



## NIAB to support smallholder community farms in Kenya

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NIAB has secured funding from BBSRC for a two year Agri-Transfer project in Kenya to support the uptake of new crop varieties by smallholder farmers and promote new agricultural and dissemination technologies.

Part of the Flexible Interchange Programme (FLIP), a BBSRC initiative that supports the exchange of knowledge, technology and skills between people from different research backgrounds, the Agri-Transfer partnership includes the National Institute for Agricultural Botany (NIAB), the Kenyan Agriculture and Livestock Research Organization (KALRO, formerly KARI), and two charitable development organisations, the Malaysian Centre for Commonwealth Studies (MCSC) and the Cambridge Malaysian Education and Development Trust (CMEDT).

Agri-Transfer will pull together the diverse and complementary expertise of these partner organisations to develop a workable and sustainable dissemination model for agronomic data collected on new crop varieties (using wheat as the test crop) for smallholder farmers in Kenya. It addresses the widespread problem in developing countries that a full understanding of the potential benefits of improved crop varieties and advancements in agricultural technology is often not realised. Many farmers do not have access to quality seed of the new varieties, nor the agronomic information required for optimal production, and poorly functioning agricultural extension services are a major barrier to the implementation of advances in agricultural research and technologies. These issues affect all crops which lack a strong formal seed system and are a bottleneck in making effective use of all public sector agricultural R&D.

The project will work with two self-help, farmer-based organisations in Nakuru County, Kenya where farmers will run wheat field trials of new Kenyan wheat varieties under the direction of KALRO and NIAB. The use of an ICT-based platform developed by MCSC and CMEDT, together with other methods currently used by NIAB and KALRO, will be evaluated as methods of disseminating data obtained from the field trials to smallholder farmers.

“The rare combination of expertise offered by the whole Agri-Transfer team will prove to be a powerful means to free the bottlenecks suffered in many developing countries,” said the project leader Dr Lesley Boyd of NIAB. “We can replicate our experience in Kenya elsewhere, and bring a new and sustainable solution to a long-standing problem.”

**The project in Nakuru County is already underway, please check this page for regular updates on progress.**

# The Agri-Transfer Team



## **Dr Lesley Boyd** Project Leader

Lesley has led a research programme on wheat-rust interactions for 19 years and is an internationally recognised expert on wheat-rust genetics and biology. She is a member of the Borlaug Global Rust Initiative (BGRI) and in 2011 won the Jeanie Borlaug Laube Women in Triticum Mentor Award for her work in supervising and mentoring young female researchers. Boyd led the BBSRC/DFID - SARID project: *Assessment of genetic biodiversity of durable disease resistance in African wheat genotypes, leading to the development of novel marker systems for wheat breeding* and now leads the BBSRC-DIFD-Gates funded SCPRID project: *Implementing effective marker technologies into disease resistance wheat breeding programmes within Africa*.



## **Dr Tinashe Chiurugwi**

Tinashe's specialities are crop improvement and technology transfer, having worked on a range of horticultural and arable crops in Zimbabwe and the UK at Pioneer Hi-Bred, Seed Co Ltd, University of Reading and Rothamsted Research. As a research associate within the NIAB International Initiative, Tinashe explores ways (project development and fundraising) to apply NIAB skills and experience to agricultural issues in developing countries. Tinashe will coordinate participation by NIAB field staff in Kenya in establishing variety field trials and demonstration plots, assist Peter Njau of KALRO in developing dissemination models for the wheat variety data that are suitable for smallholder farmers, and in the production of knowledge dissemination materials.



## **Dr Peter Njau**

Peter has been head of the Cereal Breeding Section at Kenya Agricultural Research Institute (KARI)-Njoro, since 2001. He has led the National team in the fight against the stem rust race Ug99 since it appeared first in Kenya in 2002. Peter is a member of the BGRI and Principal Investigator of the DRRW project in Kenya. Over the last five years he has released eight wheat varieties with resistance to stem rust (Ug99) one of which, Robin, is a lead variety in Kenya covering over 60% of the wheat area in the country. Peter also led his team to evaluate at least 200,000 wheat accessions from more than 30 countries for their resistance against Ug99 and other races in addition to co-hosting an international training course for standardisation of notes taking for rust diseases in wheat. He is a co-PI in the BBSRC-DFID-Gates funded SCPRID project, *Implementing effective marker technologies into disease resistance wheat breeding programmes within Africa*, and a regional research project, East Africa Agricultural Productivity Project funded by the World Bank.



## **Dr Claudia Canales**

Claudia has a PhD (Oxford), seven years of post-doctoral experience in plant sciences and five years in international agricultural technology transfer and science communication in Sub-Saharan Africa. She will facilitate communication among partners, promoting interaction with other relevant projects funded by MCSC/CMEDT, interacting with technical support and software professionals in charge of back-end development of the ICT application, and sharing knowledge back to the UK plant research community and UK seed companies.



### **Simon Kerr**

Simon has twenty years of experience in trials work for NIAB in the UK and will provide technical input to variety evaluation and the development of field plots for the demonstration of improved varieties in Kenya.



### **Max Marcheselli**

Max is a graduate of Queen Mary's College, London. He played an important role in facilitating on the ground deployment of the ICT dissemination project targeting smallholder farmers in Northern Tanzania to improve sesame productivity. He will primarily be involved in the training of smallholder farmers in the use of the ICT platform on the tablets.



### **Dr Terry van Gevelt**

Terry is an applied economist based at the Centre of Development Studies, Cambridge and a research consultant to MCSC/MCEDT. He has theoretical and practical experience in a variety of evaluation methodologies related to agriculture and will provide expertise in project evaluation.



### **Ian Midgley**

Ian is a graduate of Newcastle University, with eight years of experience in trials work for NIAB in the UK. He is BASIS and FACTS qualified, and will assist with the development of field trial and demonstration plots in Kenya.



### **Johnson Kamwaga**

Johnson is an agronomist based at Kenya Agricultural and Livestock Research Organization (KALRO) Njoro centre. He heads the Soil and Crop Management section at the centre and has been coordinating research activities in tillage systems, soil fertility and plant nutrition, weed control and general crop husbandry, etc. He is also involved in dissemination of agricultural technologies through field days, open days, agricultural shows and exhibitions as well as advisory services for farmers.