

N2Africa Podcaster no. 11

November and December 2011

Introduction

We close the year with a number of 'good news' items from N2Africa. As you will see there is growing confidence in our approach and ability to put nitrogen fixation to work for the African farmer. We now have the opportunity to reinforce our work in the existing eight focus countries and to extend our activities to another five countries in sub-Saharan Africa. I gave a keynote presentation at the 17th International Conference on Nitrogen Fixation in Fremantle, Australia in December that was well-received and resulted in several new offers and enquiries for collaboration. None of this

would be possible without the hard work and commitment of a huge number of individuals and partner organisations. I extend our sincere thanks to all of you from the N2Africa team and we look forward to working closely with you in the coming year.

Wishing you all peace and prosperity in 2012.

Ken Giller

N2Africa Nigeria hosts Bill Gates

Wednesday, 28th September 2011, was a big day for N2Africa when Bill Gates, Co-Chair of the Bill & Melinda Gates Foundation, visited one of the project's soyabean-inoculant demonstration sites in Kano State, Nigeria. Mr Gates was accompanied by Jeff Raikes, the foundation's Chief Executive Officer, Sam Dryden, Director of Agricultural Development, and Prem Warrior, Senior Project Officer with specific responsibility for N2Africa. The team was received by the N2Africa Nigeria Coordinator, Dr Abdullahi Bala. The visit lasted for about an hour during which Dr Bala described how N2Africa works with farmers to improve productivity in smallholder farms and enhance the livelihoods of farm households. He explained that Kano State is the most populous state in Nigeria, commonly with household sizes of more than 15 relying on land holdings of 1 to 1.5 ha. Despite the widespread poverty in the region, it serves as the food basket of the country as well as the neighbouring countries of Niger, Chad and Cameroun. Hence it is imperative to improve crop productivity (yield per unit area).

N2Africa works with farmers to improve productivity in smallholder farms through the increased cultivation of



Bill Gates and Jeff Raikes arriving and being greeted by IITA's test sites at Bichi on 28 September 2011. They were accompanied by Sam Dryden (not seen) of BMGF

legumes, mainly soyabean, cowpea and groundnut. Land in the area is largely owned and managed by men and the project addresses this obvious gender imbalance in the communities by organising training for women on food processing for income and enhanced household nutrition. This training provides direct access to local markets for the women. Farmers were provided with seeds of improved varieties, phosphate fertilizers and rhizobial inoculants. The farmers are in return expected to give back 2 kg for every 1 kg of seed given, which will allow for new farmers to be provided with seeds in the following year.

The Bill & Melinda Gates Foundation leadership were shown customised packets of inoculants, seeds and fertilizer that the project provides farmers. Malam Usman Ahmadu, the lead farmer in charge of the demonstration plot, demonstrated to the visiting team how soyabean seeds are inoculated after which he gave explanation on the various treatments on display. The demonstration plot was divided into four sub-units, each of 15 m x 10 m. One sub-plot that served as the control was treated with neither inoculant nor fertilizer; the next plot was treated with inoculant only and the third with phosphate fertilizer only. The fourth sub-plot



NIGERIA / Kano / 28 September 2011
Bill Gates arriving at IITA's test sites at Bichi on 28 September 2011.
Greeting Bill Gates is Dr. Abdullahi Bala



Bill Gates holding a packet of inoculant while being briefed by IITA staff during the visit to IITA's N2Africa test sites at Bichi on 28 September 2011

was treated with both inoculant and phosphate fertilizer. Dr Bala further explained that the demonstration had 4 objectives; (i) to demonstrate to farmers that soyabean could be cultivated in the area in spite of the relatively short cropping season. The benefit of growing soyabean is that it diversifies the cropping system and source of income to the farmer, has residual benefit to the soil, helps in controlling "witchweed" - the parasitic plant *Striga* - and provides fodder for livestock; (ii) that proper crop management is a key requirement for good crop performance; (iii) to demon-



Farmer Usman Ahmadu demonstrates how an inoculant is used while Bill Gates and Jeff Raikes (both not seen) watch during their visit to IITA's N2Africa test sites at Bichi on 28 September 2011

strate the benefit of inoculant; and (iv) demonstrate that the inoculant only works well if the plant is given adequate amount of phosphate fertiliser. The visitors were fascinated by the striking difference between soyabean plants treated with and without phosphate fertiliser and inoculants and the fact that the inoculant constitutes a small fraction of the total cost of inputs. In response to a question on the source and availability of the inoculants, Dr Bala explained that inoculants are currently not produced in Nigeria; the one used by the project was imported from Legumefix in the UK as a necessary step to start the inoculant demonstration with high quality products. However, N2Africa is currently in consultation with an entrepreneur that has indicated interest to set up an inoculant manufacturing plant in Nigeria by 2013. The demonstration was capped with an explanation on nodule colour and distribution in response to inoculation. There was a lot of animated discussion on the economics of soyabean production and profitability relative to maize production. Later in the day at IITA's office, N2Africa's Farm Liaison Officer, Ms Esther Chinedu, exhibited a range of food products made from soyabean by a women group working with the project.



Bill Gates and Jeff Raikes examining a packet of inoculant during their visit to IITA's N2Africa test sites at Bichi on 28 September 2011

Abdullahi Bala

Extending N2Africa Activities in DRC, Liberia and Sierra Leone through a grant from the Howard G. Buffet Foundation

Interest in enhancing inputs from N₂-fixation legume integration into production systems continues to rise. The [Howard G. Buffett Foundation](#) and the [Bill & Melinda Gates Foundation](#) have announced a partnership to improve the quality of soil in Africa through support for the [N2Africa](#) initiative. The new grant of US\$2M from the Foundation will reinforce activities in the Democratic Republic of Congo (DRC) and enable N2Africa to expand the project to Sierra Leone and Liberia.

In DRC, N2Africa will extend into North Kivu, where we will build on lessons learnt in South Kivu and establish partnership networks towards the identification, evaluation and dissemination of legume-based technologies aiming at income, nutritional and soil fertility impacts at the

smallholder farmer level. In Sierra Leone and Liberia, the activities in the first six months will be focused on building partnerships through scoping missions and workshops. The primary focus of the project will be on the major grain legumes – namely groundnut, cowpea and soybean, which are the key crop priorities for N2Africa.

“Africa needs a ‘brown revolution’ to improve soil quality and increase agricultural productivity,” said Howard G. Buffett. “Our partnership with the Gates Foundation and our contribution to N2Africa underscores the importance of investing in both soil and seeds as a way to improve the standard of living and quality of life for the world’s most impoverished and marginalized populations.”

Ken Giller

Supplementary Grant to N2Africa from the Bill & Melinda Gates Foundation

N2Africa is a learning grant through which we hope to deliver technologies for enhancing nitrogen fixation in grain and forage legumes in farmers’ fields to contribute to improved livelihoods. As illustrated in the diagram below – dissemination and delivery (D&D) form the core of the project activities. M&E provides the data on D&D that allows us to research the underlying reasons for performance of technologies, or for adoption by farmers, and the overall impacts of the N2Africa project. Thus we like to refer to N2Africa as a “development to research project” rather than a research for development project.

Given the large investment in dissemination activities and the scale of the activities, N2Africa offers a unique opportunity for the systematic collection of information on the performance of legumes under farmers’ conditions in Africa, as well as detailed investigations in who benefits from legume technologies and what is necessary to make commercialisation of legumes work. This information is the basis to improve the targeting of legume-based technologies to African farmers. As far as we are aware, the N2Africa project is the only project currently running in sub-Saharan Africa offering such possibilities at the scale we are working and across a range of countries.

Based on the successful start of the project, Dr Prem Warrior, our Senior Program Officer at the Bill & Melinda Gates Foundation has assisted us in obtaining a supplementary grant of US\$1.3M for two main activities:

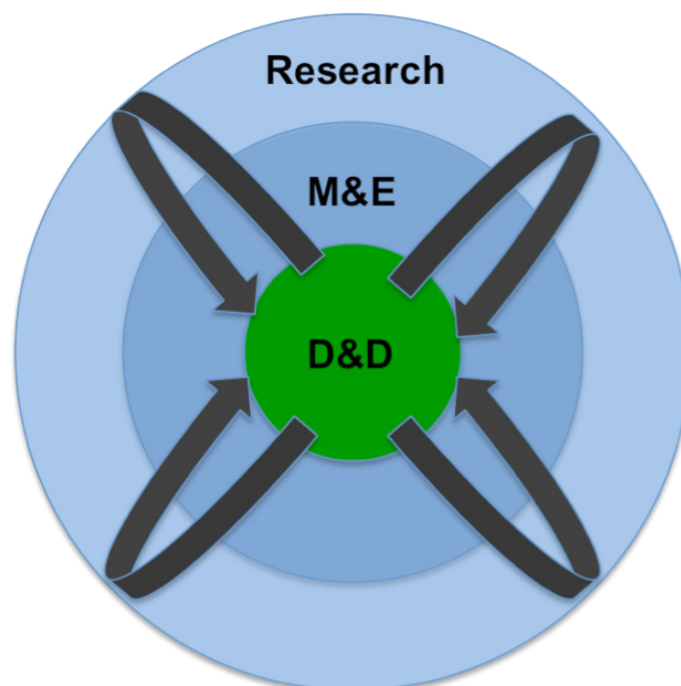
1) *To extend the activities of N2Africa to three new countries: Ethiopia, Tanzania and Uganda.*

A major thrust in 2012 will be to seek partners in Ethiopia, Tanzania and Uganda and to start preliminary activities with farmers groups in the field. Our first activities will

focus on building partnerships through scoping missions and workshops. We are already in touch with a number of organisations in these countries and if you think you can help us – please feel free to get in touch with Esther Ronner (Esther.Ronner@wur.nl) who is introduced in this Podcaster below.

2) *To enhance the learning from current dissemination activities in N2Africa.*

The expanded activities in N2Africa will focus on new detailed measurements, monitoring and evaluation within the current dissemination activities of the project. For this



purpose a new research assistant is being recruited in each of the current eight N2Africa countries. New activities will be established to solve problems of non-responsive soils that have been encountered, and to probe more deeply as to which farmers are benefiting the most, and how we can best assist the poorest in the communities where we are

working. This will include some specific studies on gender and on household nutrition, including food shares within households.

Ken Giller

New people joined the N2Africa project team in Wageningen

Esther Ronner has recently joined the N2Africa project team at Wageningen University. Within N2Africa she will be working on the extension of project activities to Ethiopia, Tanzania and Uganda, including pilot studies and writing project proposals. She will also contribute to ongoing research activities in the current N2Africa countries. Esther has a background in irrigation/water management and in international development. Previously, she has done research on conservation agriculture in Kenya and on smallholder irrigation systems in Mali.



Edouard Rurangwa (PhD student) and Esther Ronner discussing research

Edouard Rurangwa has recently started his PhD program at Wageningen University under N2Africa Project Scholarship. His research work will focus on targeting of legume technologies in farming systems in Rwanda within the context of N2Africa. Edouard has a background in horticulture, and has done research on the influence of Arbuscular Mycorrhizal Fungi (AMF) on performance of banana in Rwanda. Currently, he is working in banana program in the Rwanda Agriculture Board (RAB).

constrain adoption and diffusion of groundnut and soybean technologies among the farmers. He will conduct his field work in the four impact areas of N2 Africa project in Malawi; Mchinji, Lilongwe, Salima and Dowa. Admire has a background in Economics and works for Department of Agricultural Research Services (Ministry of Agriculture and Irrigation) as a research scientist (economics). His past work has been on evaluating project proposals and research projects and conducting economic analysis of agricultural issues and other related areas.

Admire Katunga joined N2Africa as a PhD Sandwich student at the Development Economics Group of Wageningen University. His PhD research focuses on socio-economic analysis of smallholder groundnut and soybean production and marketing in Malawi. He will work on seed systems, technical efficiency of smallholder farming system, market integration and demand analysis; and on how they in turn

Meeting on N2Africa project finances at Wageningen

December 14th-16th a meeting was organized at Wageningen for the N2Africa financial staff. Led by Alastair Simmons, Ken Giller and Kenton Dashiell the delegates of CIAT (Lorraine Odhiambo), IITA (Kayode Awobayo) and Wageningen University (Lenie Kooijman and Wim de Wijse) worked towards the new budgets for years 3 and 4 of the project.



Charlotte Schilt

Photo shows Lenie Kooijman, Kenton Dashiell, Kayode Awobayo, Lorraine Odhiambo and Ken Giller



Human capacity building project on legume sciences

The Bill & Melinda Gates Foundation (BMGF) has just awarded a grant of \$1,700,147 (including \$420,376 in co-funding from other sources) to Tshwane University of Technology (TUT) in Pretoria, South Africa, to undertake capacity building in Legume Sciences for Africa. The project will focus mainly on training and research to increase yields of major food legumes in Africa such as cowpea, groundnut, common bean and soybean. The funding will be used for basic and applied training of 12 MSc and six PhD students over a five-year period. The focus countries of this project include Mali, Burkina Faso, Ghana, Nigeria, Uganda, Tanzania and Ethiopia. It is planned that, wherever logistically possible, students recruited from these focus countries will undertake their research activities within existing BMGF-funded programs in Africa, such as N2Africa, TL II, and AGRA, hopefully leading to better project implementation and effective utilization of these talents on the African continent. The partners in this capacity-building project include TUT in South Africa (Prof Felix

D. Dakora), the Centre for Rhizobium Studies at Murdoch University (Prof John Howieson), the University of California at Los Angeles Campus, UCLA (Prof Ann Hirsch), Brazil's Agricultural Research Corporation or EMBRAPA (Prof Mariangela Hungria), and the Department of Science and Technology of the South African Government. The approach in this project is to develop a sandwich program whereby students from the seven focus countries in Africa register with TUT in South Africa and undertake part of their training in Australia, Brazil or USA, depending on the nature of the research project. Because there are currently very few female scientists in agricultural research in Africa, this project seeks to have a gender balance of 50% female and 50% male recruitment. The project will commence with immediate effect from 1 January 2012. Interested potential students from the seven focus countries should contact Prof Felix D. Dakora (DakoraFD@tut.ac.za or DakoraFD@gmail.com).

The Podcaster is published each month – we look forward to receiving news and contributions – particularly from partners. Please send in contributions by the third week of each month. Contact address for this newsletter is: N2Africa.office@wur.nl

Please feel free to forward this email to colleagues you believe would be interested. This email has been sent to you by N2Africa, funded by The Bill & Melinda Gates Foundation.

When you change your e-mail address and want to keep receiving the Podcaster, please send your new address to N2Africa.office@wur.nl. If friends/colleagues like to receive future Podcasters let N2Africa.office@wur.nl know as well.