Two novel DNAs associated with cassava begomoviruses enhance disease symptoms, break resistance and are found integrated in most cassava genomes - Dr Joseph Ndunguru

Understanding Bemisia tabaci: the driver of viral disease epidemics in cassava in sub Saharan Africa – Dr Peter Sseruwagi

In this seminar, two highly esteemed researchers Dr Joseph Ndunguru and Dr Peter Sseruwagi from the Mikocheni Agricultural Research Institute, Tanzania will describe their work on the Cassava mosaic begomoviruses and whitefly which cause and carry the destructive cassava mosaic disease (CMD), costing Africa an estimated USD1.9-2.7 billion annually.

Dr Ndunguru will report on the discovery of two novel DNAs, designated DNA-II and DNA-III, that contribute to the etiology of CMD and are widespread in cassava (Manihot esculenta Crantz). These findings have implications for the control of CMD, geminiviruses generally, and the origin and evolution of geminivirus sequences.

Dr Peter Sseruwagi will discuss the whitefly B. Tabaci which is the major vector of cassava mosaic begomoviruses (CMBs) and cassava brown streak viruses (CBSVs); the causative agents of cassava mosaic disease (CMD) and cassava brown streak disease (CBSD), respectively.

African governments have initiated programs to monitor the spread of CMD and CBSD and enforce mitigation measures. However, limited research has been conducted to establish the role of the B. tabaci species associated with the two diseases.

His presentation will discuss the impact of whitefly and whitefly-transmitted virus (WTV) problems in smallholder cassava farmer crops in SSA, and efforts and opportunities for their mitigation.

Plant Molecular Biologist and Head of the Mikocheni Agricultural Research Institute, Dar es Salaam, Tanzania, Dr Joseph Ndunguru is the principle investigator of several research projects including Disease Diagnostics for sustainable Cassava Productivity in Africa co-funded by the Bill & Melinda Gates Foundation and DFID, a project implemented in Tanzania, Kenya, Uganda, Rwanda, Malawi, Mozambique and Zambia.

He recently received a Presidential medal award on Scientific Discoveries and Research Excellence and Best National Agricultural Research Scientist 2011. His research interest is to understand plant virus at molecular level, their genome organization, gene expression and develop resistance to plant virus of economic importance to Africa.

Dr Peter Sseruwagi grew up in a farming community in Central Uganda and has 22 years experience in research and integrated pest management of crop viral diseases and associated insect vectors, and working with smallholder farmers in sub Saharan Africa.

He is a Co-PI and the Africa-based Team Project Manager on the new NRI-led ‘Africa cassava whitefly: outbreak, causes and sustainable solutions’ project aimed at tackling cassava whitefly in Sub-Saharan Africa under funding from the Bill & Melinda Gates Foundation.

Dr Sseruwagi is committed to developing sustainable solutions to whiteflies and WTVs on African food crops.

Event Details
Date: Monday, 8 December 2014
Time: 12.00pm – 1.00pm
Venue: Agriculture Lecture Theatre, UWA
Parking: Fairway Entrance #4
Enquiries: 6488 4717; ioa@uwa.edu.au
Cost: Free, but RSVP essential via www.ioa.uwa.edu.au/events/register

UWA IOA Mission
To advance research, education, training and communication in agriculture and resource management, for the benefit of mankind.

Contact Details
The UWA Institute of Agriculture
The University of Western Australia
M082, 35 Stirling Highway
Crawley, WA 6009
Tel: +61 8 6488 3756
Email: ioa@uwa.edu.au
ioa.uwa.edu.au