

N2Africa Podcaster no. 29

January and February 2015

Introduction

Welcome to the March edition of the Podcaster. I have been living in Arusha for the past five months on sabbatical leave from my position at Wageningen University, based at the IITA office in Tengeru. It's been a great opportunity to spend some time with Dr Freddy Bajjukya, the Tanzania N2Africa Coordinator and his team. We had a great field visit in January to the West Usambara mountains around Lushoto and joined a number of field days with local partners and farmers evaluating some of the field demonstrations on beans. It's also been a perfect opportunity for me to connect with a range of NGOs and other partners with whom N2Africa works in



Farmers evaluating N2Africa technologies in Lushoto, West Usambara, northern Tanzania

Tanzania. Beans are everywhere and such an important part of the farming system and diet in this region.

Charlene McKoin, the N2Africa Senior Project Officer of the Bill & Melinda Gates Foundation, visited Arusha on the 3rd and 4th of March and we took the opportunity to Visit the Nelson Mandela African Institute of Science and Technology (NMAIST) and discussed our collaboration with Professor Patrick Ndakidemi, Dr Kelvin Mtei and Yusuphu Namkeleja who is conducting his MSc research on rhizobia for *Phaseolus* beans. N2Africa has funded the establishment of a glasshouse at NMAIST which is close to



Charlene McKoin visiting the NMAIST glasshouse

being commissioned and will be an important resource for research and teaching.

Over the past six weeks I have been leading a [Massive Open Online Course \(MOOC\) on Growing our Future Food: Crops](#). We have used a lot of examples and videos from N2Africa, which provide an excellent teaching example focused on closing yield gaps in relation to feeding the world's growing population. If you missed the course, don't worry as we'll be re-running it in a few months time and will alert you when it comes online again.

We have a rich and varied collection of stories in this edition of the Podcaster. There are reports from our first established Public-Private Partnerships that have attracted new funding and are well set to scale out N2Africa technologies beyond our own targets. We have reports of workshops and from some of the many students who are conducting their PhD and MSc research for N2Africa. There are also a number of news items, including an item from Ilse de Jager and Theresa Ampadu-Boakye who received the Harvesting Nutrition Award on behalf of N2Africa for Most Scalable Approach: ([YouTube video](#)).

Please don't forget to send in your own news from N2Africa – your colleagues across Africa are always interested to hear news from different parts of the continent.

Ken Giller

N2Africa Partnerships

Moving on from a “proof of concept” during the first phase of the N2Africa approach at scale, the second phase was designed to scale out the proven legume technologies using a “business led” approach. The legume intensification technologies vary from country to country, among crops and regions within countries but include a strong focus on getting the best legume varieties and management approaches in place being inoculants, fertilizer with P, K and other nutrients, and ancillary interventions. Further N2Africa now has a strong emphasis on gender-sensitive approaches for pre- and post-harvest labour saving tools, value addition at household to Small Medium Enterprise (SME) levels plus sustainable supply of the promoted inputs. The approach of going to scale is through partnerships with the public and private sectors whom would be engaged in Capacity Building, Dissemination, Input supply, Marketing, Learning and Project M&E.

The approach could not have come at a better time as the Nigeria country director Professor Sani Miko of SG2000 mentioned ‘meaningful partnerships are the new way to go’ and welcomed N2Africa to add value to their AGRA funded ‘*Improving Productivity and Incomes of Smallholder Farming Households Through Innovative Extension and Advisory Services in Northern Nigeria*’ Project.

Development organizations no longer wish to operate in isolation, most donors insist on value chain approaches making N2Africa compatible with both the NGO and private sectors. Thus N2Africa is moving to partnership agreements that clearly define each partner’s roles, contributions and we have joint M&E. The approach was initially branded as somewhat opportunistic, a financially modest contribution but full attribution.

After one year, 59 partnerships were sealed along the legume value chains including those on agronomic research and rhizobiology. It is expected the target of 550,000 households in 11 countries will be covered by 2015 over one to multiple year partnership agreements, hence setting the landscape for actual implementation.

Special credit on spear-heading comprehensive partnerships is given to Ethiopia. A good example is the multi-partners, comprehensive ‘Balegreen Spice and Grain Development Plc’ partnership which is further elaborated on in Box 1.

Challenges facing some N2Africa partnerships are with sustainable input supply of certified legume seeds, inoc-

ulants and legume fertilizers that have not yet seen well established private sector led supply chains. Early on in the project it was realized that these relatively ‘difficult’ inputs with limited shelf life (legume seeds, inoculants), awareness, and for seeds easy for farmers to self multiply for some years which inhibits the private sector to take them up in their portfolio facing large opportunity costs or low profitability.

The above portrays a “chicken and egg” situation of on the one hand farmers mentioning the lack of these inputs slowing technology adoption and on the other the input suppliers claiming lack of demand. As the demand exists but is unpredictable and scattered, the project is looking at innovative ICT solutions to predict and dynamically track demand information through a commercial new chain actor – work still in progress. In the meantime two types of partnerships have developed for which comparison is of great interest to shine more light on farmer adoption and adaptation processes.

These two partnerships can be distinguished as so-called ‘closed systems’ and ‘open systems’. For the former the Bale Green – ACOS is an example of a nucleus farm and buyer that are engaged in providing farmers inputs, services and a guaranteed output market. Other examples are AgDevCo and Busaka in Ghana and Export Trading Group in Tanzania. Most other partnerships are ‘open’ where farmers input and output chain actors are not interconnected, hence through partner value chain projects the linkages, information exchange and in general improved value chain performance is promoted.

Basically dissemination efforts in closed systems are expected to render higher adoption rates than in open systems where input suppliers and farmers still have to tune supply and demand and-or farmers face market risks and lack of services including input credit. On the other hand an array of other constraints, attitude, risks or otherwise bottlenecks may still be prevalent in farmer (segments) inhibiting adoption despite being part of a ‘closed system’. N2Africa is therefore looking at analyzing the two systems through its MSc-Internship program, hereby calling on the interested candidates to execute this. N2Africa is moving quickly with its partners and we look forward to learning what the key components of success will be. If you have comments and suggestions please feel free to contact me.

Edward Baars, N2Africa Senior Business Development Officer



Box 1. An N2Africa Inclusive Partnership Case Example in Ethiopia

Balegreen Spice and Grain Development Plc is a nucleus farm involved in both their own and community seed multiplication, in dissemination, bulking, mechanization services, fertilizer and inoculant supply to out-growers linked to and organized through various Farmers Producers Cooperative Unions covering 90,000 smallholder farmer households.

The partnership is further strengthened through an N2Africa solicited USAID funded Alliance for Green Revolution in Africa's (AGRA) Scaling Seeds and Technologies Partnership (SSTP) project grant of \$300,000 to the lead grantee Menagesha Biotech Industry Plc. (MBI), a private sector inoculant manufacturer. The project is entitled "Scaling Chickpea Technologies for Increased Production and Productivity of Smallholder Farmers in Major Chickpea Producing Areas of Ethiopia". It is designed to establish feasible input supply chains and grain market access involving a consortium of Public-Private partners and is part of the larger partnership with Balegreen Spice and Grain Development Plc.



Part of the partnership process; discussion between AGRA Country and Deputy Country Coordinators (left), MBI (center) and the N2Africa team (right)

With the grant support from SSTP to the lead grantee Menagesha Biotech Industry Plc. (MBI) and the overall project management by the Steering Committee composed of the key project partners involving N2Africa, MBI, AGRA Ethiopia, Balegreen and Tsehay Union under the chairmanship of -N2Africa, the project will be implemented for 26 months (from February 2015 to April 2017) in the major chickpea growing Woredas of Amhara, Oromiya and SNNPR regions.

The partnership is structured under four strategic objectives of supporting chickpea and other legumes input production and distribution, capacity building, partnership development and grain market access. Two seed multiplying partners, Balegreen and Tsehay Union will produce and supply 2,700 tons of certified chickpea

seed to the smallholder farmers and the inoculant plant, MBI, will produce and supply over 11 tons of inoculants and provide technical backstopping. By the end of project period the dissemination and commercialization efforts will ensure sustainability of the supply chains. The input distribution channels will use the existing Farmers' Cooperative Unions to initiate local input dealers.

Furthermore, technologies for chickpea and other legumes will be demonstrated to smallholder farmers who will be trained on improved production practices, farming as a business, and linked to high potential and competitive grain buyers mentioned below. This will be achieved through a collaboration among public research and extension organizations (i.e. the National Soil Testing Centre - NSTC and Holeta Agricultural Research Centre-COMPRO II, the Agricultural Transformation Agency- ATA, the National Agricultural Research System entities and the Office of Agriculture for dissemination) and the development partners SNV and Agriterra through their Cooperatives for Change (C4C) project.

On the market side, the partner Agricultural Commodity Supplies (ACOS) Ethiopia has a potential annual uptake of over 33,000 Mt of legumes (mostly haricot bean and chickpea). ACOS has built a successful contract farming model with crop insurance scheme facilitated by C4C to its farmers. The company has three approved chickpea varieties registered in its name for which it has developed a niche market.

As part of the larger partnership, the processor Guts Agro Industry makes different products such as super cereal or CSB Plus-for children, pregnant and lactating women- LIBDEL Baby Cereal (LBC)-for children from the age of six months to two years, Lembo Snacks or corn chips and Plump Nuts used for treatment of acute malnutrition. Guts Agro Industry recently launched a high standard chickpea based Shiro "YANET Shiro", a popular ingredient for sauce. Guts Agro Industry uses maize, soybean, chickpea and haricot bean as raw materials.

The 'modest' but crucial role of N2Africa is defined as technical backstopping, soliciting the AGRA grant, coordination of the consortium, facilitation of market linkages, M&E and to provide evidence of the effect of using improved seeds, inoculants and legume (blended) fertilizers.

The main project outcomes are increased production, distribution and use of quality Kabuli chickpea and other legumes' seeds along with inoculants, NPS fertilizer and improved agronomic practices, better coordination, enhanced technical capacity and awareness of farm communities and hence better use and adoption of technologies to enhance production of chickpea and other legumes.

Tamiru Amanu, N2Africa Business Development Officer in Ethiopia

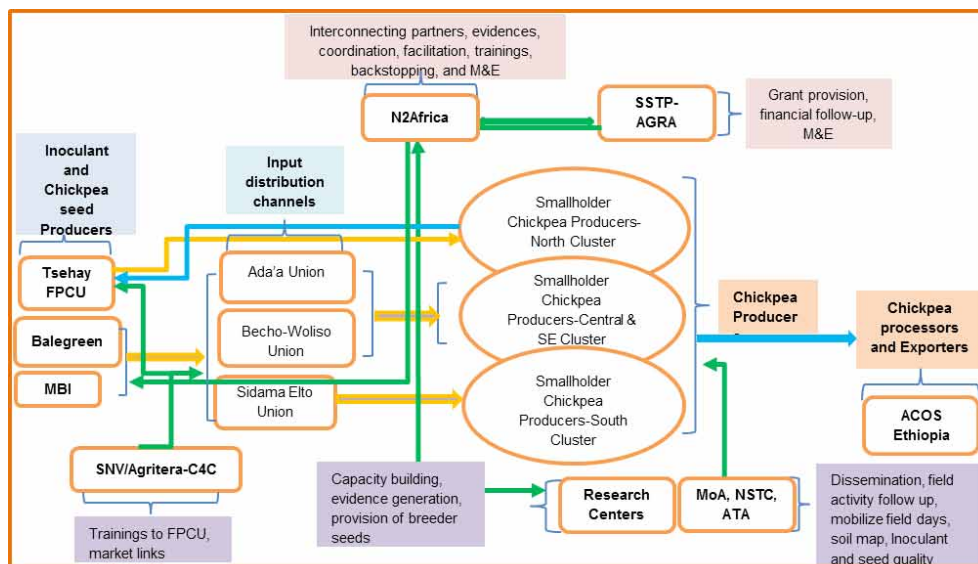


Figure: Flow chart of inputs, services and grain product between different chickpea value chain actors

N2Africa-Ethiopia held its 2015 Annual Planning & the Public-Private Partnership (PPP) Validation Workshop

N2Africa-Ethiopia held its second annual planning and the Public-Private Partnership Validation workshop on 21-23, January 2015 with about 90 participants from the NARS, private partners, ILRI, CG centers, representatives of farmers' organizations and N2Africa leadership staff from Nairobi, Ibadan and Wageningen.

Alan Duncan, ILRI Principal Livestock Scientist and N2Africa Project Management Member, made a warm welcome speech highlighting the fact that N2Africa is moving beyond agronomy to other key project components including partnership development and gender.

The workshop was officially opened by the Honorable Guest, H.E. Prof. Tekalign Mamo, State Minister's Advisor for agriculture and Winner of "2014 Yara Award". H.E. has emphasized the global/regional focus to soil fertility improvement, in general, and the current effort of Ethiopian government in conducting soil survey and fertilizer blend development, in particular, as the country is losing millions of dollars due to soil degradation. The effort of N2Africa project in promoting biological nitrogen fixation and legume production technology at the different parts of the country was appreciated and marked as a potential support to the Ethiopian government for which joining hands as partners and aligning efforts was boldly indicated for ensuring sustainability.



Figure 1. H.E. Prof. Tekalign Mamo, State Minister's Advisor for agriculture and Winner of "2014 Yara Award"

In this event, Siboniso (Boni) Moyo, ILRI's Director General's Representative in Ethiopia, has pin pointed to the potential contribution of engaging the public and private partners in research for development work and the effort that is being made by the project to this regard through partnership development.

An overview of N2Africa project in general and specific to Ethiopia was presented by Endalkachew Woldemeskel, the N2Africa country coordinator for Ethiopia. In the presentation, he indicated that the agronomic results of the bridging year and 2014 preliminary results showed clear yield differences on target legumes due to promotion of N2Africa legumes technology. The progresses on other project activities such as the input supply chain, grain market access and gender was also emphasized.

With a clear overview of the dissemination and sustainability strategy by Edward Baars, Senior Business Development Officer for N2Africa project, the Public-Private Partnership (PPP) strategic framework for Ethiopia was presented by Yared Sertse from Shayashone Trading PLC. In its design, the PPP has focused on four major pillars of the project: the capacity building pillar, input demand and information, dissemination and marketing. The partnership models were appreciated with few concerns including the coordination and operationalization of the PPPs at different project implementation levels.

Results of 2014 project activities were presented by the respective NARS partners with a brief individual presentations followed by detail explanations following 'a market place or bus stop approached' with an excellent facilitation by Peter Ballantine, Head of ILRI's communication. Dr. Theresa Ampadu-Boakye (The Monitoring and Evaluation Specialist), Joost van Heerwaarden (the Data Manager) and Eskender Beza (a PhD fellow on 'validation of digital data collection') made a presentation on the data capturing processes and learning as a team. Across the presentations, it was observed that application of inoculants and fertilizer improved crop performance as compared to the control treatments. Furthermore, inoculation resulted in better diseases resistance in legume crops. However, investigations on seed dressing fungicide versus inoculants is needed to safeguard



Figure 2. Partial view of ILRI-N2Africa Annual Planning & the Public-Private Partnership (PPP) Validation Workshop participants

germinating seeds after planning. In some target locations, faba bean was indicated to be less responsive to inoculation, which may be related to its promiscuous nature. Key challenges discussed include moisture stress, severe faba bean disease, low farmers awareness on inoculations, faba bean seed shortage in north, shortage of vehicle, lack of adequate trainings for researchers, and lack of frequent field follow-up from Woreda Bureau of Agriculture.

During the second and third days of the workshop, partners worked out entirely on 2015 planning sessions as groups. The planning was made based on project Result Framework where partners were initially subdivided in to random groups of five to work out and come up with list of activities for each of the specific project objectives. Finally, partners rejoined to their specific institutions to finalize the planning process for the five project objectives. The other dissemination partners, like the NGOs and private, also joined the respective NARS partners as depicted in the PPP framework for the planning and possible synergies.

2015 Annual planning workshop of N2Africa, Ghana

The 2015 annual project planning workshop took place from 3-5 February, 2015 at the Modern City Hotel, Tamale. Samuel Adjei-Nsiah (country coordinator) welcomed the participants and gave an overview of N2Africa project in Ghana. He also pointed out the objectives of the workshop and invited the partners to share their expectations.

The three-day workshop brought together project partners from research institutions, universities, private sector, farmer organizations, development organizations and Non-Governmental Organizations. Partners present were; The Kwame Nkrumah University of Science and Technology, University for Development Studies, Savanna Agricultural Research Institute, USAID-funded Agricultural Development and Value Chain Enhancement (ADVANCE) project, USAID-funded Agricultural Technology Transfer (ATT) project, Catholic Relief Services (VRS), Evangelical Presbyterian Development and Relief Agency (EPDRA), URBANET, Busaka Agribusiness Company, Agricultural Development Company (AgDevCO), YARA and the Ministry of Food and Agriculture. Key activities during the workshop included; presentations on progress of work during 2014 farming season by partners, synthesis of challenges and lessons learnt during 2014, and development of work plans by partners.

Different models of Public/Private Partnership reflecting on N2Africa Dissemination model was presented by Edward

Cowpea-maize relay cropping. A method for sustainable agricultural intensification in northern Ghana?

Wytze Marinus did his MSc thesis research in Karaga district, part of the Northern Region and in Kassena Nankana district, Upper East Region, food insecure districts where considerable population growth rates will lead to increased demand for food production and higher

Fred Kanampiu, N2Africa project manager, clearly indicated the importance of clear understanding in project implementation, coordination of partners, engagements with project leadership staff to gain critical inputs. He also indicated that issues of data quality, sustainability, transferring research outputs to outcomes are important aspects while creating business opportunities targeting improvements of smallholder farmer's livelihoods is the main goal of the project.

Finally, Tafa Jobie, Director for Oromia Agricultural Research Institute Crop Research, appreciated the effort of the project in addressing more agro ecological zones, engaging more partners, acknowledged the project progress so far and officially closed the workshop.

Synthesized by N2Africa-Ethiopia National Team (Endalkachew, Tamiru and Birhan)



Partner groups developing their action plans for 2015 season Baars which sparked off a lot of discussions among partners. New partners (Busaka and AgDevCo) who recently came on board also presented their model of operation. Also present to help in planning were Theresa Ampadu-Boakye (M&E specialist), Joost van Heerwaarden (Data Coordinator) and Fred Kanampiu (N2Africa Coordinator).

Samuel Adjei-Nsiah

pressure on agricultural lands. A clear need exists for sustainably increasing crop yields in this area where maize is the most important cereal and one of the most important staple crops. He focussed on cowpea in the cowpea-maize relay cropping.

Theory of change and planning workshop held for Uganda Partners

A national planning workshop for the N2Africa project in Uganda was conducted from 27th to 30th January 2015 at Kabira Country Club in Kampala. The purpose of the workshop was twofold; to build a common understanding of the vision of the N2Africa project and the logic underpinning of the project action, and to develop a national work plan for the second year. The workshop brought together 35 participants that included dissemination partners (Africa 2000 Network, World Vision Uganda and VECO East Africa), National Agricultural Research Organization (NARO), CIAT, Makerere University and the private sector- Simlaw Seeds Limited, Equator Seeds Limited and Agrinet) and N2Africa project staff. The workshop began with two days of Theory of Change workshop led by the Agricultural Learning and Impacts Network (ALINe), followed by two days of Planning workshops led by N2Africa staff.

Professor Johnny Mugisha, the Dean School of Agricultural Sciences, Makerere University, opened the workshop. He very much appreciated the structure and purpose of the workshop and the N2Africa project. He reiterated that intensification of cropping systems with legumes was a positive step in the right direction as legumes have a central role smallholder farming systems. He said that addressing nitrogen limitations would contribute to improved nutrition and food security and incomes thereby generally improving livelihoods of smallholder farmers. He noted that to deliver on the project goal partnerships were critical and thus urged participants to understand and fulfill their roles. He cited the key role of Makerere University in the partnership as offering training and production of rhizobium inoculants. He thanked IITA for support in refurbishing the rhizobiology laboratory for and establishing a greenhouse at Makerere Agricultural research Institute Kabanyolo. This would facilitate research and training and production of inoculants. However the marketing of the inoculants was poor and desired that a partnership that could enhance availability of inoculants to the farming communities was desirable, he said.



Group photo of workshop participants - Prof. Johnny Mugisha, seated 2nd from right

The purpose of the theory of the Theory of change workshop was to enable partners understand, own and agree on their roles in the M&E plan. The ALINe together team, Dr. Yvonne Pinto and Ms. Catherine You together with the N2Africa project M&E officer, Theresa Ampadu-Boakye facilitated the workshop and through it national partners appreciated the global N2Africa theory change in the country context country level. The participants coined a simplified version of the theory of change as N2Africa builds sustainable partnerships and expertise in nitrogen fixation to improve soil fertility, increase productivity, food security, nutrition and income through improved grain legumes for smallholder farmers. Underlying constraints for the theory of change in the Ugandan context were synthesised as:

1. Poor legume productivity was characterised by lack of access to appropriate technologies, lack of knowledge, absence of effective extension and unpredictable weather and degraded soils;
2. Poor diets and weak support to women and very poor farmers due to prefixed and rigid gender roles, less women inclusion and poor post harvest handling;
3. Lack of effective legume input supply and output market chains due to limited markets for legumes, price fluctuations, high interest rates, taxation of agricultural inputs, lack of distribution systems for inoculants;
4. Limited national capacity in legume agronomy and rhizobiology research as such: there is a paucity of knowledge and information, lack of appropriate rhizobium inoculants formulations for common bean and groundnut, conflicting agronomic and technological recommendations, limited research in rhizobiology and involvement of farmers in the research process.

On the basis of these issues key actors in the theory of change were identified and roles defined in the actor network for the relevant partnership developed.

The workshop transitioned to planning in the following two days 29th and 30th January 2015. This started with progress review for 2014. This was largely on N2Africa led dissemination in the three regions of operation (details will be found in a workshop report that will be ready and posted on the website soon).

Much of the work in 2014 concentrated on demonstrations, diagnostic trials and adaptation trials reaching nearly three thousand farmers. Master plans (dissemination, agronomy, M&E, multi-stakeholder platforms, rhizobiology) guiding the implementation of the N2Africa project were discussed with the participants prior to development of action plans. Action plans were developed per grain legume commodity and involved partners from private sector (seed companies), research institutes, and dissemination partners who took the overall leadership. These action plans are being reviewed for formalization of agreements. However following the meeting steps are underway to concretize the part-



Amos, A2N field Assistant collecting data from a diagnostic trial at Kasyambya Kabale, 2014B

MSc research in Kapchorwa district Uganda

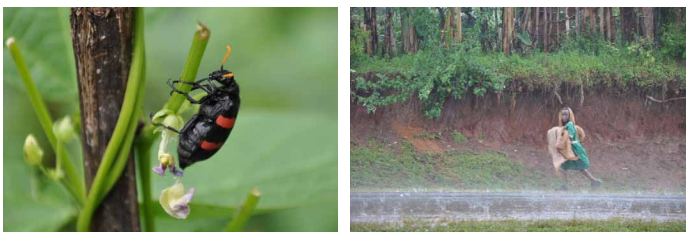
Published before on [Facebook](#) on 8 January 2015

“Who is that white man with his walking stick and that little guy?” farmers started asking other farmers. I climbed many hills (I tried to do this as well with a bunch of banana on my head: nearly impossible), sloped down slippery hills on rubber boots and did this all together with my soil probe and my (female) translator. It was an unforgettable rich experience and I want to thank the project and the Ugandan farmers and people for that!

Two months of fieldwork on the slopes of mount Elgon (Uganda) have come to an end. In Kapchorwa district, where I was situated, demonstration plots were planted with eleven different treatments for climbing beans. Not only different varieties were used, also different fertilizer inputs and different staking methods were implemented.

These demonstration plots are the control of my study on the further adaptation of these techniques by so called ‘focal trial farmers’: A group of farmers, who in this case received seeds and fertilizer. Many of these farmers were present when the demonstration plots were planted and they now all have their own diverse practices and reasons for (not) planting the beans. One of the aims of this research is to evaluate the extent to which farmers adapt new techniques and what we (as project and researchers) can learn from this.

To collect the data for this study I used a tablet, which was a good new experience: not only because less paper



nerships. One notable partnership on soyabean is led by World vision includes a buyer (Agrinet) and, Local seed business development (IISD), Equator Seed Company (Seed trader), Makerere University (inoculants and foundation seed for soyabean) NARO- NARL (Research), and Uganda Cooperative Alliance (farmer institutional strengthening). In this partnership, Agrinet has placed an order of 300,000 tons for MAKSOY2N soyabean variety. Agrinet has already discussed with farming communities organized by World vision in Apac, Oyam, Kole and set buying price of soyabean at harvest. They also commit to training farmers on post harvest handling (quality issues and establishing the bulking/buying centers). Farmers are now being mobilized for production and arrangements made for accessing quality seed from Equator Seed Company.

Peter Ebanyat and Connetie Ayesiga



was used, also because data could be collected faster (GPS and pictures were directly linked to each questionnaire) and could be stored very quickly.

Furthermore, during field days we evaluated the different treatments in the demonstration plots by making use of images, that each represented one treatment. It needed some explanation in the beginning, but afterwards farmers enthusiastically entered the demonstration plots.

Now I’m back in the Netherlands again, to get started writing my thesis. I know I’ll be back one day!

Laurie van Reemst

N2Africa-Ethiopia Conducted Gender Training Workshop with the aim of Mainstreaming Gender into Legume Value Chain

N2Africa Ethiopia national team in collaboration with Project Gender Specialist and the Centre for African Family Studies (CAFS), conducted gender training workshop during 15-18 December, 2014 at ILRI Addis Campus. The trainees were drawn from agronomy, soil sciences, plant breeding and socioeconomics and research extension departments of the NARS partners. The training was conducted to sensitize partners, mainstream approaches, and design work plans to address gender inequity in legume value chains and decision-making and hence to address one of the key project objectives “Empowering Women to Increase Benefits from Legume Production”.

With the welcoming speech by Alan Duncan (PhD), Livestock Principal Scientist and N2Africa Project Management Member, the Country Coordinator for N2Africa-Ethiopia Endalkachew Woldemeskel (PhD) made a brief overview of the different project components, including gender, and the possible interfaces between the components.

The first day of the workshop was entirely allotted to familiarizing the trainees with gender concepts in general and mainstreaming gender in legume value chains specifically. The session was led by the gender specialists, Speciose Kantengwa (IITA) and Annet Mulema (ILRI) with facilitations and contributions from N2Africa Ethiopia National team (Dr Endalkachew, Tamiru and Birhan) and CAFS (Mekdes and Abebe). The group works were engaging where the participants were able to share views and make the workshop lively.

Following the field work introduction and role play sessions during the second day of the workshop, participants were subdivided into three groups of male, female and mixed groups. Each group having a leader, who speaks local language, and a rapporteur met their respective farmers groups of manageable size at one of the project implementation *Woreda*, Ada’a, for the actual field work using the gender tools which were handed in advance to them during the third day of the workshop.

Major gender challenges and opportunities, potential recommendations and action plans were developed and



Figure 2: Practical Field Work with Chickpea Growing Female (top) and Male (bottom) Farmer Groups at Ada’a Woreda. Ude Kebele.

presented in plenary for the chickpea value chain during the fourth day of the workshop. Furthermore, together with the draft overarching gender action plan presentation by W/ro Mekdes Alemu, the trainees were able to project the field experience to their respective areas and legumes and developed draft gender action plans to be implemented during 2015 project period.



Figure 1: N2Africa-Ethiopia Gender Training Workshop participants at ILRI Campus

At the final closure of the training workshop, Dr Endalkachew Woldemeskel, acknowledged the trainees for their endurance and contribution at this intensive training and side planning session.

Synthesized by Tamiru Amanu (Business Development Officer, N2Africa-Ethiopia)

Co-design of improved climbing bean technologies in Uganda and Tanzania

Edited since publication on [Facebook](#) on 5 February 2015

The 2015A rainy season is rapidly approaching in Uganda and northern Tanzania. For my PhD research on climbing beans in the highlands of these two countries, we have organized a number of discussions with farmer groups (Figure 1). In these discussions we evaluated the different climbing bean technologies that were demonstrated last season, and the experiences of farmers who tested one of these technologies on their own field. We will use the feedback from these discussions to tailor technologies for the next season. An example is the comment that farmers in Southwestern Uganda made: they prefer the use of shorter stakes because they have seen that the damage caused to flowers and pods by birds is less with shorter stakes. Earlier research has shown, however, that longer stakes give better yields. This is something we are going to assess in the coming season. And it should also give us information on whether farmers who mention staking as a constraint for the cultivation of climbing beans, like the lady on the picture (Figure 2), are better off planting double the area of climbing beans if they cut long stakes in half.



Figure 2: Farmer who mentioned staking as her major constraint for climbing bean cultivation

Another conclusion from the evaluations with farmers is that farmers do not only look at yield when they evaluate a new technology. In the previous seasons we experimented with different staking methods, such as the use of tripods (three stakes tied together on top) and the use of strings made of sisal or banana fibre. When farmers compared these new methods with single stakes, the common staking method, they mentioned the strength or durability of the method/material most often as reason for preference of one method



Figure 1: Feedback and planning session with farmers in Eastern Uganda

IITA news on N2Africa activities in Tanzania

Published before on [Facebook](#) on 12 February 2015

Catherine Njuguna (IITA) kindly shared with us [a blog](#) on the IITA website on very recent N2Africa activities in Tanzania.

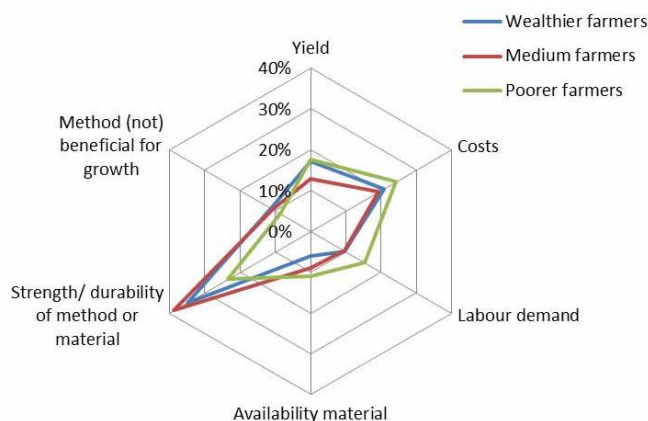


Figure 3: Reasons that poorer, medium and wealthier farmers gave for preference of one staking method over the other (% is number of times a reason was mentioned divided by the total number of reasons). Staking methods compared were single stakes, tripods, sisal strings and banana fibre ropes.

over the other (tripods over single stakes and sisal strings over banana fibres). The cost of the staking method was also mentioned more frequently than yield. The evaluations were carried out with separate groups of poorer, medium and wealthier farmers. Farmers with fewer resources preferred staking methods with lower costs and labour demand more often than farmers with more resources (Figure 3). Information like this could help us tailoring technologies to different types of farmers and offering them a 'basket of options' to choose from.

Esther Ronner

In addition to publication via this blog a slightly different version of the article was published on page 3 of last weeks [IITA weekly bulletin](#).

Certificate granted to N2Africa for its roles and partnership in “research and development”

In Ethiopia, N2Africa project activities are implemented in 27 Woredas (Districts) over four regions (Amhara, Benishangul-Gumuz, Oromia and Southern region) in partnership with national, international and private institutions and NGOs, thus promoting N₂-fixation and legume production technologies among smallholder farmers. The project targeted four legume crops in Ethiopia (soybean, common bean, Faba bean and chickpea). Activities on faba bean (FB) focused at Bale zone in Oromia and Amhara (Adet and Debark/Dabat Woredas) in collaboration with the regional research institutes, the ARARI (Amhara Regional Agri. Research Institute) and OARI (Oromia Agri. Research Institute). When N2Africa touched base in Ethiopia in 2012, Sinana Agricultural Research Center (SARC) of the OARI was involved on FB variety adaptation trials and multiplication of the seeds of improved varieties (on station) to make seeds available in sufficient quantity for N2Africa activities during the bridging year in 2013. Promotion of N2Africa technologies on Faba bean at Bale zone targeted a number of Woredas including Sinana, Goba and Agarfa. These Woredas represent a cool-wet highland agroecology in Bale zone and known to have a bimodal rainfall pattern, locally known as ‘Bona/Meher’ which extends from August to December and the second one, locally called ‘Ganna/Belg’, from March to July.

During the bridging year, in 2013, N2Africa conducted, in collaboration with SARC, input and variety trials and established demonstration plots on farmer’s fields. Preliminary results have shown that inoculation and/or phosphorus fertilizer increase grain yield of faba bean by up to 17% as compared to control plots (without inputs). During the 2014 growing season “best bet” technologies (improved seeds, effective strains, application of phosphorus fertilizer and improved agronomic practices) were promoted for adaptation by hundreds of farmers. Improved FB performances in the demonstration and adaptation activity clusters in 2013/14 have resulted in increased demand for N2Africa technologies (inoculants and improved seeds) among farmers in the target Woredas. In the 2014 growing season, altogether 415 farmers were reached with N2Africa technologies in the diagnostic, demonstration and adaptation cluster activities.

The Bale highland is traditionally dominated by a cereal mono-cropping system, where barley/wheat is continuously grown. Because of this practice, the area suffers from outbreak of new diseases, depletion of soil fertility and infestation by grass weeds which reduces yield. OARI

It’s all about beans... Rwanda even released a song
Published before on [Facebook](#) on 22 January 2015

Rwanda’s top musicians King James, Miss Jojo, Riderman, Tom Close, and Urban Boyz have donated their talent for a healthier Rwanda and promote beans as you can see in [this clip](#) from HarvestPlus.



Figure 1. Male and female farmers visiting faba bean demonstration plots on farmer’s field day (note the plant height and vigor of the FB stands).

recognized pulses such as faba bean as a potential crop which can be grown in rotation to break the mono-culture cropping practice in the zone. In line with this, the introduction of N2Africa technologies (improved seeds, inoculant and P fertilizer application) brought about new opportunities to farmers and the demand for improved seeds and efficient FB inoculant has now increased to grow FB in rotation. In addition, the PPP (private public partnership) that N2Africa is now promoting created input and output value chain around legume production activities, thus creating new market opportunities in these districts. In recognition of N2Africa’s role and partnership to promote legume production and productivity of agriculture in the Bale zone, the OARI-SARC in Oromia Region granted a certificate to N2Africa-Ethiopia project in November 2014 (Figure 2).



Figure 2. Certificate issued to N2Africa in recognition of its roles and contribution in promoting N2fixation and legume production technology in the Bale Zone of Oromia region, Ethiopia (the certificate reads in Oromiffa and Amharic languages).

Compiled by N2Africa-Ethiopia national team (Endalkachew, Birhan and Tamiru)

Report Borno Youths training

In Podcaster 28 on page 8 we informed you on the training of youths from Borno State Nigeria on Agrobusiness.

We now also received their report which is [attached here](#).

N2Africa won an award as outstanding nutrition-sensitive scaling agriculture project!

In 2012, The World Bank Group launched the SecureNutrition Platform to bridge knowledge gaps between agriculture, food security and nutrition. Together with Global Alliance for Improved Nutrition (GAIN) and Save the children UK, the SecureNutrition Knowledge Platform's 2013 Harvesting Nutrition contest was initiated to showcase projects that link agriculture, food security and nutrition and their challenges. The contest attracted 50 submissions from projects around the world seeking to showcase their efforts to improve the impact of agriculture and/or food security interventions on nutrition outcomes (have a look at [the website](#) to learn about many interesting projects. N2Africa was selected as one of the winners for the most scalable approach!

On 18th and 19th February 2015, the three winning projects were invited to attend the Harvesting Nutrition Celebration event hosted at the World Bank, Washington DC and we (Theresa Ampadu-Boakye and Ilse de Jager) were selected to attend this two-day programme as representatives of N2Africa. Wednesday 18 February, all three projects presented their projects among a small group of technical experts. Relevant details of N2Africa and the results of nutrition research that has been conducted within N2Africa were shared with the group. This resulted in interesting discussions afterwards which are highlighted below among the take homes. Thursday 19 February, the official award ceremony took place including video and photo portraits of the award-winning projects RIAN (as winner for Potential Impact on Nutrition), Shaba Shape Up (Innovation) and N2Africa ([video](#)), featuring Speciose Kantengwa and Samuel Adjei-Nsiah), a panel discussion and a keynote presentation by Dr. Derek Yach. The event was livestreamed on World Bank Live. Check the webcast available for replay [here](#) and a short description of the 3 winners [here](#).

Some interesting take home messages from the event:

1. What activities can be implemented (and are effective) by an agriculture project like N2Africa to make it more nutrition-sensitive (but at the same time staying close to core activities and expertise)? Ideas out of discussions:
 - Identify and educate participating beneficiaries on nutritional aspects, not only legumes but on the complete diet (increase crop diversity, strengthen the income to nutrition pathway). Collaboration with nutrition specific staff/organisations instead of training extension agents to also learn about nutrition.
 - Identify and develop value added legume-based products that can easily be accessed and prepared by targeted rural households and simultaneously are of commercial value.
 - Develop strong social structures which has been identified to have strong link with nutrition, for example develop farmer groups to facilitate empowerment of



Ilse de Jager and Theresa Ampadu-Boakye showing the award

- women and/or creating access to commercial markets.
 - Women empowerment in relation to specific gender constraints in the various value chains, for example access to financial support and/or training how to manage loans.
2. What can be measured (evidence based) as contribution to nutrition by agriculture projects?
 - Stunting (chronic malnutrition) is a 'high-level outcome' which is impossible to be influenced by an agriculture project alone. Stunting is a result of many different factors of which agriculture is just one underlying factor. Therefore it is probably better to focus on including indicators like dietary diversity within agriculture projects which are more plausible to be effected by an agriculture project, directly or indirectly. Potential relevant nutrition indicators for N2Africa:
 - * Individual dietary diversity score of children and women (vulnerable groups)
 - * Iron status of children and women (high iron beans variety being distributed in Uganda)
 - * Quantitative dietary intake assessment (to identify problem nutrients and contribution of legumes to the diet)
 - * Frequency of legume consumption
 - Research on underlying steps of pathways linking agriculture and nutrition is needed.



Ilse de Jager and Theresa Ampadu-Boakye

Ethiopian case study of adoption domains for N2Africa published in the Atlas of African Agriculture Research and Development

We have just published a case study of the adoption domains for N2Africa using chickpeas in Ethiopia as an example. Our maps and analysis show how we have combined three different factors - population density, access to chickpea markets, and agro-ecological zone - that affect the adoption of chickpeas in Ethiopia.

Our submission to the atlas has four maps as well as explanations of what these are maps telling us, why this is important and information about the underlying data.

You can view our submission [here](#).

We have used these domains to characterise our target regions in Ethiopia and the other core countries, and they will be used to guide the selection of sites for demonstration and adaptation trials.

Andrew Farrow, Endelkachew Wolde-meskel



2016 PanAfrican & World Cowpea Conference

First announcement

On behalf of N2Africa Ken Giller accepted the invitation for N2Africa to cohost the joint PanAfrican Grain Legume and World Cowpea Conference, to celebrate the 2016 International Year of Pulses, as declared by the United Nations (<http://www.iyop.net/>). The conference is organized by Legume Innovation Lab, Michigan State University and IITA.

Bringing together these parties serves to help to promote and support the participation of African NARS and university grain legume scientists and graduate students, working in diverse disciplines/areas, in this conference which has been tentatively scheduled for the week of February 28 to March 5, 2016 in Livingstone, Zambia.

The Podcaster is published six to 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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