

**THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF AGRICULTURE**



TANIPAC PROJECT



**Report on Aflatoxin Awareness Creation Launching in
Manyara Region
November 2019**

Executive summary

TANIPAC project implementation to create awareness to the public was officially launched on November 09, 2019 at the CCM community Hall, Kiteto DC in Manyara Region. The event was honoured by the District Commissioner, Eng. Tumaini Magessa. The event was aimed at launching the awareness creation program under TANIPAC project to educate the public on the impact of aflatoxin occurrence in food system and its health impact in human and animals. Three papers were presented focussing on mycotoxins status in Tanzania, health effect in human and impact of aflatoxin in animal health and productivity, economic impact of mycotoxins and technical solutions to prevent and control mycotoxins from pre-harvest to storage. Among the key recommendations include providing education to all extension officers; Ministry of agriculture and LGAs should support the project on provision of education and training about aflatoxin contamination; education and information be provided to consumers so as to ensure the food products they consume are safe; ASA to ensure quality seeds is available at reduced price in order for farmer to afford; By-laws be formed to guide farmers and livestock keepers on good crop storage and safe animal feed formulation and selling; cooperation between government and private sectors needed to provide education about aflatoxin; and a national campaign about aflatoxin with focus to highly affected areas.

1.0 INTRODUCTION

1.1. Project Context

The United Republic of Tanzania in Collaboration with the Global Agricultural and Food Security Program (GAFSP) and the African Development Bank (AfDB) is implementing the Tanzania Initiative for Preventing Aflatoxin Contamination (TANIPAC). The project is a five-year (2019 -2023). The overall goal of the Project is to improve farm incomes, rural livelihoods, and food and nutrition security, export revenues and contribute to poverty reduction through aflatoxin prevention and control in maize and groundnuts value chains.

1.2. Project Objectives

The main objective of this project is to minimize aflatoxin occurrence in the food system attained through an integrated approach in the maize and groundnuts value chains with the overall impact of improving food safety and food security. Specifically, the project

will (i) improve pre- and post-harvest infrastructure, technology and management (ii) increase public knowledge and awareness around the health risks and the effects on malnutrition, as well as increase the participation of private sector in applying the mitigation measures; and (iii) strengthen institutional capacity for the development of value chains for safe and nutritious foods, and develop innovative marketing incentives.

2.0. Workshop Organization and Participants

2.1. Organization and participation

TANIPAC project organized a one day workshop to launch awareness creation on aflatoxin occurrence in food value chain and its impact on human and animal health as well on the economy. The launch workshop was held on 8th November, 2019 at the CCM Community Centre in Kiteto District in Manyara region and was officially opened by the Kiteto DC Commissioner, Mr. Tumaini Magessa.

The awareness launch workshop was attended by over 70 participants representing the Two Project Districts participating in the project, namely Babati DC, Kiteto DC and Manyara RC. Participants were drawn from DEDs, DAICOS, Project support officers, Ministry of Agriculture, Ministry of Health Ministry of Industry and Trade, PACA representative, Babati and Kiteto Council's Chairs, Chairs of Health Committee, Kiteto MP's Representative, farmers and livestock representatives, Kiteto DC's office and the Project Coordination team.

During the workshop, various presentations were given touching on various issues related to aflatoxin occurrence, impact and management. The Guest of honour was Kiteto District Commissioner, Eng. Tumaini Magessa and the TANIPAC coordination team was led by the Project Coordinator, Mr. Clepin B. Josephat.

2.2. Awareness Launching Workshop Objectives

The main objective of the workshops was to officially launch commencement of the public knowledge and awareness creation to

- I. Introduce the project to the high level management in Manyara region
- II. Understand the status of aflatoxin occurrence and its impact to the society and the economy, and
- III. Getting commitment from the two District decision makers on how they will support implementation of the TANIPAC project.

2.3. Workshop Opening by the Guest of Honour

Following the participants' introduction and greetings from DEDs, Councils' Chairs, DNFS and Project Coordinators, the guest of honour, Eng. Tumaini Magessa was invited to address the audience and finally to officially open the awareness creation marathon. Eng. Magessa thanked everyone who had turned up for the events and expressed his happiness for being honoured to officiate at the event on the aflatoxin issues which was live and burning in his districts.

Mr. Magessa recalled that the problem had existed in Manyara, and Kiteto in particular and wondered why such outbreaks are occurring in Manyara and Dodoma regions. He cited the on-going outbreak that had just claimed the life of a kid and one being hospitalized at the time of launching the awareness campaign. Despite the delay he conferred that they DC administration was happy for their cry has been heard at last.

Eng. Magessa commended the Kiteto DEDs office for the good job done so far by visiting villages and distributing leaflets about understanding aflatoxin issues among the community, something which has reduced the number of deaths as compared to the two previous years (2016 and 2017). He mentioned that during this year's outbreak, Kiteto DC had lost 6 people and confessed that poor health people cannot bring development and urged everyone to ensure people's health if development envisaged are to be realized.

Mr. Magessa expressed his hope that the TANIPAC would bring happiness and new hope to the current problem and lamented that the storage infrastructure in the Area is not well designed to keep safe and quality produce. He wondered how come people have changed for good in wearing clothes but they are hard to adopt behavior that reduces aflatoxin contamination in their food. He wishes to see the bright future of Manyara without aflatoxin outbreak and suggested that a by-law be introduced for those who will go against the best recommendations regarding occurrence of aflatoxin in Manyara region.

He vowed that it was enough and called to an end the outbreak emergencies that were becoming a normal thing in the district and the region in general. He concluded his speech by urging all Manyara functionaries in attendance to listen carefully all the presentation, participate fully in the discussion and disseminate whatever important issue they are going to pick from the workshop presentations.



Photo 1: Kiteto DC Eng. Tumaini Magessa Speaking during aflatoxin awareness launching workshop in Kiteto

3.0 PRESENTATIONS

Various presentations were given during the seminar touching on the project and aflatoxin issues along the food value chains. The first presentation was given by Mr. Clepin Josephat, The Project Coordinator who explained the workshop objectives and gave project overview. He mentioned about the genesis of the TANIPAC project and various steps taken from inception proposal writing to win grants and soft loan from GASFP and AfDB Bank respectively. He insisted that it was the government's intention to address a serious challenge in the food value chain that played a key role in implementation of this project.

He told participants that the project was implemented in 10 regions of Tanzania Mainland and Zanzibar in 20 Districts, of which situational analysis had shown to be in high risk of aflatoxin contamination in maize and groundnut value chains. He emphasized that the project was meant to address low awareness on aflatoxin

occurrence among other issues as it has a great impact in preventing and controlling aflatoxin occurrence and is a key for behavioural changes in the community and the public in general.

The **second presentation** was presented by **Doctor Analice Kamala**, a representative from Tanzania Bureau of Standards (TBS) and described the status of aflatoxin contamination in Tanzania. Initially participants were informed that TBS has assumed a new role of overseeing and controlling food safety issues in the country that was originally undertaken by the defunct, TFDA. Doctor Kamala told the participant that though we are talking about aflatoxin, it is better be understood that there were many mycotoxin of importance to human health and economy, particularly Fumonisin, Ochratoxin Zearalenone, Trichothecenes and Deoxynivalenol, all of which are originated from mainly three groups of fungi: *Fusarium*, *Aspergillus* and *Penicillium* species. She mentioned critical factors necessary for mycotoxin occurrence to include, susceptible crops such as maize, groundnuts, cottonseed, and chill pepper; ubiquitous toxigenic fungi; and drought and high humidity.

She cited some limit that human can tolerate without showing any sign of disease, especially aflatoxin as 0.0017ng/kg bw and fumonisins as 2ug/kg bw. She insisted that mycotoxins once in the food cannot be removed by normal processing and cooking methods. Dr. Kamala warned against high consumption of maize as high as 600gm per caput as captured in the national statistics, as this could pose high risk if maize are highly contaminated with single or multiple mycotoxins.

The **third presentation** was presented by Mr. Ally, a representative from Ministry of health described the impact of aflatoxin on human health. He mentioned the important effect resulting from short or long term exposure to mycotoxins including immune suppression, malnutrition and stunting and cancers such as liver and kidney cancers. He mentioned some key short term effect from acute mycotoxin poisoning as jaundice (Icterus), abdominal pain and swelling (Ascites), vomiting diarrhea and fever and sometime deaths, as result of ingesting high doses over short time period, particularly among under 15yrs and over 40yrs population

The **fourth presentation** presented by **Dr. Japhet Nkangaga**, a representatives from Ministry of Livestock and Fisheries dwelled on aflatoxin effect in animals' health and production. Dr. Nkangaga admitted that though animals are sensitive to mycotoxins as to human but it was difficult to diagnose the animal on aflatoxin exposure due to the nature of animals' physiology and multiple signs presentation. He mentioned some key effect as anorexia (lack of appetite) lethargy (lack of energy) diarrhea, reduced food conversion ratios resulting in reduced growth, production and reproduction. Acute manifestations of aflatoxicosis were mentioned to include, liver lesions and cirrhosis

leading to animal deaths. He urged all players to work collaboratively to combat aflatoxin occurrence in animal feed systems as they cost huge economic losses.

Doctor Happy Magoha had the opportunity to present on the economic impact of aflatoxin in the society. She told the audience that Africa was losing an handsome amount of in export value as high as 40% due to exceeding maximum safe limit allowable for exports, translating into US\$450-670 million annually. She further mentioned that 30% of all liver cancer in Africa is attributable to aflatoxins, leading to losses of hundreds of human resources. Most importantly, Dr Magoha illustrated how significantly we are losing millions of dollars to as high as US\$1,100 million annually as resulting from medical costs due to aflatoxin exposures amongst the Tanzanian population. She called for partnerships and collaboration in order to contain aflatoxin in food chains in Tanzania and Africa at large.

The **last presentation** was given by **Mr. Julius Nyabicha**, a representative from the private sector and technology manufacturers (A agro Z textiles Co. Ltd). Mr. Nyabicha mentioned the private sector participation in the fight against aflatoxin occurrence in food and said his company was doing well to address aflatoxin holistically from farm to storage by producing products that are meant to curb aflatoxin from pre-harvest (Aflasafe) to post-harvest (drying tarpaulins and hermetic bags). He described various approaches his company uses to reach customers from where they are and importance of technology demonstration for easy uptake.



Photo 2: TANIPAC Project Coordinator, Mr. Clepin Josephat speaking during the launch workshop

4.0 WORKSHOP DISCUSSIONS

4.1 Poor Agricultural Practices and insufficient infrastructures

During the discussions the participants raised some reason of aflatoxin contamination in maize and groundnuts crops in Manyara Region such as:

- Poor agriculture practice whereby farmers use indigenous seeds there are highly susceptible to pest and fungal infestation
- Lack of or use of inappropriate infrastructure for storage such as poorly designed warehouses and traditional storage bins.

4.2. Lack of awareness about the aflatoxins and its impact

Participants contended that awareness was an issue in continuing aflatoxicosis outbreak due to

- Lack or little knowledge about the problem (aflatoxin) as most farmers and livestock keepers don't have information about the problem and those who know they don't have knowledge on how to solve the problem.
- Climate change as rainfall and drought have become highly unpredictable posing challenges to farmers on containing aflatoxin occurrence
- Poverty is one of the cause of aflatoxin contamination as most farmers and livestock keepers cannot afford the cost of managing farm activities and medical expenses

4.3. Weak enforcement and surveillance system

Participants admitted that inadequate enforcement on food safety issues are the reason why Manyara and Kiteto DC in particular are constantly frequented with the outbreaks due to

- Weak inspection capacities and lack of clarity on roles and responsibilities of food and regulatory bodies
- Lack of by-laws to help dealing with those people who are found to possess contaminated food or traders who sale unfit for consumption food while knowing it could bring diseases and other complications to consumers

5.0 WORKSHOP RECOMMENDATIONS

Following deep question and answers from presenters and deep discussion, participants recommended the project and the Government in general including

- Education should be provided to every extension officers in Manyara region.
- Ministry of agriculture and LGAs should support the project on provision of education and training about aflatoxin contamination.
- Education and information should be provided to consumers so as to ensure the food products they consume are safe.

- Due to high prices of quality seeds, the Seeds Agency requested to reduce the price in order for every farmer to afford the cost and get best seeds.
- Training should be provided in such a way that farmers and livestock keepers can understand easily, example using cinemas and music as this will facilitate idea take up and behavioural changes
- By-laws must be formed to guide farmers and livestock keepers on good crop storage and safe animal feed formulation and selling
- Government and other private sectors should cooperate to provide education about aflatoxin
- There should be a national campaign about aflatoxin issues but the focus should go to highly affected areas such as Kiteto, Babati, Kondoa and Chemba DCs.
- Project working with private sector and ministry of health, trade, agriculture and bureau of standard across the regions harmonize producers for enforcing maximum level sampling and testing protocols and institute a uniform surveillance system
- Use of logos to identify aflatoxin safe foods for the general public as this will facilitate consumers to buy safe products and incentivize the private sector to invest in preventive technologies
- A policy regime that places the burden of proof for compliance on private sector, traders, processor, producers, wholesales, and retailers with partner state government agency
- Ministry of Industry and Trade and Food Regulatory bodies should take responsibility to ensure food consumed is safe and rich the safe maximum limit.

Budget and Implementation

During the awareness campaign launching event in Manyara Region, a total of Tshs.23,880,400 was approved for the event which was held at the CCM Community Centre in Kiteto District, of which 23,491,680 shillings were, spent which is equivalent to 98.37 percent of the approved budget. The increase in budget was due to cost of printing T-shirt for the exhibitors. The expenditure included the items as detailed in table 1 below.

Table 1: Budget Expenditure for the Awareness Campaign Launching

| S/N | Item of Expenditure | (A) Budget Allocation | (B) Actual Expenditure | (C) Balance (Tshs) |
|------------|----------------------------|--------------------------------------|---------------------------------------|-----------------------------------|
| 1 | Perdiem for members | 16,330,000 | 18,290,000 | (1,960,000) |
| 2 | Travel costs for members | 1,120,000 | 446,000 | 674,000 |
| 3 | Fuel (Diesel & Petrol) | 2,667,600 | 1,310,680 | 1,356,920 |
| 4 | Photocopying & Printing | 150,000 | NIL | 150,000 |
| 5 | Conference Packages | 3,000,000 | 2,930,000 | 70,000 |
| 6 | Training Materials | 100,000 | 215,000 | (115,000) |
| 7 | Motor Vehicle & Watercraft | 300,000 | NIL | 300,000 |
| 8 | Miscellaneous Expenses | 212,800 | 300,000 | (87,200) |
| | Balance (A-B) | 23,880,400 | 23,491,680 | 388,720 |