N2Africa Podcaster no. 17

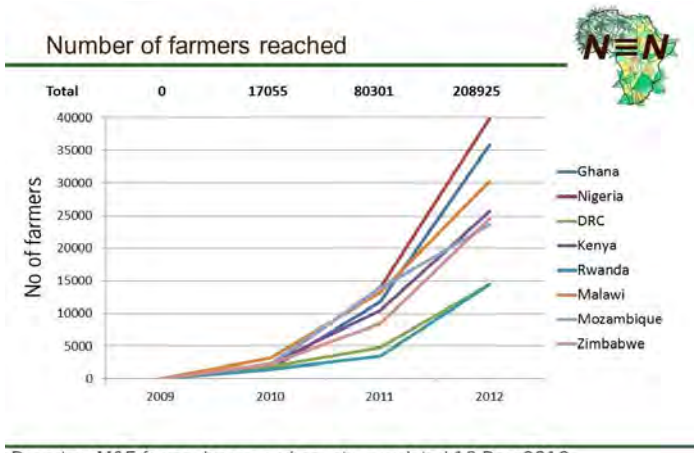
December 2012

Introduction

As we approach the end of 2012, the N2Africa team would like to thank all Podcaster readers for your continued interest, collaboration and support. Our work would not be possible without the huge range of partners who fulfill an enormous diversity of roles. Success in securing greater inputs and impacts from N_2-fixation in smallholder farmers' fields depends on the contributions of all of you!

A week ago, N2Africa, represented by Bernard Vanlauwe and myself, had the opportunity to speak at a 'learning lunch' hosted by Prem Warrior at the Bill & Melinda Gates Foundation headquarters in Seattle. We were delighted that Dr John Lynam, the independent reviewer of N2Africa appointed by the foundation, also joined us. The presentation was a 'thick sandwich' of three talks. Bernard started with a 25 minute update on progress of the project. After a short discussion, John Lynam presented his perceptive and thoughtful reflections on the project. In particular, John highlighted the unique nature of N2Africa in that we work to improve smallholder crop production at scale, and try to do this in a way that we can learn about what works where and when and for whom. He commended N2Africa for the novel 'Development to Research' model which focuses on reflexive learning loops. He noted that this is difficult to integrate effectively on time to guide the project from season to season.

As the slide from the presentation shows, based on the most current information N2Africa has now reached more than 200,000 farmers after three years of activities across the eight countries. This is a massive achievement! After discussion of John Lynam's report, we were then given the opportunity to present ideas of how N2Africa should develop into the future and preliminary plans for the new



Based on M&E for each crop and country - updated 10 Dec 2012

countries Ethiopia, Tanzania and Uganda. The good news is that the foundation have given us the go-ahead to start activities in these three countries in 2013 and we are already actively doing this.

In this Podcaster we have an update from Ben Ahiabor and Robert Abaidoo in Ghana, case studies in Zimbabwe, two reports from Paul Woomer and the Kenya team and reports on Jeroen's travels to N2Africa partners in various countries.

If you feel that your work is not given enough attention in the Podcaster, we can only include news if we receive reports – so please send in a contribution for the next Podcaster.

Wishing a peaceful and relaxing festive season to all of you!

Ken Giller

Photo credit Matt Pycroft

Impressions from the project coordinator of his visits to the countries where N2Africa is implemented

On Sunday December 9th I returned from my visit to N2Africa Mozambique, the last leg of a trip that took me to all of the eight countries where the N2Africa project is implemented (excluding those countries that are serviced by the supplementary grant). Western Kenya, Nigeria, Ghana, Rwanda, Democratic Republic of Congo, Malawi, Zimbabwe and Mozambique were visited. These visits allowed me to meet and get to know project staff. Every opportunity to meet with partners was embraced and people have been very accommodating in making these meetings possible, meeting on Saturday or Sunday when needed and willing to travel distances when required. This is very much appreciated and I would like to thank everybody who contributed to making this a very successful trip.

One of the stores of IITA Mozambique (Gurué) with different varieties of soyabean seeds waiting to be distributed to the various partners for dissemination to farmers

We have visited the field on numerous occasions to interact with our implementing partners and with farmers, who are the ultimate beneficiaries of this project, and to get an impression of what is happening on the ground. I am much impressed by the welcome we received on all occasions, whether from a lead farmer who proudly gives an account of the legume crops she planted and how she manages the crop as well as how she demonstrated the technologies to other farmers, or farmer groups and associations who demonstrated the different recipes and presented the various food stuffs they prepared. We had very tasty meals which were, as you can imagine in sub-Sahara Africa, accompanied by a lot of dancing and singing. I also appreciated the exchange with our partners that allowed us to review our collaboration and discuss what is going well, where we can improve and, maybe most important of all, what we should do differently in the last phase of the project. My impression is that the N2Africa project is very well embedded in local structures. The project has played a role as an initiator, catalyst or stimulator of all these developments on the inputs systems, the smallholder production as well as the processing and marketing side, all along the soyabean and other legume crop value chains. I think we have realized a lot in the three years of the project, but

A farmer proudly showing the beans he harvested from only 0.8 kg of seed (in the bucket) and the safe box that the savings and internal loans committee (SILC) keeps, with savings made partially from the proceeds of selling grain. The SILC is an element of the SMART project of CRS, one of our partners in Malawi

The women from IKURU ltd. (a partner in the N2Africa project Mozambique) sorting the groundnuts to get first grade groundnuts for export to the Netherlands.

the question for the last year of the project is how we can improve the sustainability of our interventions. The question of sustainability is one of how we can embed the technologies that we promote in the programs of our partners and putting the delivery and dissemination mechanisms in place that allow for further upscaling and outscaling of the technologies. We have convinced farmers and partners of the benefits of the improved varieties, use of inoculants and fertilizers, but this can only be sustained if the input distribution systems are in place that provide the farmers access to these inputs. That is something that we will focus on more in the last phase of the project. In similar manner the marketing and sale (linking farmers to markets) of the grains (and seed) is an important aspect and prerequisite for the sustained expansion of the number of farmers and area under legume crop cultivation. There are a number of opportunities (developments and high demand in the countries that can be built). So that will be another aspect that we

will focus on this year. In most countries we have entered the last season in the project that will allow us to experiment with different D&D approaches and that will give us insight in how we can sustain the momentum that has been generated in the various countries towards putting nitrogen fixation to work for the smallholder farmers.

For the various trips I was accompanied by Alastair Simmons who has until recently, been the interim Project Coordinator for the N2Africa and who now returns to his responsibility as our Communications, Knowledge and Project management officer. On quite a number of these country visits Matt Pycroft and Matt Sharman accompanied us as well. They are doing the video coverage. They have captured well what N2Africa is doing on the ground in addition to the opinions and visions of many of our partners and we will be able to tell the story of N2Africa in a varied way exploring different story lines.

Jeroen Huising

N2Africa-ADVANCE partnership enhances soyabean-rhizobium inoculants technology dissemination – Part 1

In Ghana, the N2Africa project primarily seeks to promote the production and productivity of soyabean, cowpea and groundnut in the northern sector of the country. Various partners engage in establishing demonstration plots evaluating the use of rhizobium inoculants and phosphorus fertilizer (TSP and/or murriate of potash) and in some cases also nitrogen fertilizer (Urea). Also, they establish multi-location variety trials and multi-locational input trials with different types of fertilizers (organic and inorganic) of the three target legumes.

The Agricultural Development and Value Chain Enhancement (ADVANCE) Program partnered with N2Africa in 2011. ADVANCE is a USAID-funded project with the goal to achieve a greater degree of food security among the rural population in northern Ghana while increasing competitiveness in the domestic markets. Therefore the program adopts a value chain approach where smallholder farmers are linked to markets, finance, inputs and equipment services and information through relatively larger nucleus (commercial) farmers and large traders (aggregators) who have the capacity to invest in these chains. The program also builds the capacity of smallholder farmers to increase the efficiency of their farm business with improved production and post-harvest handling practices. In addition, the

ADVANCE staff taking delivery of inoculants (Legumefix) at CSIR-SARI for distribution to agro-input dealers and nucleus farmers


Testing whether a simple planter could sow inoculated seed without removing the inoculants from the seed surface

ADVANCE project has been collaborating with input supply companies interested in investing in on-farm demonstrations as a way of educating smallholder farmers on new technologies.

The partnership with ADVANCE started off with a workshop in May 2011, where N2Africa staff, led by Rev-Dr. Benjamin Ahiabor, trained the staff of ADVANCE and some agro-input dealers on rhizobium technology and legume enterprise. After half a year, all the nucleus farmers reported of positive responses of their cultivated soyabean to rhizobium inoculation. Based upon that positive reaction, in May 2012, ADVANCE continued to train 18 of its Nucleus Farmers

as well as four (4) extension personnel of ADVANCE on soyabean-inoculants technology. These nucleus farmers were expected to also disseminate the technology to their out-grower farmers.

The N2Africa project's partnership with ADVANCE has tremendously advanced the cause of the project in the target zone. In northern Ghana, ADVANCE is now working with 48,648 farmers, 478 producer, trade and business associations, 112 nucleus farmers with out-grower schemes, 106 large end-buyers/processors, 131 agro-input dealers, 46 financial institutions and 26 radio stations and 37 mechanization service providers. Of particular mention is the great role ADVANCE has played in creating awareness among agro-input dealers and commercial farmers in the importance and use of soyabean rhizobium inoculants. This has resulted in their patronage of the product for distribution to smallholder farmers across northern Ghana and, to some extent, Brong Ahafo Region. Through this partnership with ADVANCE, the N2Africa project has been able to make available an amount of 107.10 kg of the inoculants to its nucleus and out-grower farmers in northern Ghana. This was supposed to inoculate approximately 1,071 (one thousand and seventy-one) acres of soyabean. In the next podcaster we report about this year's training of some of ADVANCE's Operational Communities.

Rev-Dr. Benjamin D. K. Ahiabor, Principal Investigator, N2Africa Project, SARI & Mr. Edwin K. Akley, Farm Liaison Officer, N2Africa Project, SARI

Part 2 will be published in the next Podcaster

Legumes varietal selection is critical for effective marketing: Case study for Mudzi and Guruve districts of Zimbabwe

The focus of the N2Africa project is to put nitrogen fixation into use for smallholder farmers in Africa. In Zimbabwe, the project has been running for two seasons and is now entering its third and final season. The farmers have gained some commendable knowledge and have benefitted from the technologies. These include the use and the importance of the inoculants, methods recommended for intercropping, the best inter-row and in-row spacing and also the use of manures and appropriate fertiliser rates. The use of improved varieties has enhanced the farmers' seed selection base. Above all, the farmers have become aware of the challenges they meet when marketing their produce from these leguminous crops.This is mainly so in the districts where a larger area has been planted with some of these legume crops with the intention of selling.

A pile of groundnut bags ready for the market at Kanyoka business centre in Mudzi district

In the last season farmers in Mudzi planted large areas of groundnuts and got good yields in the region of 1.5 – 2.0 tonnes per hectare. The varieties grown were Natal Common and Ilanda. During the marketing season, companies that buy the produce, for example the Grain Marketing Board, Agricom and Agriseeds went to the district at various shopping centres where they would ask the farmers to come and sell their produce to them. However, it turned out that these buyers were looking for specific varieties of groundnuts to be processed into peanut butter. These are the small seeded varieties such as Natal Common, which they were saying will produce peanut butter with a uniform pouring consistency, and are homogeneous in the whole container unlike the other varieties which would produce poor quality peanut butter. The latter were said to produce a peanut butter which would settle at the bottom of the peanut butter jars with a lot of oil at the surface. These will therefore be difficult to use because of the texture and it is not liked by consumers. This type of groundnut variety is meant for the roasted salt peanuts as a snack and therefore could not easily sell and this posed as a marketing problem for the farmers who had produced this variety of groundnuts in large quantities.

In the same season in Guruve district there was an issue of sugar beans that were grown on a larger area and also attained very good yields of about 2 tonnes per hectare. The Cardinal variety gave some problems during the marketing period. The buyers were citing reasons which make the variety unpopular with most buyers and consumers such as low protein content compared to other available bean varieties, takes long to cook, taste not favourable and not appealing on the plate.

People attending a groundnuts field day on one farmer's field in Mudzi

A farmer cited places where she had gone to look for a market for her crop and they declined to buy her produce. Farmers were also highlighting the dishonesty of the buyers especially in Guruve where the preferred variety that was first bought was Speckled Ice and those who had grown Cardinal had to sell the crop at a lower price. The buyers, after realising that all the Speckled Ice variety was bought,

then came to farmers and bought Cardinal at a much higher price. The rationale used by the buyers was that they knew that most farmers had grown more of Cardinal and they wanted to capitalise on farmers by reducing the demand of the variety, offering a very low price saying that the crop was low in demand from the public. The preferred varieties were white seeded varieties like Speckled Ice and Bonus which the buyers came and bought at a much higher price than the Cardinal.

From the last season experience, it could be noted that farmers now know the demands of markets and are making some frantic efforts to source the legume varieties that provide high yields and at the same time can be sold without any difficulties. From another point of view, it showed that there is an information gap between the farmers and the market on prices, hence the problems with the buyers of the produce.

Here farmers are bringing their produce to the central collection point-notable absence of infrastructure for storage (Picture by Byron Zamasiya)


Farmers grading their groundnuts before weighing the produce and taking it to be marketed (picture Byron Zamasiya)

It is very important that farmers look for market demands before they grow their crops, so that at the end of the season they will not lose their produce to unscrupulous dealers at the end of the season.

Isaac Chabata and Caroline Chipomho

Kenyan Farmer Delegation Generates Understanding and Good Will

The N2Africa outreach activities in west Kenya work through 26 grassroots collaborators. This team typically installs 50 BNF technology demonstrations, conducts 25 farmer field days, operates 16 grain legume market collection points and assists the Legume Agronomy team with its on-farm experiments twice a year, owing to our bimodal rains. Often, these cooperators are also asked to host visitors, sometimes at short notice, who are graciously accommodated and leave with a strong understanding of our field operations. At a recent planning meeting, farmer leaders commented that they seek wider understanding of program operations, and asked that a farmer delegation be organized on their behalf. The program then sponsored a fifteen-person farmer delegation between 7 and 12 October 2012 consisting of seven women and eight men and led by John Musyoka, N2Africa Training Officer. First the delegation traveled to the MEA Ltd. facility in Nakuru to observe the production of BIOFIX inoculants and blending of Sympal fertilizer (see photo). Next they traveled to the Kenya Agricultural Research Center at Muguga that offers soil testing services. The planned visit to MIRCEN at the University of Nairobi where quality assessment of inoculants is performed was unfortunately cancelled because of a system-wide strike, but this left more time for the team to interact with staff from Promasidor at the Athi Export Processing Zone, the outreach team's largest soyabean buyer and manufacturer of the textured vegetable protein SOSSI™. The tour ended with a visit to CIAT offices in Nairobi where they were greeted by the new Program Coordinator, Jeroen Huising, and a roundtable discussion on program outreach activities ensued. Transportation was provided by ARDAP, a program partner that recently was awarded a bus from another project. Total cost for the five-day event was only $290 per delegate, a reasonable expense considering the greater understanding and good will generated. Dick Morgan Ongai, Chairman of the Mufagro Farmer Association and delegate from Vihiga County, aptly summarized the experience as "allowing for better sensitization of farmers concerning opportunities presented by BNF technologies, and also strengthened trust between farmers, input suppliers and buyers".


The farmer delegation visits the MEA factory in Nakuru where Sympal is blended (photo credit Moses Chamwada)

Paul L. Woomer, Kenya Country Mentor

Soyabean Processing Windfall in West Kenya

One of the larger challenges to those working in program outreach activities is linking “at least half of the farming communities” to legume processing initiatives. This target of course grows as more farmers participate in the program, for example over three years the number of groups participating in west Kenya is currently 26, suggesting that 13 processing operations need be established. We responded by preparing the handbook “Grain Legume Processing Handbook: Value Addition to Bean, Cowpea, Groundnut and Soyabean by Small-Scale African Farmers” (40 pp) and organizing a course around it attended by 18 participants. The simple “mince and press” approach to making soyamilk attracted considerable attention and we focused our first efforts around establishing soyabean “dairy” operations by assembling and distributing 12 kits consisting of a mincer, soaking basin, filters, press plates and pasteurizing pans. This approach met with moderate success, with women meeting in the late afternoon to take turns mincing their soyabeans for use in the evening meal at a rate of about two tons per month. One partner later established a shop that markets a full range of soyabean products including snacks, fruit soyamilk yoghurt and blended flours. On paper at least we had achieved our 50% target but then an additional exciting opportunity arose.

This state-of-the-art soya milk processor was provided through UNIDO and was installed at one of three factories in west Kenya (photo credit Josephine Ongoma)

The United Nations Industrial Development Organization (UNIDO) and the Government of Japan announced plans to establish three soyabean processing factories in west Kenya using state-of-the-art Japanese equipment intended to produce emergency relief food for the Kenyan Red Cross. Arrangements were forged with the Kenyan Ministry of Industrial Development to accommodate these factories and six trainees were sent to Japan to gain experience with the machinery and processes. At first, N2Africa was asked to guarantee supply of about 220 tons of soyabeans per year, but then our interaction with the project increased. Mrs. Josephine Ongoma, one of the N2Africa Node Leaders in west Kenya, was recruited by UNIDO to serve as National Coordinator to oversee the installation of the equipment and to launch factory operations. Factories able to process about 45 kg of soyabean per hour are now under development in Migori, Kisumu and Malakisi. Each will specialize in a different range of soya products. Soyamilk will be used in school nutrition programs (see photo). Fortified blends will be used in famine relief by the Red Cross. Other mechanisms are being explored so as not to interfere with local entrepreneurial opportunities. From its modest attempts at the cottage industry scale designed to improve household nutrition, soyabean processing within the program has grown to represent a considerable market for west Kenya’s farmers and a great opportunity to better respond to humanitarian crises in Africa.

Paul L Woomer, Kenya Country Mentor

The Podcaster is published eight times per year – we look forward to receiving news and contributions – particularly from partners. Please send in contributions well in time. Contact address for this newsletter is: N2Africa.office@wur.nl

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