analysis, or the rapid test kit device published by ICRISAT in August 2016, which is supposedly available for a price at under US$ 2. The final product will be presented to PACA in a draft version for final editing & publishing. The aim of the work outlined here is a document which presents a wealth of information compiled together in a systematic way and for an ease of reference and use.

1. **The product**

The draft publication will offer a comprehensive overview on methods for Aflatoxin analysis with a focus on rapid methods, with excellent background information on mycotoxins and mycotoxin regulations, some information on mycotoxin control (the example of Aflasafe), general information on mycotoxin testing, and a summary of the principles of the major categories of testing methods. It will cover as many companies as possible under the review of commercial products. The compilation of testing methods offers completeness which is an added advantage to the information available so far, which is rather bits and pieces. The publication will present summary tables that aim to be comprehensive too, including the system requirements and even cost of equipment and cost per sample which many users will find useful. The update of the existing information also will look at unifying diction /syntax of terms used repeatedly, e.g. names of toxins. Various figures (like mycotoxin level in ppb), costs and presentation of data should also be unified and coded strictly to the English language and in correct decimal places notation. All tables will have to be checked for completeness and comparability between different methods. For all photos, graphs etc. the rights of publication have to be clarified and dedicated to PACA. Pro’s and Con’s of the methods under scrutiny should also be checked and complemented where needed. List of links and literature needs to be updated.

1. **Quantity structure and time frame**

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| **Activity** | **Man-days allocated** |
| Research additional information and update and prepare additional content to be included in the publication | 3 days |
| Harmonize the 2 existing draft documents into one comprehensive overview document | 1 day |
| Review document for correctness and comparability between methods with particular emphasis on consistent use of terms, decimal places notation and strict adherence to uniform data presentation | 1 day |
| A first draft version with track changes will be presented to GIZ and PACA for approval or slight modifications (second draft version). Thereafter check of changes made by PACA (if applicable) and proofreading for English language.  Further assistance during designing the layout, editing and publishing | 2 days |
| All activities | 7 days |

The work outlined here (a first draft version) shall start on the 30th November and shall be completed by 20th of December 2016. Thereafter further collaboration in the process of finalizing the second draft, editing and publishing is expected. For these activities 7 man-days will be allocated in the contract.

### Contacts and Communication

The contractor will work in close collaboration with GIZ SV NAREN Team and the PACA secretariat. Contact persons for this contract will be Charlie Moosmann (karl.moosmann@giz.de) and Amare Ayalew (Amarea@africa-union.org).