

13<sup>th</sup> African Crop Science Society Conference



# Building Africa's Future

Crop Research and Innovation for Agricultural Transformation, Resilience, and Inclusion



# BOOK OF ABSTRACTS

16<sup>th</sup> - 19<sup>th</sup> September

Venue: Eduardo Mondlane University Main Campus  
Maputo, Mozambique



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# **13th African Crop Science Society Conference**

*Building Africa's Future:  
Crop Research and Innovation for Agricultural  
Transformation, Resilience, and Inclusion*

## **BOOK OF ABSTRACTS**

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# 13<sup>th</sup> African Crop Science Society Conference

The Conference is organized by the Faculty of Agronomy and Forestry Engineering, Eduardo Mondlane University, in collaboration with the Agriculture Research Institute of Mozambique (IIAM), the Higher Polytechnic Institute of Gaza (ISPG), The Higher Polytechnic Institute of Manica (ISPM) and the African Crop Science Society (ACSS).

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IN HOMABAY AND THARAKA NITHI COUNTIES, KENYA COUNTIES, KENYA .....	25
AGRICULTURAL COOPERATIVE: a catalyst for rural development .....	27
SUSTAINABLE DEVELOPMENT: women's participation and challenges in agriculture.....	28
ROLE OF FARMER-TO-FARMER EXTENSION APPROACH IN INCREASING ORANGE FLESHED SWEETPOTATO PRODUCTIVITY AND MARKETING IN MASSINGA DISTRICTS OF MOZAMBIQUE.....	29
<b>THEME: PRODUCTION SYSTEMS .....</b>	<b>30</b>
CHALLENGES OF PLANT BREEDING IN MOZAMBIQUE .....	31
STABILITY ANALYSIS OF BAMBARA GROUNDNUT [ <i>Vigna subterranean</i> (L.) VerdcERDC]) GENOTYPES IN NORTHERN MOZAMBIQUE USING AMMI AND GGE BILOT .....	32
UNDERSTANDING BAMBARA GROUNDNUT [( <i>Vigna subterranean</i> (L.) Verdc)] CROP IN THE NORTHERN REGION OF MOZAMBIQUE: production, uses and myths .....	33
.....PHYSICAL, COOKING CHARACTERISTICS AND CONSUMER ACCEPTANCE OF WHOLE AND DEHULLED PIGEON PEAS ( <i>Cajanus cajan L.</i> ) CULTIVARS GROWN IN MALAWI.....	34
DELIMITATION OF CASSAVA GERMPLASM CLUSTERS IN KENYA BASED ON PHENOTYPIC TRAITS .....	36
OCCURRENCE OF AFLATOXINS IN FOOD COMMODITIES PRODUCED AND CONSUMED IN ANGOLA AND MOZAMBIQUE .....	37
MORPHOLOGICAL CHARACTERIZATION OF 18 RICE VARIETIES ..	39
POPULATION GENETIC ANALYSIS OF CASSAVA BROWN STREAK VIRUS IN MOZAMBIQUE, TANZANIA AND KENYA AND GENETIC DIFFERENTIATION OF CBSD ASSOCIATED VIRUS SPECIES .....	40
EFFICACY OF ULTRAVIOLET (UV) IRRADIATION ON THE POSTHARVEST CONTROL OF COWPEA BRUCHID .....	42
ADAPTABILITY OF THE FORMOSANA BANANA VARIETY IN THE SOUTHERN AGROECOLOGICAL ZONE .....	43
STUDY ON PERFORMANCE OF COW MANURE (CM), POULTRY MANURE (PM), TAP WATER (TW) AND THEIR EFFICIENCY ON THE	

# OCCURRENCE OF AFLATOXINS IN FOOD COMMODITIES PRODUCED AND CONSUMED IN ANGOLA AND MOZAMBIQUE

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Aflatoxins, the mycotoxins produced by molds from the genus *Aspergillus* sect. *Flavi* that infest food and feed commodities, are a pressing issue in most African countries and their presence has led to a surge in health problems and food insecurity. The lack of effective monitoring and control in the Portuguese-Speaking African Countries (PALOP) has resulted in the underestimation of these mycotoxins. The present work aimed to determine the occurrence of total aflatoxins (AFs) in several agricultural products – corn, beans, cassava flour, peanuts and rice – produced and consumed in the provinces of Cuanza Sul, Angola, and of Chongoene and Gaza, Mozambique. During 2023 and 2024, 236 samples (96 from Angola and 140 from Mozambique) were collected from local markets and analyzed for AFs using the lateral flow strip AgraStrip® Pro WATEX® (Romer) method. For Mozambique, 44% of all samples were positive for AFs (median=4.9 µg/kg). The highest incidence and contamination levels were found in corn, with all samples contaminated, ranging from the LOD to as high as 9200 µg/kg (median=26.9 µg/kg). Of these, 63% were contaminated above the Maximum Tolerable Limit (MTL) established by the Codex Alimentarius (15 µg/kg). AFs incidence in all



samples from Angola was 66% (median=1.25 µg/kg). Corn samples from this country showed a 96% incidence (median= 1.7 µg/kg, range LOD-82.3 µg/kg), but only 8% were above the MTL. The less contaminated commodity in both countries was cassava flour. For this crop, Angolan samples were all below the LOD, while Mozambican samples showed an AF incidence of 37% (median = 0.75 µg/kg), the highest level being 9.6 µg/kg. Considering the recommended MTLs, the aflatoxin contamination in crops produced and consumed in both countries is extremely high, mainly in corn, which constitutes the dietary basis for most people in the two countries, thus representing a significant public health risk and economic loss. Mozambique is particularly affected by this problem and, given the expected climate changes, the perspective is for its aggravation. Therefore, concerted efforts on mycotoxin control strategies are urgently needed.

**Keywords:** Mycotoxins, health risk, PALOP.