AAUN Panel 2: Post harvest Group Presentation

Joint AAUN Australia Awards Agricultural Research Symposium

College of Agriculture and Veterinary Sciences, University of Nairobi-Kenya

25th November 2015
Panel PI/Representatives

Three projects in the group led by

• Dr. Casper Madakadze, University of Pretoria

• Dr. George Abong, University of Nairobi

• Prof. Robyn McConchie, University of Sydney
Project 1

“Increased Bambara/Cowpea Production in Eastern, Western and Southern Africa”
Partner Institutions

- Dr. Casper MADAKADZE – University of Pretoria
- Dr. Amin MUGERA – University of Western Australia
- Prof. Sashi SHAMA – Murdock University
- Prof. Victor OKORUWA – University of Ibadan
- Prof. Kwaku G. DUODU – University of Pretoria
- Prof. John MUYONGA – Makerere University
- Dr. P JOHNSTON – Cape Town University
- International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria
- Dr D Nthakheni – Limpopo department of Agriculture
- Dr K Mashinagaidze – ARC-Grain Crops, South Africa
Broad Objective

• To substantively increase sustainable, safe, biosecure, widespread cultivation and consumption of cowpeas and bambara nuts as relatively inexpensive sources of protein in the diet of people.
Main Activities

- Review available data and literature on cowpeas and Bambara value chains
- Identification of research gaps and developing an appropriate conceptual framework
- Develop sub-theme main activities for proposal development
- Develop a full proposal for funding
This broad objective will be addressed through three sub-themes:

- **Addressing constraints to low productivity and post-harvest handling**
  - To increase productivity by increasing yields per unit area and quality through improved crop varieties, optimized agronomic practices, and post-harvest handling and processing.

- **Modernising Bambara/Cowpea Systems and Value Chains**
  - (as part of legume systems)
  - To investigate the factors that could drive the demand for bambara and cowpea.

- **Enhancing Food Nutrition & Health and Food Safety**
  - Investigate factors responsible for the hard-to-cook phenomenon
  - Develop nutritious food products or ingredients with health-promoting properties.

- **Integrate gender, poverty and environmental concerns in the framework**
Anticipated outputs from this initiative are:

• A full proposal on cowpeas and bambara groundnuts value chains

• Joint external funding applications to international donors

• Fostered collaboration and partnerships between AAUN member universities and partners

• Mapped out opportunities for graduate students training, and participation of post-docs and early career scholars.

• A review article on value chain analysis in sub-Saharan Africa from the literature review
Time lines: 
1st workshop April 2014 in Pretoria (UP) – framework developed
2nd meeting May in Johannesburg (AAUN workshop)- framework further refined

Focused development of the three thematic areas devolved as follows:
a. Production issues – UP (IC Madakadze)
b. Value chain issues – UWA (A Mugera)
c. Processing and value addition – Makerere (J Muyonga)
Sweet potato Post-harvest Value Addition for Improved Food and Nutrition Security in Kenya
Team members

Abong’, GO\textsuperscript{1*}, Makhungu, V\textsuperscript{1}, Kaaya, A\textsuperscript{2}, Wanjekeche, E\textsuperscript{3}, Shibairo, S\textsuperscript{14}, Lamuka, PO\textsuperscript{1}, Okoth, MW\textsuperscript{1}, Odongo, NO\textsuperscript{1}, Sopade, PA\textsuperscript{5}

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\textsuperscript{4}Kibabii University College, P.O. Box 1699, 50200, Bungoma, Kenya

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Specific objectives

1. Assessment of current post-harvest practices, constraints and opportunities-growing areas

2. Characterization of physico-chemical and nutritional quality traits of SP varieties for processing suitability-Kenya/Uganda

3. Developing, evaluating and validating post-harvest value addition/technologies for food and industrial applications of attempts and proposal.

4. Enhancing SP utilization through increased uptake and commercialization of newly developed technologies and OFSP products through capacity building and technology transfer-Proposal.
Progress

• Note: delay in grant release–delay in activities.

• Face to face meetings held:
  • May 2015: Johannesburg AAUN meeting
  • June 2015: Nairobi- progress discussion.

• Desk top review of situation analysis-completed and draft generated-Review on-going.
Progress

• Baseline survey of gaps: current post-harvest handling practices in Uganda complete and partially in Kenya - by mid December 2015.

• Sampling roots and leaves for analysis: planning almost complete and an MSc. Student is attached - by end of December 2015.

• Exchange visit and conference attendance to Australia - accomplished on 16-20 November 2015
Future plans

• Validation and up scaling of post-harvest handling technologies
• Development of value added products
• Development and submission of proposals to obtain funds towards this realization is our endeavor.
Thank you