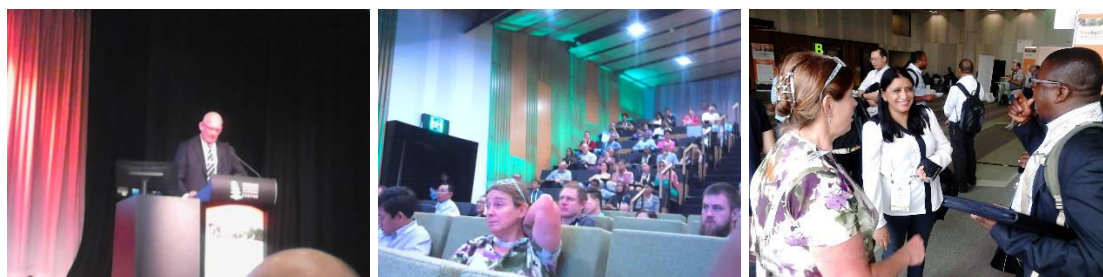


## **Tropical Agriculture Conference and exchange visit to the Centre for Nutrition and Food Sciences, the University of Queensland, Brisbane, Australia from 16-20 November 2015**

### **Preamble**

The inaugural University of Queensland Tropical Agriculture Conference, dubbed TropAg (<http://tropagconference.com.au/>) was held this year at the Brisbane Convention and Exhibition Centre, Brisbane, Australia. It provided a platform for networking, sharing research findings as well an avenue for exchanging essential ideas and learning in the plant, animal, food, and nutrition areas of tropical agriculture. Dr. Abong', who is a 2015 AAUN grantee, attended the conference, after which he was hosted by Dr Peter Sopade of the Centre for Nutrition and Food Science, University of Queensland as part of the AAUN exchange visit to Australia. This report captures the main issues that he was involved in while in Australia.

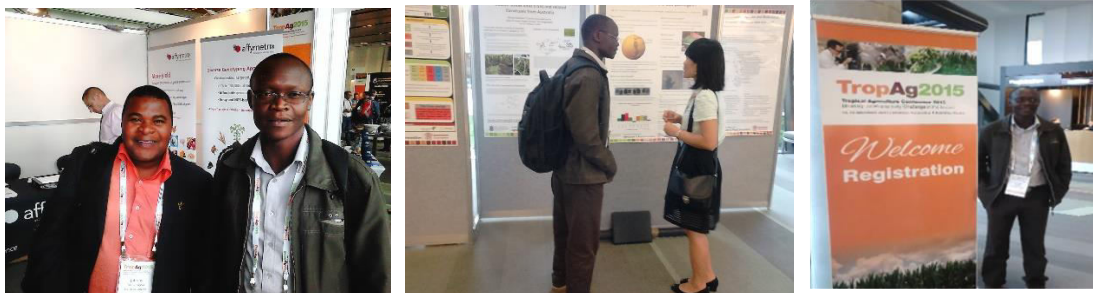
### **Day 1: Monday 16<sup>th</sup> November 2015**



**Left, Queensland Agriculture and Fisheries minister gives a speech as delegates look on during the opening session, right is Dr. Nkurumah of Gates Foundation charting with other participants during a break.**

The Tropical Agriculture Conference was opened by the Minister for the Department of Agriculture and Fisheries, Queensland Government and the Vice Chancellor and President of University of Queensland (UQ). The director of Queensland Alliance for Agriculture and Food Innovation gave his welcome remarks. The first session of the conference revolved around definition of the food challenge in the tropics. Key note speeches included the role of public goods in addressing global food and nutrition security; tropical livestock production and health constraints; impacts of plant diseases on tropical agriculture; nutrition security with its diverse and revolving targets; climate risks and the productivity challenge in field crops.

Session two of the conference focused on provision of solutions through integrated farming systems. In this session presentations highlighted among others the pathways for sustainable development, mixed farming systems, financial, labour and livestock management. Discussions around these presentations highlighted the role of enhanced technology and its potential in improving food security. At the end of the session two scholarship awards were presented to UQ students: DVCR Student Scholarship award and Queensland Crawford Fund Student Scholarship Award. A poster session followed before the day came to an end.



**Johnny Massangwa from Malawi and George Abong from Kenya during the poster session**

## **Day 2: 17<sup>th</sup> November 2015**

Day two opened with session three that focused on market driven solutions viable for tropical agriculture. Two key note addresses highlighted how the changing consumer dynamic is affecting demand for tropical agriculture, and how demand-driven approaches to breeding can increase small holder's adoption of new plant and animal genetics. Of key interest were presentations on micronutrient bio fortification of acid and neutral soils for enhanced crop production and improved *anthocyanin* contents of *sweet potato*, identification of sensory basis of consumer preference for red and yellow papaya in Australia, use of genomic tools to improve eating quality of Northern Australian beef, and progress in breeding of high oleic, early maturing peanut varieties in Australia.

The fourth session provided an opportunity for scientists to show how they could provide solutions to tropical agriculture problems. The session opened with a key note speech on how plant science can affect human health. Issues ranging from GMO crops, nanotechnology, facing challenges of tropical diseases, innovation and technology in grain

industry and genomics were presented and discussed. The session ended with awards for best posters for the conference.

### **Day 3: 18<sup>th</sup> November 2015**



### **Presentation and panel of discussion followed by networking session**

The final day of the conference was a little different from the two initial days in that it had five symposia running parallel to each other under five topics: Future of sugar cane; Control of tropical livestock parasites into the future; Food safety issues and challenges in global supply chains; Genomics technology for tropical Agriculture; Redesigning photosynthesis to meet global productivity challenge.

The afternoon session closing session displayed insightful panel discussion following highlights of events focusing on vision 20150 by Prof. Gordon Conway. Discussions focused on a number of problems in tropical agriculture, including the need to involve the youth in agriculture, having in mind the challenge of high population growth verses constant land area, nutrition sensitive agriculture and its relevance to tropical agriculture, issues of GMO and their utilization.

### **Day 4: 19<sup>th</sup> November 2015**

An industrial visit to Bribie Island for exploration of extrusion processing for food and feed product development. Extrusion technology for research was well explained. The facility was convenient for research and industrial trial of various feed and food products. Potential future collaboration with the institution to facilitate trials of extruded sweet potato and other products were discussed.



**On the right is the inside view of extruder as Dr. Abong' observes internal arrangements, far left is Dr. Sopade discussion with David the extruder operator.**

In the afternoon, a visit to nearby supermarkets was made to find out sweet potatoes and related roots being sold and their displays in the groceries. Photos of the same can be seen herein.



**Varieties of sweet potato and white potatoes displayed in a supermarket in Brisbane, Australia**

#### **Day 5: 20<sup>th</sup> November 2015**

This last day of the visit was spent at the University of Queensland Centre for Nutrition and Food Science. Discussions on current sweet potato project and future focus of the work as well as development of proposals were done. The need to orientate the project towards achieving its goal as well as expanding the proposal submission base were also discussed. Request for extended funding from the AAUN was also explored. There was also an extensive discussion to identify other funding agencies for a national or regional project on postharvest and processing of sweet potato. The day was rounded up with visits to the processing and analytical laboratories of the host Centre, Schools of Agriculture and Food Sciences and Chemical Engineering to view ongoing researches and facilities. A courtesy call was paid to Professor Mike Gidley, the Director of the Centre for Nutrition and Food Sciences.



**Drs. Abong' and Sopade during the visit to the Centre for Nutrition and Food Sciences**

### **Acknowledgement**

A grant from the Australia-Africa University Network (AAUN) that facilitated this insightful trip under the ongoing research project on sweet potato post-harvest, is highly appreciated. The planning, hospitality and support accorded by Dr. Peter Sopade and his colleagues at the University of Queensland, Brisbane, Australia made this trip a success.

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