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Introduction

One issue often raised when we discuss soyabean as an important crop for smallholder farmers in Africa, is the use of genetically-modified varieties. A discussion was sparked amongst N2Africa staff, and it came to light that Linus Franke had written a report on the issue of GMOs recently. We summarise some of the recent discussions in this latest edition of the Podcaster. Apart from news items

from various countries, we also report on steps taken to expand the activities to N2Africa to new countries. I hope you will find items of interest, and if you feel your country is under-represented in the Podcaster, please send in your articles for the next issue!

Ken Giller

N2Africa featured in Nature

N2Africa was featured in a recent article on the problems of soil fertility in Africa. To read the article click [here](#).

Genetically modified soyabean: a viable option for smallholders in Africa?

In 2011, roughly three quarters of the global soyabean cultivation area was planted with genetically modified (GM) soyabean (James, 2012). In Africa, GM soyabean is only commercially cultivated in South Africa. Is the rest of Africa missing out on a great opportunity, or are the disadvantages of GM soyabean for smallholders outweighing the benefits?

The vast majority of GM soyabean worldwide has been modified to withstand the application of a broad-spectrum herbicide, in most cases glyphosate. GM soyabean with other traits such as improved insect resistance (Bt) and particular grain qualities have been commercially released recently or are about to be released. Herbicide tolerant (HT) soyabean has eased weed control, and also facilitated the application of reduced or no tillage techniques by reducing weed control problems associated with the adoption of such techniques (Franke et al., 2011). A downside is that reliance on a single herbicide for weed control, typically though not exclusively associated with HT cropping systems, can lead to the development of herbicide resistant weeds.

For smallholders in sub-Saharan Africa, weeding is a very labour demanding activity (Van Heemst et al., 1981; Franke et al., 2010), and labour scarcity is in many areas limiting an expansion or intensification of crop production. Thus, it is well possible that GM HT soyabean has a niche among smallholders in Africa as a labour saving technology. African women would especially stand to benefit as they currently bear the brunt of the weeding work.. The experience with Bt cotton in India adopted by millions of resource-poor farmers has shown that GM crops can indeed contribute to the livelihood of smallholders (IFPRI, 2009; Choudhary & Gaur, 2010).

Despite the potential benefits, there are some major obstacles to the widespread adoption of HT soyabean by African

smallholders. First it is important to note that technology adoption especially by smallholder farmers is a complex process that transcends social and economic considerations. Despite the availability and worldwide use of herbicides since the 1950s, adoption of herbicides among smallholder African farmers currently stands at below 5% (Overfield et al. 2009). Adoption of HT soyabean is likely to be a challenge especially given that the cultivation requires access to affordable herbicides complemented by skills to handle and apply herbicides safely. Secondly, patent rights on GM genes could make the widespread practice of re-using part of the legume grain yield as seed for the next season (farmer saved seed) illegal for GM crops. Large biotech companies may delay the release GM crop lines in many African countries, until requisite patent laws and enforcement mechanisms are in place. However, as costs of the development of new GM lines are rapidly declining and patent rights on some older GM traits will expire in the next couple of years (the patent on the glyphosate tolerance trait for instance expires in 2014), opportunities



Weedy soyabean



arise for Africa-based public breeding institutes and private companies to develop GM lines adapted to the needs of African farmers.

There is little up-to-date information on the current state of “enabling environments” for green biotechnology in Africa. In many African countries, a strong anti-GM stance has grown among government officials, consumers and some non-governmental organizations based on unsubstantiated fears about the technology. Another issue is that various African countries do not have a functional legal framework in place for the cultivation and use of GM crops. In addition, the choice for GM or non-GM can affect access to markets and output prices. In markets where labelling, traceability and identity preservation systems are in place, prices for GM soyabean grain are often lower than those for non-GM soyabean, reflecting a premium paid by some end users for non-GM produce. In the future, part of the African soyabean sector may be able to capitalise on this niche market for non-GM soyabean. The commercial cultivation of GM soyabean in African countries is likely to annihilate the opportunity of serving non-GM soyabean markets, as unintended mixture of GM and non-GM soyabean in the chain is hard to avoid. Among the large soyabean producers in the world, only Brazil is able to keep flows of GM and non-GM soyabean segregated and export non-GM soyabean (at increasing costs though).

Clearly, genetic modification does not offer any magic solutions to food security problems in Africa. However, the technology has the potential to increase productivity and/or relieve management constraints in an African smallholder context. It is unlikely that small-scale sub-Saharan farmers outside South Africa will adopt GM soyabean en masse in the near future. In the longer term, the availability of GM lines adapted to the needs of African smallholders, the legal and institutional ‘enabling environments’ for GM crops in Africa, market preferences, and other socio-economic factors are likely to determine the adoption rate of GM soyabean and other GM crops in Africa.

N2Uganda

We have started exploring opportunities to initiate N2Africa activities in Uganda. To this end I met with several potential partners in Kampala and also travelled to the area around Kabale in the south-west Uganda and to Mbale in the south-east of Uganda. Piet van Asten of IITA was kind enough to arrange and host a round table discussion that was attended by representatives of various departments of Makerere University, National Agriculture Research Organisation (NARO), World Vision, the CIAT Bean Program/

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Linus Franke, Anne Turner and Edward Mabaya

PABRA, Uganda National Agro-input Dealers Association (UNADA) and IFDC. We made good progress in identifying priority crops and regions where N2Africa is likely to focus and will be following up in the coming months with planning activities. Thanks to all who participated and we look forward to starting up with new partners in the coming year.

Ken Giller

Legume production in Zimbabwe: An update

In the eight districts where N2Africa is working in Zimbabwe, farmers are expanding the area they put under legumes. Farmers are increasingly aware of the importance of legumes for enhancement of soil fertility, but also the nutritious protein provided by legumes and their profitability as compared with other crops that were previously prioritised in the districts.

For example in Guruve, where the N2Africa project has been operational in five wards in the last two seasons integrating the activities of the IFAD-funded project run by CIAT on supporting marketing of legumes, farmers noted the importance of growing sugar bean in their fields and almost all farmers have planted the crop. Notably, farmers in these wards have grown more sugar beans than the country's staple crop, maize. Areas planted with beans range from 1 to 5 hectares.

Being prompted by the variability of the season in the past few years, the farmers have noted the potential of legumes, which are short season crops, beneficial in crop rotation and provide good opportunities as a cash crop since the crop is cheap to produce and the price is lucrative. There is always a ready market for sugar beans in Zimbabwe.

"We have realised that bean production is a profitable enterprise as compared to maize hence farmers have planted large areas of the crop this season", said Stanley Nyamakato, an N2Africa Lead Farmer in Guruve district. He continued to explain that farmers have learnt the profitability of legume enterprise after N2Africa implemented the project in the last season. In Guruve, as in many other places in Zimbabwe, farmers are faced with serious cash constraints, particularly at the beginning of the agricultural season. Therefore numerous farmers used retained seed from last season, but despite the challenges, some other farmers managed to buy the seeds themselves, for example from agro-dealers in the district.

Notwithstanding the very late start of the current season and the continued erraticness of the rains, the production seems promising. Hence the next challenge is marketing. Last season, Byron Zamasiya (Liaison Officer for the IFAD-funded project), facilitated marketing of common beans from Guruve. The total amounts available for marketing from Guruve are likely to be much larger. Although this makes collective marketing easier, the road network in Guruve is in such a bad state that transporters are often hesitant to travel to the district with their trucks and if they do, they charge much higher prices.

Meanwhile, field days have commenced in all districts. These field days provide an opportunity for farmers to showcase their achievements and for those who were not



Mr. Karambwe and his mother receiving a knapsack sprayer on a field day in Guruve



Mr. Isaac Chabata (N2Africa Farm Liaison Officer) showing the numbers of pods on groundnut in Chegutu District

in the project to learn about biological nitrogen fixation and its importance for soil fertility. Of equal importance is that these field days have proven to be a great opportunity to put the project into spotlight of government officials. Local authorities in the different districts were invited and most of them were the guests of honour at the functions. Particularly the field day in Mudzi district was a great success after the N2Africa staff had been facing challenges to implement field activities during the season. This is illustrated in the next article.

Isaac Chabata

Will the dry bones live again? Insights from the N2Africa/IFAD field day in Mudzi district, Zimbabwe.

When the N2Africa project was launched in Mudzi district in the 2010/11 season, most farmers and local authorities were very skeptical of the concept of biological nitrogen fixation. Farmers who have stayed in the district for over 20 years argued that growing soyabeans, common beans, groundnuts and cowpeas intensively in the area would not be successful since Mudzi lies in natural farming region IV which has low agro-ecological potential largely due to scarce and erratic rainfall. According to the farmers, the only crop that thrived under these arid conditions is groundnuts although the yields were below 0.75 t/ha. Rainfall in the district is very erratic and variable with a mean annual of 450 mm. Smallholder farmers in this district usually have food sufficient for mostly three months and rely on food handouts from food-for-work programs. The use of rudimentary farming practices on the increasingly nutrient depleted soils has seen maize yields falling way below 0.5 t/ha.

When farmers were enrolled in the project for the 2011/12 season, their hope was that they would access free inputs, an affliction which has become quite notable among most smallholder farmers in Zimbabwe. The farmers believed that the 1 kg seed packs that were given to follower farmers fell way below their expectation. This is despite the fact that they were made aware of the objectives of the N2Africa project through training. Moreover, farmers could not believe their 'ears and eyes' when they heard Byron Zamasiya, training them on farming as a business and collective marketing. Although he reiterated the need for farmers to move from 'farming to agriculture', the farmers in Mudzi still viewed the project skeptically. Traditionally, the farmers struggled to access the right inputs of improved legume seeds and fertilizers in reasonable proximity to their farm. Results from the N2Africa and IFAD baseline for



Agronomy trials on the fields of Mrs Chaparadza visited during field day in Guruve district

Zimbabwe show that, smallholder farmers do not use certified legume seeds from agro-dealers. A large proportion of the farmers cite the lack of cash/credit to pay for the inputs due to their inability to sell their harvest in remunerative markets. Perennially, they are loss makers as their crop production costs outweigh their revenue from the sale of surplus produce. One lingering question in the minds of the farmers was whether the project would be able to improve soil fertility through biological nitrogen fixation, reduce production expenditures and improve farmers' income through linking them to remunerative markets. As one farmer, Mrs Makanjera put it across, 'will these dry bones live again?'

It is against this gloomy backdrop that a field day was held at Mr Nyamukondiwa's homestead in Ward 12. In the



Mr. Mike Nyamukondiwa (Mudzi) showing two groundnut plants with different numbers of pods, on the right he is holding Natal Common cultivated with SSP and Gypsum



Agritex Field Officer Mr. Kahiya and District Administrator Mr. Mapungwana from Hwedza district handing over a knapsack sprayer to Mrs. Eva Mufanebadza

2010/11 season, he participated in the collective marketing that saw the group dispose 2.9 tonnes of shelled groundnuts at \$780/tonne. During the 2011/12 season, Mr Nyamukondiwa is participating in the N2Africa project as a groundnuts seed producer. He was allocated 10 kg of seed (certified Natal Common variety), and gypsum to produce groundnuts for onward buying by the project. Apart from the N2Africa seed multiplication plot, the farmer also allocated 5 ha of his land to groundnuts. In his plots, he used uncertified seed of a local variety known as 'Kasawaya' and he did not apply single super phosphate or gypsum.

On the 9th of March 2012, all roads in Mudzi's ward 12, converged at Nyamukondiwa's homestead. A total of 385 people attended the field day. Of these 385, 35 were stakeholders from the local authorities, agricultural extension officers from neighboring wards, NGO representatives, the Rural District Council chairman and local ward councilors, District Youth coordinator, Social Welfare department, the District Administrator and traditional leaders. In addition to these invited guests, three members of parliament for Mudzi constituency namely Mr Nhavaya, Mr Kachepa and Mrs

Katsande attended the event. Drama unfolded in the seed multiplication plot after the farmer had finished explaining to the guests how he grew the crop. Many questions were raised and most of them were centered on use of and role of inoculants, fertilizers and how biological nitrogen fixation could help a farmer household improving household food security and income. The N2Africa and the IFAD Liaison Officers took turns to respond to the questions. However, the session on questions came to a complete halt when the District Administrator asked to count the number of seeds which the groundnuts plant had. Several plants were randomly uprooted from the seed multiplication plot and the minimum number of unshelled nuts per plant was 180 while the maximum was 210. The three members of parliament took turns to meticulously verify the seed counts and they confirmed the counts. However the groundnut plants from the farmer's own field had at most 30 unshelled nuts. It was all smiles as the guests gave a clapping ovation to the IFAD and N2Africa Liaison Officers. Thereafter, they were presented with a goat by the farmers for their contribution to bringing the dry bones to life. The smallholder farmers saw it first-hand that use of certified groundnuts seeds and gypsum fertilizer has a very positive effect on yield. The farmers also learned that for them to realize profit from their crop enterprises, they need to grow crops that are wanted by the market using the lowest cost possible technology available such as nitrogen fixing legumes. A testimonial by one farmer, Mr Masuku who participated in IFAD led collective marketing in the 2010/11 season reiterated that legumes such as groundnuts are more profitable to grow as they fetch higher prices than maize. And indeed farmers in the wards involved have expanded their land areas under groundnut as compared to last season. At the close of the field day, two Members of Parliament, Mr Kachepa and Mrs Katsande, requested the CIAT team (N2Africa and IFAD officers) to bring the project to their constituencies in the 2012/13 season. They pledged to fund the purchase of the inputs which will be used in the demonstration plots. Surely, the dry bones had become flesh again!

Byron Zamasiya, Isaac Chabata and Nelson Mango



Mr. Katsande showing off his cowpea harvest (Mudzi district)

Forage legumes in Zimbabwe – a brief summary

Forage legumes are an affordable alternative feed for dairy livestock for the cash constrained smallholder farmers in Zimbabwe. Local pastures are usually inadequate for livestock especially during the dry season. The grazing quality of the native pastures also depends on the species composition of most pastures where most farmers graze their cattle. *Sporobolus pyramidalis* is a dominant species in Zimbabwe's pastures and has been classified as the worst in terms of feed quality for livestock. There is need therefore to supplement; protein rich concentrates are often unavailable and unaffordable for most smallholder farmers leaving protein rich forage legumes as the next viable option.

Numerous efforts have been directed at improving rangelands in Zimbabwe but the output has not been worth the effort owing to various reasons. Seedling survival during establishment, high cost of seed, poor targeting as well as lack of knowledge of most farmers on the importance and use of forages hampered adoption and frustrated most intervention efforts. For the N2Africa project, the target farmers for forage legume research and dissemination are those farmers that belong to dairy associations and are looking to improve their daily milk production. Three dairy associations are involved; the Chikwaka dairy association, Hwedza dairy association and the Guruve dairy associa-

tion. Mudzi has also been selected to evaluate the adaptability of the various species because of its unique climatic environment although no functional dairy association is operating in the area at the moment.

Initiatives by some non-governmental organization in Chikwaka and Hwedza (Land o' Lakes) has seen an attempt by most dairy farmers to establish their own forage and fodder banks. Farmers with established tree forages usually have a higher daily amount of milk sales to the dairy association compared to those who have no additional feed to their cattle. This has presented a good entry point for the N2Africa project. While the benefits of using tree forages has been fully understood among a selected group of dairy farmers, accessing the different species and establishing them has been the major challenge. As a result, apart from research trials on tree legumes and annual legumes, The N2Africa project availed different tree legume species to farmers for them to establish their own fodder banks. While there could be many other challenges associated with adoption of legume forages in smallholder farms, proper targeting alone presents a big opportunity and potential for adoption.



Crotalaria juncea in a farmers field in Chikwaka

The tree species that are being evaluated in Zimbabwe are *Acacia angustissima*, *Cajanus cajan* (pigeonpea), *Gliricidia sepium*, *Leucaena esculenta*, *L. leucocephala*, *L. pallida* and *L. trichandra*. The growth of these species will be evaluated over the two years. For the annual species velvet bean (*Mucuna pruriens* var. *utilis*), trailing cowpea (*Vigna unguiculata*), lablab (*Lablab purpureus*), sunnhemp (*Crotalaria juncea*), sunnhemp (*C. ochroleuca*), forage soyabean (*Glycine max*; promiscuous, likely derivative of Heron 147) will be tested.

Biomass production, BNF, pests and disease resistance, yield of a following maize crop, persistence, feed quality and grain yield will be measured as part of an evaluation in every agro-ecological zone. Chikwaka is in natural region 1, while Hwedza and Mudzi are in natural regions 3 and 4 respectively. The different species are being tested with and without fertilisers and the trees are being tested with and without the inoculant.

Overall, the forages have been very well received by dairy farmers and they hope to continue getting support and backstopping as this helps put money in their pockets after milk sales every day. Chances of adoption are high as farmers hope to benefit even in getting firewood from tree forages as well as contribute in putting nitrogen fixation to work for smallholder farmers in Zimbabwe!

Talkmore Mombeyarara



Dairy farmer Erica Mhonda-Mapango in Chikwaka harvesting biomass from *Acacia* and *Leucaena* species to feed her dairy cattle

George Mkhwamba – One of N2Africa's Leading Farmers in Malawi

When the Agricultural Extension Officer from the Department of Agricultural Extension Services (DAES) in Salima resigned last year, Mr. George Mkhwamba began to coordinate all the N2Africa activities with his fellow Lead Farmers in the area. He did this at his own initiative and voluntarily. He leads Tipindule, a club of 24 farmers growing soyabean and on top of that he is visiting all the other Lead Farmers and their groups to ensure that everyone understands and

uses the N2Africa technologies in their legume cultivation. George provides technical backstopping to other Lead Farmers whenever he is asked. He is often invited by his fellow farmers to help them with the N2Africa technologies that are being demonstrated in nearby sites.

In addition to the N2Africa's legume technologies, George is also experimenting with techniques he has developed



on his own. In addition to his N2Africa demonstration plot, together with his group members, George set up a plot to test different planting densities of soyabean. George's fellow farmers have already observed more vigorous growth of soyabean planted using N2Africa recommended spacing, compared to their traditional method of planting the crop. George is also testing different organic fertilizers; comparing the use of manure with a compost of legume crops residues.

IITA extends N2Africa to Sierra Leone

With a grant of the H.G. Buffet foundation, N2Africa is currently expanding its activities into Liberia, Sierra Leone and north-Kivu in DRC. To kick-start activities in the new West-African countries, at the end of March meetings were held in both Sierra Leone and Liberia. The meeting in Sierra Leone even attracted a journalist, Richard Bockarie, who published the following piece in *The UPDATE Newspaper* of 22-03-2012.

In Sierra Leone, the project will cover production, utilization and marketing of improved varieties of soyabean, cowpea and groundnut. Whilst farmers in Sierra Leone are very familiar with the cultivation of groundnut and cowpea, soyabean is relatively new.

A two-day N2Africa-Sierra Leone implementation planning workshop has been hosted by the Sierra Leone Agricultural Research Institute (SLARI) and at its Headquarters, Tower Hill, Freetown, 19 and 20 March 2012. 21 representatives from organizations primarily responsible for agricultural research (SLARI) degree-related training (Njala University and University of Sierra Leone/Fourah Bay College), technology dissemination (NGOs: World Vision, Welt Hunger Hilfe, COORD-SL), and commercial production of weaning food Bennemix Food Company SL Ltd) and poultry feed (Sierra Akker Agricultural Company Ltd) participated in the workshop.

While Salima District was heavily affected by drought this season, George continued to encourage his club members to follow good crop management practices. He planted maize on a plot that had a soyabean demonstration during the 2010/11 season to observe if there is any difference with maize grown on the same land both last and this season. He said he wanted to see if the soyabean that was planted last season had left some nutrients in the soils. He checked the maize performance during its first few weeks after planting and before fertilizer application. Despite the dry spells, the maize planted on the former soyabean plot did well in its first weeks, indicating there are indeed residual benefits.

George has also mastered good Integrated Pest Management techniques, and serves as an excellent advisor to his fellow farmers, who in the past would just "wait for the extension agent" to come by to diagnose problems, enabling them to take timely measures before problems get out of control.

N2Africa-Malawi is indeed lucky to have George Mkhwamba as a Lead Farmer, and he is an inspiration to not just his fellow farmers but the Malawi team!

Gloria Kasongo and Anne Turner

Welcoming participants, the Director-General of SLARI, Dr. Alfred Dixon said the project was timely, more so against the background of huge yield losses caused by deteriorating soils.

The Regional Project Coordinator, IITA-Kenya Dr Bernard Vanlauwe told the workshop that soil infertility can be halted and reversed if specific varieties of grain legumes are integrated in cropping systems to capture nitrogen from the air and make it available to crops in the form of natural fertilizer.

Dr. Braima James, IITA Country Representative in Sierra Leone, indicated additional nutritional and economic value of grain legumes in local food industries, especially the use of soyabean to nutritionally fortify gari and other cassava products, weaning foods and poultry feed.

Farming Systems Researcher Dr. Franke Linus, Wageningen University emphasized that in putting nitrogen fixation to work for smallholder farmers, the project will contribute to strengthen national research capacity, introduce new and improved varieties of food grain legumes, increase the area of land cropped with legumes, enhance soil fertility, increase legume productivity, link smallholders to markets and help create new enterprises to increase demand for legumes.

Through the project, IITA and WU will contribute to existing efforts to strengthen grain legume research capacity at SLARI. For technology dissemination, the project will work through selected NGOs to enable farming communities to produce soyabeans, cowpea and groundnut in quantities and quality to meet public and private sector demands.

Mr. Pakai Kamara, Managing Director Sierra Akker Agricultural Company Ltd (which produces feed for poultry industries) and Dr. Philip Kanu, R&D Manager at Bennimix Food Company SL Ltd (a baby food industry), both enthusiastically welcomed the project and indicated that they will each provide guaranteed market for locally grown soyabean which is desperately needed by their respective industries. Workshop discussions provided basis for agreements on legumes of interest, operational areas, technology development/adaption and dissemination activities, post-graduate training needs, timelines and logistics for implementation of planned activities. These ideas were further refined during group work on day 2 of the meeting.



Participants, who formed the nucleus of N2Africa-Sierra Leone partners, expressed their commitment to work with IITA and WU to make N2 Africa work in Sierra Leone and provide more opportunities for food security and income generation especially through smallholder production and commercialization of soyabean, cowpea and groundnut.

Braima James

See to my strain

Although in local Sierra Leonean Pidgin “*see to my strain*” does not have anything to do with rhizobia and inoculation, this text on the back of a car in Freetown nicely covered the purpose of our trip to Sierra Leone and Liberia, where N2Africa is currently expanding with additional funding from the H.G. Buffet foundation.

During the first exploratory trip from March 18-23 we considered both the rhizobial and other legume-associated issues of *see to my strain* and what it actually means in Pidgin: see to my problems.

Sitting at the SLARI office at the top of a hill in Freetown, we got involved in the work undertaken by SLARI (Sierra Leone Agricultural Research Institute), IITA (International Institute of Tropical Agriculture), the universities and various NGOs and discussed how we can complement each other’s work best. These workshops yielded a large amount of information about amongst others current research and development programs, what kind of legumes Sierra Leoneans like to eat and when and how they usually plant them. From two representatives from the private sector we learned that there is a demand for soybean for the rising poultry industry and for soybean and cowpea for the (baby-)food industry. Lack of availability of improved seed and inoculant came up as major problems where N2Africa can assist.

In Liberia the workshops were hosted in the spacious IITA office in Monrovia, where besides the IITA staff involved, various NGOs, the University of Liberia and some representatives of the private sector had gathered. Also here we received a vast amount of information and decided, like



we had done earlier in Sierra Leone, to start working on groundnut and cowpea, since these are popular legumes among both Sierra Leoneans and Liberians. As a relatively new crop, soybean is also going to be part of our program.

While everybody participated very enthusiastically and we see many opportunities for making N2Africa a success in Liberia and Sierra Leone, we must first see to the *strains* (problems). Since in both countries improved seed is not readily available, the first year N2Africa will focus on agronomy trials to screen varieties and responses of the legumes to input use and pest management. For this purpose we will import – one time only! – about 500 kg of improved seed to each country. Besides demonstration trials on

intercropping, the NGOs involved will take on community based seed multiplication so that next year we can start dissemination of the legume technologies among farmers well prepared.

We will soon see to the first *strains* and have improved seed and inoculant shipped to Sierra Leone and Liberia and hope to have the first trials implemented in time!

Greta van den Brand

Progress N2Africa in Ethiopia

Through the supplementary grant from the Bill & Melinda Gates Foundation, we started exploring opportunities for expanding N2Africa to Ethiopia. From 9 to 13 January, Ken and I paid a first visit to this country, where we met some of the key partners that could later help us developing a proposal for N2Africa in Ethiopia. In Addis Ababa we had a meeting with people from ILRI, IWMI and CIMMYT. They gave us some more insight in the cropping systems and purposes of the different legumes in Ethiopia, and informed us on other initiatives around legumes that N2Africa could link to. We also had a broader look at input and output markets for legumes and spoke to representatives of IFDC, the Ethiopian Agricultural Transformation Agency and the WUR-coordinated Soyabean Value Chain project. A trip through the beautiful Rift Valley took us to Hawassa, for meetings at Hawassa University. We also spent one afternoon in the field to get a better idea of the complexity of farming systems around Hawassa, where crops like enset (false banana), coffee, maize and vegetables are grown altogether on small pieces of land.



Chickpea and soyabean came out as promising priority legumes to work on. Market outlooks for both crops are favourable; soyabean could be important for import substitution, whereas chickpea offers potential as export crop. In some areas, chickpea is grown at the end of the rainy season on residual soil moisture. This not only gives a stunning pattern of green dots in the dry season (see photo), but also allows farmers to practice double cropping for additional income. A disadvantage of chickpea is, however, that the large seeded varieties grown for export are popular for green pod consumption, so that extra labour is required

to guard the fields. Next to chickpea and soyabean we will probably also work with common beans, grown for export in the area around Hawassa, and with forage legumes.

The next step towards the development of a proposal for N2Africa in Ethiopia will be a workshop in the beginning of May, which we organise in cooperation with Tilahun Amede of ILRI. This workshop should give us a clearer picture on which legume niches to focus on in this vast country, and what the focus of our activities should be to increase legume production in Ethiopia. Soon after the workshop we plan to start with some pilot activities around variety screening and seed bulking, so that we are well prepared for the real work!

Esther Ronner

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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