

Soil Health news



October 2014

Down to earth information...

George Oduor reviews the progress at ASHC...

The past few months have been a very busy time for 3 flagship projects: Africa Soil Health Consortium (ASHC), Optimising Fertilizer Recommendations in Africa (OFRA) and COMPRO II (lead by IITA) – with all projects making significant headway.

The first phase of ASHC is drawing to a close and the team has redeveloped the website to make it easier to find materials in all three of our main working languages – French, Portuguese and English. It is now easier to find examples of materials that promote integrated soil fertility management. You can also download them and adapt them to work for your specific audience. If you need guidance, you can get help from our ‘How to...’ section of the website.

Through our collaboration with the COMPRO II partners we have developed a template for an inoculant manual. This resource was initially developed in Ethiopia but it has now been repurposed and adapted for use in Uganda. This is exactly how we want others to work with the material we develop with our partners – use what works and customize what needs to change for your audience or context.

We are also in the process of publishing the ISFM cropping system guides for coffee/banana, sorghum and millet, cassava and rice. The maize/legume guide will be available later in the year. We have developed these as conventional manuals – but also as easy print versions designed to be A4 with all images specially

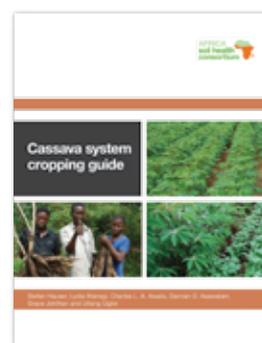
selected to work even in black and white. These guides will also be available in French and Portuguese. We are also about to share a guide to vermicomposting (making compost with worms) in both English and Amharic.

The OFRA team has just completed the project baseline study and a major report on progress to date for AGRA, the project funders. There are now a great many fertilizer response field trials underway in 13 countries and great progress is being made on the organization of the data being collected. The communications plans are also coming together and the first promotional products and training materials are nearing completion.

We have also been working closely with AGRA Soil Health Program.

AGRA is not the only other investor in our project work. The Technical Centre for Agricultural and Rural Cooperation (CTA) has announced funding to support the reprint of the ASHC ISFM handbook. This is important as it means that French language copies of ASHC handbook for ISFM will be available for the first time.

George Oduor
ASHC Project manager



In this issue...

Case notes: father and daughter bond through an ISFM story in a comic	2
Funding update	4
Africa Green Revolution Forum 2014	5
ASHC pilots capacity building in Malawi to forward pro-ISFM policy	6
Congratulations	9
Plans developed to reach over 1 million Ethiopian farmers with materials developed at ASHC write-shops	10
What OFRA has to offer...	13
George Oduor introduces the new ASHC website	15
Is profit a dirty word?	17
ASHC ISFM Cropping Systems Guides launched	20

Case notes: father and daughter bond through an ISFM story in a comic

Raymond Jumah from FIPS-Africa shares case notes from Tanzania

Veronica Victorice of Mtegowa Simba village in Tanzania has a different relationship with her father now – and it is all thanks to a comic.

As part of the its innovation communication pilot projects, ASHC commissioned two stories in Shujaz, a graphically illustrated comic produced by Well Told Story (WTS). Six hundred thousand comics are distributed every month in Kenya.

ASHC wanted to explore if the same approach could work where the Shujaz brand does not have a following. So, this experiment looked at how young people could be used as a conduit for integrated soil fertility management innovations using a comic story. ASHC worked in partnership with Farm Input Promotions-Africa (FIPS-Africa) to produce an 8-page single story comic. The story was translated into Kiswahili. FIPS-Africa had acted as technical consultants when the story was first developed, so the advice in the comic was consistent with their approach.

16,000 smallholder farming families were targeted and the 40 FIPS-Africa advisors in Morogoro rural district helped with the distribution. The story features a young woman and her grandmother reviewing the options for planting maize (see bottom of page 3). They looked at different approaches attempted by their neighbours and decided to apply three approaches – improved seed, fertilizer and manure. They discovered ISFM from first principles.

FIPS-Africa returned to the villages when the harvests were in and talked to the young people about the impact the comic had had on their families. Here access to information was key to challenging gender stereotypes – as a woman and a young person Veronica



Veronica is happy because she has played a role in improving the family's maize production. They planted the DK8031 maize in January 2014

previously had no voice in the farm. But then things changed...

Veronica's day starts early in the morning, doing household chores, cleaning the compound and leaving for the farm to weed, cultivate or harvest, depending on the season. She said: *"The hardest part of my day is working in the farm but it has lately become interesting because my dad and I engage in discussions freely unlike before when he would wait to instruct me. The comic created a platform for discussions on maize farming."*

In the past Veronica saw her father as rigid and hard to engage with on important issues. But now they sit down and brainstorm on how to improve production, with Veronica leading the conversation, using the Malkia story from the comic. Her father had seen the comic and asked his daughter to read it for him so he could understand the messages.

"When I looked at the book I noticed it was a story. My father liked the illustration but the fonts in the book were too small for my dad to read so he made me the teacher. We had three conversations just discussing

Malkia and I loved these discussions. I also had an opportunity to discuss my career with dad. He is really keen to ensure that I progress to university." Having to weed less will certainly provide more time for Veronica to study.

As the two shared and compared the modern and traditional ways of planting, a special bond was building between father and daughter. Veronica explains: *"Dad argued that there was no need to use fertilizer on our farms but manure. I made him understand that it was necessary because soils get depleted every season we plant."*

Veronica remembers her dad's position on manure application before the comic. He believed in broadcasting manure when planting to enrich the whole plot with nutrients. This had a big impact on Veronica's workload: *"Because of this we could weed three to four times a season while other farmers weed twice a few weeks after planting and when maize is knee high. There is page where the characters are arguing over what improved*

yields. It brought out the message so clearly that my dad and I easily understood the need for a combination of good practices, such as spacing, use of improved seed and, planting one seed per hole, as the core requirements for a good harvest.”

Last season they planted the DK8053 variety using the 25 cm x 75 cm spacing, as taught by the FIPS-Africa advisor. They did not broadcast farmyard manure as before but followed instructions from the comic to micro-dose it.

“My dad and I decided to combine the three things for better yields. We harvested seven bags from the quarter acre of land. We used to harvest five bags from the same plot. The comic has helped me bond with my dad. I love the fact that we implemented things from

the comic and they worked.”

Today, Veronica and her father enjoy a special relationship built from every minute they sat down reading the comic together, grasping the message and applying it on their plot of land. The teenager is happy that the comic was able to demystify her dad who she had for a very long time mistaken to be uncaring.

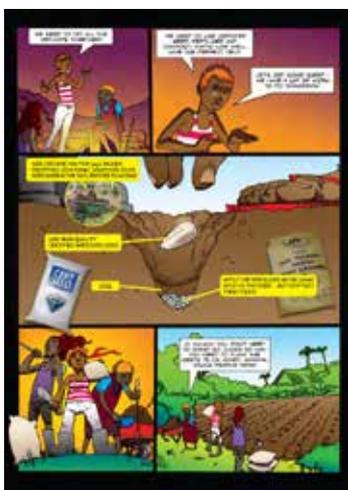
“After reading the comic I bought the 2 kg of DK8053 for two reasons: one was that I had tried the seed on a 5 metre x 5 metre plot and liked its performance and another because my daughter would help me refer to the comic as we implemented new things” says Msise.

Veronica has also been spreading the word. Seven of her young friends shared the comic so their neighbours also received these messages.



Msise, Veronica's father, inspecting the DK8053 maize planted after learning about ISFM from Shujaaz

Rob Burnet from Shujaaz commented: “A dedicated Tanzanian version of Shujaaz launches in September 2014 with seed money from The Bill & Melinda Gates Foundation. Half a million copies of the 32 page comic book will be distributed free around the country every month, accompanied by FM radio, social media and SMS, aiming to reach and inspire millions more young people to change their lives through agriculture, like Veronica.”



“Malkia saves the seed,” in Shujaaz, a graphically illustrated comic produced by WTS

Funding update

ASHC has received a grant from the Technical Centre for Agricultural and Rural Cooperation (CTA) of €10,000 towards the printing of copies of the Handbook for Integrated Soil Management.

ASHC has received a grant from the Technical Centre for Agricultural and Rural Cooperation (CTA) of €10,000 towards the printing of copies of the Handbook for Integrated Soil Management.

This will support the printing of 3,000 English and 700 French copies. These manuals will be disseminated free of charge and will be available for download under a Creative Commons agreement. 500 English and 300 French copies of the ASHC will be supplied to CTA for them to distribute.

James Watiti of ASHC explains how ASHC intends to get these manuals into the hands of the people that need them most. He said: *“The AGRA-funded Country-level Soil Health Consortia will be one important avenue for the physical distribution of these manuals.”*

ASHC is also collaborating with a partnership project with RUFORUM to increase access to CABI knowledge and publications products to universities in Africa. A dissemination plan will be developed that targets the RUFORUM library network which will provide a ready outlet for the books to an academic/university audience.”

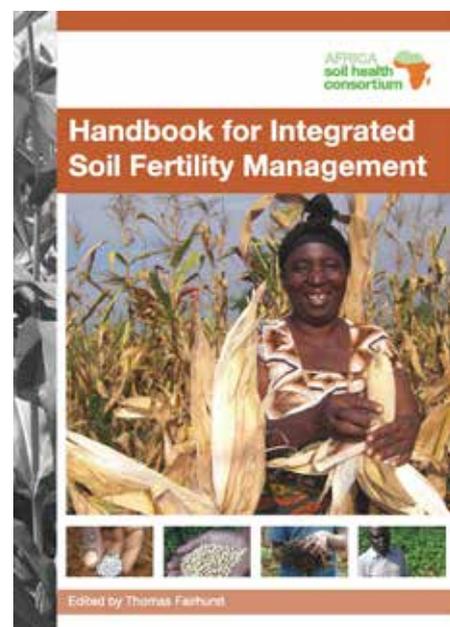
The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) is located at Makerere University and has 32 university members in Eastern, Central and Southern Africa.

James continues: *“This will be the first time that hard copies of the manual have been available in French. This is important because internet access in many of the French-speaking West African nations is very low. For example, internet use in*

Burkina Faso in 2012 was estimated at only 3.7 users per 100 inhabitants and just over 643,000 in total. In these situations access to hard copies becomes more important.”

Please contact James Watiti at ASHC if you have suggestions for events or networks to get these publications where they are needed most. Phase 1 of ASHC now runs until October 2014. However, ASHC is delighted to report that the Bill & Melinda Gates Foundation is currently considering its funding strategy for the second phase for the project to run until 2018.

George Oduor of ASHC explains: *‘I am delighted that ASHC has been seen as making enough progress in promoting ISFM to warrant consideration for a second phase*



Technical Centre for Agricultural and Rural Cooperation exists to:

- strengthen Africa, Caribbean and Pacific agricultural and rural development policy processes and strategies
- enhance priority agricultural value chains and
- enhance Africa, Caribbean and Pacific capacities in information, communication and knowledge management for agricultural and rural development.
- To make this possible, CTA has organised its activities under two operational programmes:
 - Policies, Markets, and Information & Communication Technologies (PMI)
 - Knowledge Management and Communication (KMC)
- The CTA programmes are supported by a unit devoted to promoting organisational learning and effective monitoring, evaluation and impact assessment.
- CTA works closely with a larger number of partners to achieve its projects. These partnerships can be medium or longer-term arrangements.
- To identify and implement projects CTA also regularly launches calls for proposals and calls for provision of services. All calls are published on its Announcements page.

of funding. We are talking to the Gates Foundation now about what the focus of this application should be. There will be some differences in our approach. There is likely to be a tighter geographic focus and this may see the inclusion of different emphasis on crops in line with the priorities at Gates.

The other significant change will be a shift in the way we are supporting capacity building and resource development. In phase 1 we have developed a write-shop process and some self-development tools on communication theory and practice. In phase 2 we will work in a more coherent way to ensure that the information products facilitated by ASHC are making a real difference in the lives of smallholder farmers. Whilst we will continue to develop a tool kit of resources and templates

our main focus is likely to be on finding partners that can deliver transformative change in ISFM uptake.

The other major change will be how we use the website. Thanks to funding from AGRA there are now 13 country consortia promoting and collaborating on ISFM advocacy and implementation in West as well as East and Southern Africa. So, in phase 2 ASHC will be opening up the website to host any materials that support dissemination of ISFM messages.”

George Oduor continues: “We are still working out the details of how this resource will work. There are two schools of thought. One says that the internet is the place where peer review of work can most effectively and comprehensively happen – so we

should just allow organizations to put up any work but also allow anyone to comment on the materials. A second school of thought is more cautious about ensuring that only good science and quality assured communications are promoted. ASHC does not want to do any harm but we also want to encourage debate about what is good material and an open dialogue is very useful for this.”

COMPRO II (see page 8) and OFRA (see page 9) will be integrated into phase 2 of ASHC. Compro II and ASHC run until 2016 and OFRA runs until 2016.



Africa Green Revolution Forum 2014

ASHC was delighted to be part of the AGRA Soil Health Program stand at the Africa Green Revolution Forum 2014. We were in good company exhibiting alongside two of valued partners the Kenya based development agency IPNI and AfSIS, the digital soil mapping people. On the 3 September 2014 these three organisations collaborated with AGRA to present “Healthy soils to transform African smallholder agriculture” as part of the ARGF programme. Lydia Wairegi from ASHC, made a brief



Denis Rangi, CABI Executive Director, International Development with Hon Professor Zarubabel Mijumbi Nyiira, Uganda’s Minister of State For Agriculture at the ARGF in Addis Ababa

panel presentation on the Optimising Fertilizer for Africa (OFRA) project and the value it brings into improving fertilizer efficiency use in the region.

James Watiti explains: “Over 100 of the AGRF delegates signed our visitor’s book, so we can keep in touch with them. We also distributed 40 copies of the ASHC handbook ISFM in the first few hours of stand opening.

We were pleased to welcome everyone to the stand – but we were especially honoured to receive both Koffi Annan and John Kufuor, former president of Ghana.

The team talked about ASHC and OFRA. For OFRA we shared materials on the principles behind development of fertilizer optimization tools. A second poster depicted the ASHC materials production process, capacity building activities, and piloting of innovate dissemination approaches for extension messages.”



Koffi Annan (left) and former President John Kufuor (far right) listen to AGRA Soil Health partners project activities

ASHC pilots capacity building in Malawi to forward pro-ISFM policy

The Soil Health Consortium of Malawi has 3 objectives that can be summarized as:

- Improve access to ISFM information for key stakeholders
- Enhance dissemination of ISFM innovations
- Enhance capacity to harmonise and consolidate ISFM innovations through training, workshops, research and by producing radio and television documentaries based on successful ISFM research

ASHC was approached to provide capacity building in film production to emphasize the role policy can play in the mainstreaming of ISFM amongst smallholder farmers.

James Watiti of ASHC explains: *“In our original plans it was anticipated that ASHC would play a significant role in facilitating and producing policy briefs. However, we quickly realized the enormity of the task of producing materials in five cropping systems across sub-Saharan Africa, so we reluctantly put policy work on the back burner. Now this collaboration with IPNI and our colleagues in Malawi means we have found a new and creative way to support the production of ISFM policy messages. We plan to share the training materials we have developed, closing a significant gap in the ASHC ‘How to...series’”.*

James continues: *“SoHCoM did a review and found that they had a missing link in terms of material that could emphasize the role and potential impact on smallholder farmers of ISFM to agricultural policy makers. ASHC was delighted to help the consortium build capacity in this area. We also widened the brief to cover a broader selection of audio-visual approaches. ASHC, in partnership with IPNI, developed a training programme which ran from 22-25 June 2014”.*

SoHCoM identified the key institutions with a mandate in ISFM dissemination in Malawi. Participants in the training came from a variety of backgrounds and organizations including Chitedze Research Station, media companies, extension staff from the Ministry of Agriculture and civil society.



Michael Benjal's scribing for his group during the developing key messages exercise

Rebbie Harawa of AGRA said: *“AGRA looks to the Africa Soil Health Consortium to facilitate learning and capacity building in the area of communications of ISFM. The 13*

country-level consortiums are well placed to help ASHC take lessons from one part of sub-Saharan Africa and adapt and adopt them to solve similar problems in other countries.

Now this collaboration with IPNI and our colleagues in Malawi means we have found a new and creative way to support the production of ISFM policy messages.

I am delighted to see ASHC and SoHCoM working together to create a media training resources that can be used by all of the other soil health consortiums. Helping scientists to understand mass media and to find new ways to connect to farmers is a vital priority for AGRA's Soil Health Program and is exactly the challenge that the Soil Health Consortium of Malawi is funded to address.”

Soil Health Consortium of Malawi (SoHCoM)

The Soil Health Consortium of Malawi (SoHCoM) is supported by AGRA to co-ordinate strategies, support technological innovations and develop integrated soil fertility management messages for smallholder farmers. It works across the ISFM value chain and includes the private sector, government officials and extension providers including NGOs.

The International Plant Nutrition Institute (IPNI) was awarded a contract from AGRA to support capacity building of the soil health consortiums in East and Central Africa. For the past six months ASHC has been developing plans to support SoHCoM with capacity building for development of effective communications materials/products supporting their role as a soil health knowledge hub. These plans came together in a week-long training programme.

Why the training program was a priority for Malawi

The training program for SoHCom was primarily about how to develop messages for policy makers.

James Mutegi of IPNI explained that Malawi was chosen to pilot this training program because in Malawi the smallholders are specifically benefitting from support government, such as the fertilizer subsidy scheme. But there was potential to make these policies more supportive of an ISFM approach.

Identifying the audience for ISFM messages

The audience identified included:

- Minister of Agriculture
- International development partners
- Non governmental organizations

Identifying key messages for policy makers

The messages included:

- Introduction of a country-wide campaign on practising integrated soil fertility management that will encourage the use of an integrated approach of soil fertility management
- Farmers should be encouraged to observe good agricultural practices such as crop rotation, intercropping cereal with legumes, applying compost and livestock manure, applying mineral fertilizers, good water management and slashing but not burning
- Encourage monitoring and evaluation of ISFM uptake to inform the policy development

On the first and second day the focus was on planning the content of messages and developing story ideas. Grace Omondi commented, *'I have just written a thesis on the use of stories in messages, so it was great to use some of this theory.'*

The delegates worked on writing story boards on declining soil fertility. Whilst it was important to appeal to the head with facts and data and research the stories also needed heart in the form of human interest. Policy audiences, like every one else, find it easier to remember stories than hard facts.'

Day three was a practical hands on session giving the participants the chance to practice planning for filming, location selection and interviewing skills related to the key messages that had been identified earlier in write-shop. Participants got hands-on experience in villages near Mponela.

Grace explains: *'A number of locations were selected to enable the participants to think through the range of issues we had discussed in the training. We visited a maize mill and a maize shop as well as farms. The practices observed on the farm included slash and burn land preparation and conservation agriculture. We also visited sites where deforestation and land degradation were having a negative impact on agricultural productivity. Farmer interviews were conducted to bring out the key message from smallholders who did and did not practice conservation agriculture.'*

The 4 hours in the field provided a chance for scientists and media to interact with agricultural issues together with smallholder farmers, which will help them to understand how they can work together better in future. In particular it brought home how long it takes to do things properly. It was important to balance

the desire to follow the script with taking advantages of opportunities in the field for a different approach to deliver the message.'



Tithokoze Khonyongwa, a producer Pointaz Concept, feeding back from a workshop activity

Top tips for making advocacy communications

- Story boards help to define a structure for your film
- Plan carefully – especially for the locations and people you need to film to make your story board come to life
- Find ways to simplify the science – but staying true to the research
- When interviewing decide if the question will be heard – if not make sure that interviewees repeat the question in their answer
- You need to find interviewees who are credible, representative and good communicators
- Do the interviews somewhere quiet where the interviewee and audience will not be distracted
- Remember to do some filming around the interview and film the interviewee if you are planning to include the questions in the film
- The camera needs to be operated by someone with experience to get good framing and composition and avoid excessive movement of the camera or zooming in and out of the subject
- Once you have collected your interviews and filmed in the field you can do a rough cut of the film – make sure it is the right length and work out if and how a voice-over could improve the flow of the film

Legacy

When ASHC produces training and development programs it produces 'How to...' communication guides that are based on the training notes given to delegates and the learning that comes from holding the events.

Five new 'How to ...' guides are now available on the back of this write-shop:

- How to... write a policy brief
- How to... produce a policy film using participatory approaches
- How to... produce briefing sheets for radio

- How to... produce an effective PowerPoint presentation
- How to... produce an op-ed
- How to... produce a case study

These can be downloaded from the ASHC website.

George Odour concluded: *'The production of How to... guides and the ISFM materials library form two really useful tools for anyone wishing to make development communications or policy materials. We are currently in the process of fund raising to add further resources*

such as templates that will take the stress out of poster and leaflet design. ASHC cannot work as intensively in every country but we can at least make a set of open access resources for use by trainers or for individuals to use to improve their development communications skills.'

What the delegates said:

Excello Zidane from the communications branch of the Veterans Agricultural Program, said:

"I was particularly impressed by lessons on how to transform scientific jargon into a language a smallholder can easily understand. That's particularly important because if the farmer, who is the implementer of the ISFM technology, does not get the message, the whole technology becomes useless."

Ayam Maeresa of the Malawi Broadcasting Corporation Television said the training would improve his reporting of ISFM, as a result of what he had learned at the workshop.



Ayam Maeresa (left) and Excello Zidane

Chance to meet the ASHC team

2-6 November 2014

Ecole Normale Supérieure –
Rabat, Morocco

at

Soil Biofertilization and Sustainable Development in Africa Congree

Come and find out about our latest publications, see the new website, talk about your plans for the future and how the Africa Soil Health Consortium can help you.

ASHC will also be launching the ISFM Cropping System Guides for coffee & banana; sorghum & millet; cassava and rice.

We look forward to seeing you in Rabat.



Details of the ISFM Cropping System Guides can be found on the back page of this newsletter

Congratulations

André wins again

UNESCO's Director-General, Irina Bokova, has announced that ASHC technical advisory group (TAG) chair André Bationo is one of the laureates of the UNESCO–Equatorial Guinea International Prize for Research in the Life Sciences for 2014.

In line with UNESCO's goals to encourage research; mobilize science knowledge and policy for sustainable development and fostering capacity-building in science and innovation, the purpose of this Prize is to reward projects and activities of individuals, institutions, other entities or non-governmental organizations for scientific research in the life sciences

with a view to improving the quality of human life.

André will receive a statuette of the artist Leandro Mbomio Nsue, a diploma and a cheque for \$100,000. An Award Ceremony will take place at the International Conference Centre of Sipopo, Malabo (Equatorial Guinea) on 15 September.

André was awarded the African Union prize for outstanding African science (the Kwame Nkrumah Scientific Awards) in January 2014. ASHC congratulates him on his continued success.



André Bationo, chair of TAG

Plans developed to reach over 1 million Ethiopian farmers with materials

developed at ASHC write-shops

Ethiopia plans to reach 1 million farmers with information on the use of rhizobia to inoculate legume crops to increase their ability to fix nitrogen in the soil.

Tesfaye Shimber, the director for soil and water research directorate at the Ethiopian Institute for Agricultural Research (EIAR), explains: "Our aim is to use our extensive system of Farmer Training Centres and development agents to reach as many as 1 million farmers in pulse growing areas of Ethiopia with this information."

James Watiti of ASHC, picks up the story: "These targets were set at the materials development write-shop conducted by ASHC in Addis Ababa in March 2014. The write-shop looked at the different stages of inoculation and in just 2 days produced a comprehensive draft manual.

In the intervening period ASHC has worked editing the text and commissioning around 90 illustrations to help explain the technical aspects of the application of inoculant. We had to review a lot of technical information and think about the best way to present it. This process was greatly helped by the active contributions from representatives from the Agricultural Transformation Agency (ATA), N2Africa, the Ethiopian Soil Health Consortium, Haramaya and Jimma universities, and Managesha Biotech, a private sector manufacturer of rhizobium inoculant."

Targeting key pulse crops such as faba bean, chickpea, lentil, soybean and field pea, the Ethiopian team plans to distribute the manuals and other communications materials to up to 25,000 development agents and up to 35,000 lead farmers to



effectively communicate the basic science and benefits of using inoculant on key pulse crops. These intermediaries are expected to eventually reach up to 1 million farmers.

Our aim is to use our extensive system of Farmer Training Centres and development agents to reach as many as 1 million farmers in pulse growing areas of Ethiopia with this information.

The write-shop produced a first draft in English and EIAR will be responsible for the development of the Amharic translation and for the cost of reproducing 60,000 manuals.

James noted: "It was amazing to see what could be produced in just two days using the ASHC write-

shop processes. Not only did we see people sharing their detailed scientific knowledge but we saw a real shift in the way the participants thought about presenting information.

They replaced scientific jargon with some very farmer-friendly approaches to explaining information. From the manual a host of different teaching and learning materials can now be developed. This work is part of the COMPRO II project that is looking to support the scaling-up and scaling-out of a range of biological products. So we were delighted to be joined in Addis Ababa by representatives from Notore Chemical Industries Limited from Nigeria, Africa 2000 Network from Uganda and Africa Fertilizer and Agribusiness Association from Tanzania.



James Watiti discussing progress with the Africa 2000 network team

They will be working with the draft manual and looking at how to make it suitable for use in their own countries. So, in the medium term the outputs of this write-shop will be influencing many millions of farmers across Africa."

In July a follow-up write-shop was held in Kampala with the Africa 2000 Network to customise the inoculant manual for use in Uganda. James concluded: *"The process of adapting the manual for Uganda was very straight forward. The adapted version of the manual will soon to be available for use in COMPRO II dissemination and extension support work undertaken by key partners. Africa Soil Health Consortium supports the communication elements of COMPRO II"*.

Combining key principles - accuracy of science and simplicity

of messages - the manual is aimed at extension teams and lead farmers who work closely with smallholder farmers in areas where rhizobium inoculant has been proven to show good results on target legumes. In Uganda, this has included soybean, groundnut, common bean and cowpea.

"I feel that my opinion as a farmer has been taken into account when shaping the messages in these materials. This way even the other farmers will find it more useful and relevant"

In order to ensure that simplicity of messages was validated, the write-shop included the participation of two Africa 2000 Network networks of lead farmers.

Mrs Winnie Mukabwa, a lead farmer participating in the workshop, was very excited about her role: *"I feel that my opinion as a farmer has been taken into account when shaping the messages in these materials. This way even the other farmers will find it more useful and relevant"* she explained.

Koma Stevenson, was happy about the use of illustrations in the materials: *"I think this will help address problems with understanding where the materials are used with farmers who cannot read well."*

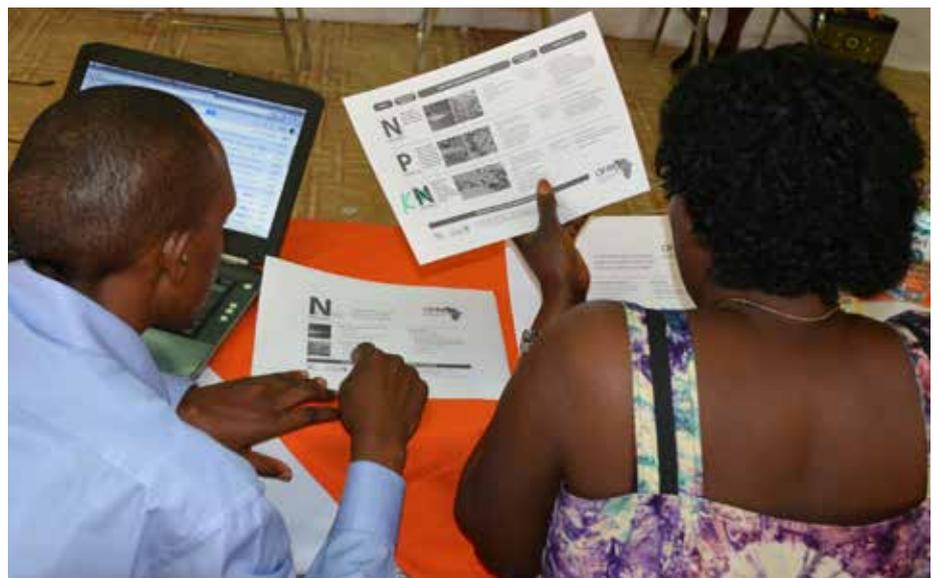
Christopher Kyesa, executive director at Africa 2000 Network, was optimistic that the manual and other support materials developed in the write-shop will equip their extension teams in all the key areas including Tororo, Kanungu, Bugiri and Kabale. He explained:



Mango Tree's Monica leading a session in the write-shop

"We really needed these materials for the next season that starts in September 2014, so this is more than timely."

Stella Keihanga, documentation officer at Africa 2000 Network was happy to see the emergence of four new materials for her resource centre in Kampala. She felt these materials would greatly improve the outreach work of their extension team and the partner agencies they work with.



COMPRO II in brief...

COMPRO II is managed by the International Institute of Tropical Agriculture (IITA) and financially supported by the Bill & Melinda Gates Foundation. The project also receives significant support from the regulatory authorities, the national agricultural research systems (NARS), educational institutes, and non-governmental organizations in the project countries; their invaluable input is highly appreciated.

The delivery partners seek to support the decisions of at least 2 million smallholder farmers in sub-Saharan Africa to use of commercial products effectively to achieve food security and increase incomes through increase of farm yield by at least 15-30%. ASHC supports all of the communication aspects of the project.

What OFRA has to offer...

Lydia Wairegi reviews the progress on OFRA

Optimising Fertilizer Recommendations in Africa (OFRA) is an integral part of the ASHC that seeks to change the way that fertilizer recommendations are produced and promoted to smallholder farmers in Africa. Using fertilizer response data generated by partners in 13 sub-Saharan countries, new recommendations will be developed that place profitability, and not maximization of production, at the heart of the recommendations.

There are two elements to OFRA:

- A major research component to establish nutrient/ crop responses leading to improved fertilizer recommendations and subsequently decision support tools covering all aspects of ISFM (mineral fertilizer, organic inputs and improved seed)
- A major communications effort to increase awareness of the new approach to recommendations and get these adopted at both policy and delivery levels in 13 sub-Saharan countries

Trials and legacy data

With the arrival of the West African planting season, OFRA field trials have now started in most of the participating countries.

Kayuki Kaizzi, the OFRA regional coordinator for East and Southern Africa, has visited Kenya and Rwanda while Manam Nouri the West African coordinator, visited Burkina Faso, Ghana and Nigeria. These visits have helped establish the field trials, including the ISFM elements, and put in place the protocols for data and sample collection, these will ultimately be analyzed at the ICRAF laboratory in Nairobi.

Some West African countries, especially Niger, have struggled to

get supplies of the single nutrient fertilizers they need for the trials. This is due to the excessive reliance on NPK for crop production in the region. The Ethiopians found it hard to access the micronutrients they needed for the trial.

Martin Macharia, the OFRA data manager, said: *"I have been mapping OFRA trial sites. This is an initial step towards being able to identify other physical locations with enough common characteristics, such as soil type or agro-ecological zones, to be confident to use the research data from one site to inform recommendations for another. This will be more accurate once we have plotted crop distribution and maps. The mapping process also helps identify potential areas to set up new trials to fill in the gaps in our knowledge. The document for site selection was drafted with input from University of Nebraska-Lincoln and AfSIS (the organisation building capacity to produce digital soil maps in sub-Saharan Africa). There can be as many as 40 trials in each participating country each year; this will mean around 1,500 trials across OFRA. So, work on the database to capture and manipulate this data is a key priority before the data starts coming in."*

In addition to the new trial data, OFRA is also analyzing legacy data from previous research. Accessing suitable legacy data has proved challenging. To help the process a concept note has been developed setting out potential benefits for collaboration with the country-level health consortiums in East and Southern Africa. Whilst the principle investigators in each of their countries also used their networks to try to access suitable existing research results and data to build into the OFRA database.



Martin explains: *"We have successfully negotiated to access data being compiled by the national soil health consortia and a number of other national and international organizations. This means that OFRA will generate and/or interpret a vast amount of data. So my other current priority is to put in place a database – not just for the OFRA project but as a tool that anyone wishing to build on our work, can access in the future."*

Communications

Good progress has been made on the communications strategy and the OFRA training manuals. Working with the team in Uganda, a manual and policy brief have been drafted and a write-shop in July 2014 helped to shape future communication plans for OFRA.

Work has also been progressing on a phone application to offer smallholders advice on fertilizer optimization. The Grameen Foundation team is working on a few technical glitches on the mobile phone version of the tool, whilst training continues on the computer-based version.

Given the size and scope of this project, there are significant communications challenges in sharing and gathering information from the teams. This is due to a combination of poor internet connectivity and fact that the key people involved in the project have to undertake significant amounts of travel to set up the trials. The team is looking for ways to improve communications to and from the field.

Monitoring and evaluation

ASHC has conducted the baseline survey for OFRA. The responses have been analyzed and information captured in a draft report. Harrison Rware, who leads on M&E within OFRA, said: “We are making good progress on the M&E. Partners in Burkina Faso and Mali found it hard to share baseline data on-line, and so the first draft of the baseline does not include these countries. We will use information in the initial application and from the inception

report to fill in some of these gaps. We are working closely with our funders AGRA to ensure that we are collecting the baseline data that will best evidence the impact of this project. We are also making good progress on a tool for partners to use in end of year reporting to make M&E more systematic building on the baseline data.”



Summary OFRA baseline survey results

The OFRA baseline survey was conducted during April and May 2014. To gather our list of names we spoke with people we knew to be involved in the fertilizer research in various institutions and asked them to share their contacts. Our list snowballed into 416 contacts. 219 people responded to the questionnaire from 12 of the 13 participating countries.

Participants were split into 6 categories:

- Policy makers
- Extension workers
- Researchers (soils and agronomists)
- Farmers organizations
- Fertilizer companies
- Agro-dealers

The number of study participants from each category was informed, to a large extent, by the importance of the category in the generation of fertilizer recommendations.

During the OFRA inception meeting, principle investigators from the project countries listed fertilizer recommendations. For maize, 6 (50%) of the 12 fertilizer recommendations did not follow the agro-ecological zones.

Ghana reported the highest number of crop-targeted fertilizer recommendation. Out of 6 crops (maize, beans, rice, wheat, millet, and cassava) none were reported to follow agro-ecological zones. The same was true in Ethiopia, Mali, Mozambique, Zambia and Burkina Faso. In Tanzania, half the recommendations were reported to follow agro-ecological zones.

Summary of findings

- 14% of extensionists and researchers reported using models and spatial (digital mapping) information for extrapolating the fertilizer response functions

- 51% of the scientists were aware of fertilizer optimisation tools, and 31% reported to having used such tools
- 31% of extension workers were aware of fertilizer optimisation tools but none had used them
- Around 5% of the participants reported that other stakeholders were involved in the development of fertilizer recommendations - including farmers, farmer organisation's, policy makers, researchers (scientists), extension workers, agro- dealers, fertilizer companies and donor organisations. Nigeria, Ethiopia and Malawi all reported significantly higher figures – with Nigeria coming top at 15%.
- The majority of the study participants reported that they produced information communication materials, but only between 1–2% thought they produce appropriate communications materials. 70% of the participants said this was because they had not received appropriate training.
- A small proportion (up to 18%) in all the target countries stated they had access to communication material appropriate for their targeted audiences.
- Over 50% of the communication materials produced are in print form. But 80% of respondents preferred to have materials in print and audio/ audio-visual formats.
- 36% advocated the use of information communication technology, especially mobile phones.

In conclusion, there is substantial awareness of various optimizer tools among the researchers and extension staff in project countries. But use of these tools is limited. For a minority there is an understanding that development of fertilizer recommendations is a multi-stakeholder initiative and that such recommendations across project countries fosters greater ownership and sustainability. But a common experience is that people are working with materials that fall short of the needs of their audiences.

George Oduor introduces the new ASHC website

Why was a new website needed?

ASHC has changed out of all recognition since it was launched in 2011. In 2013, ASHC took on the management of a major AGRA-funded development program looking at optimising fertilizer recommendations in 13 sub-Saharan countries (OFRA). We are also changing the way we work with partners and our plans to work more closely with the country-level soil health consortia. These changes meant our old website just did not work any more.

Does the new website have a different address?

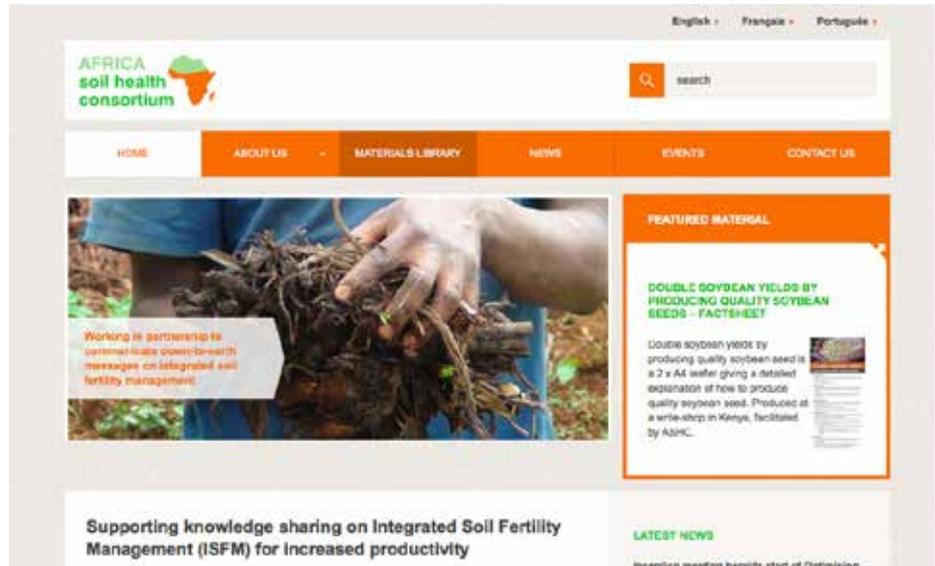
Yes and No! You can still access the site from www.cabi.org/ashc but www.africasoilhealth.cabi.org will also work.

All of the old pages have moved, however, and so if other websites are linked to the ASHC website the links will need to be changed. The team at ASHC will help you find any material you need on the new site.

What can the new website do that the old website could not?

The new website is primarily about providing a library to access ISFM materials. It has a strong focus on easy search functions for the materials that have been developed to date.

The ISFM library includes a large number of manuals looking at ISFM principles and applying them to five cropping systems (rice, coffee-banana, sorghum & millet with legumes, maize with legumes, and cassava) and around 140 exemplar materials for smallholder farmers or extension audiences and



a host of other materials. The new website is also about building a platform for not only ASHC materials but all ISFM materials. It will be more flexible and accessible. Our partners can be given access to upload their own development communications materials to the ISFM library. Genuine partnership work requires a different mindset and a different toolbox and the website developer have helped us to make this a reality.

One immediate change people will see is that when they search for one resource the ASHC team will have made other recommendations of other similar materials – “if you like that, you will also like this”. We are also encouraging people to comment on the materials on the website to help grow our knowledge of what works and what doesn't.

The website now utilizes Wordpress, which is an open source blogging tool and a content management system. This has been a big hit with the website development team. It is much quicker to make and upload pages to the website and so we have made massive efficiency gains. Jobs that had taken hours can now

be completed in a matter of minutes. **Is everything that was on the old site now available on the new site?**

Yes, the vast majority of the old content is on the new website. A few things may no longer be relevant and not make the cut, but our intention is to have anything useful from the old site fully available.

How does OFRA fit into the new website?

Optimising Fertilizer Recommendations in Africa is led by ASHC in partnership with the University of Nebraska-Lincoln, USA and the 13 participating national research teams. This program will create a great deal of data and materials that set out radically different approaches to fertilizer recommendations based on empowering smallholders to decide on crop choices and fertilizer application based on profit maximization. AGRA, the funder, was keen to exploit the potential for cross-fertilization between ASHC and OFRA outputs and have this material housed in the ASHC site. OFRA is presenting fertilizer

choices informed by integrated soil fertility management techniques and approaches so it makes sense to hold this information together in one place.

There are other synergies too, like with a strong cross-over in the delivery team and a shared technical advisory group. ASHC will be looking to bring in other suitable funding streams to extend this resource and approach still further.

How does the new website support the push for Creative Commons?

Many organisations say this material is published under a Creative Commons license, but you look at it and it is a locked PDF or book. This isn't what we want to offer in terms of open access. We know from our own experience that a lack of a photo, or a data table can derail the production of ISFM materials. So,

over the coming months we will be stripping down the ASHC materials to make files that contain text, photos and illustrations separately so they can be accessed easily.

How will the new site support the capacity building needed for this approach?

Whenever ASHC works in new areas of communication we produce a 'How to...' guide. These guides will be easier to access on the new website and they will be linked to examples of good practice in the area of communication covered.

In addition we are looking at new features such as a range of templates that will be available for any organization to customize with locally adapted ISFM messages. By making these templates in PowerPoint, we hope this will be taking away another technological barrier.

Our vision for the future is that anyone can:

- Read a How to guide on making a poster
- Read a How to guide on farmer-friendly language
- Check the ISFM content of materials they are developing in the cropping guides
- Select some images and text from our library
- Choose a template
- Then drop in their own text, their own images or upload these from the ASHC materials library

This will be a unique development tool, which will set the bar for genuinely open access and open source materials and approaches. ASHC is currently raising the funds to make this possible.

What next?

The ASHC project is looking at communications approaches so we anticipate that the website will keep evolving. At least now people can use social media, including facebook to see what is new at ASHC and how the website is reflecting this.

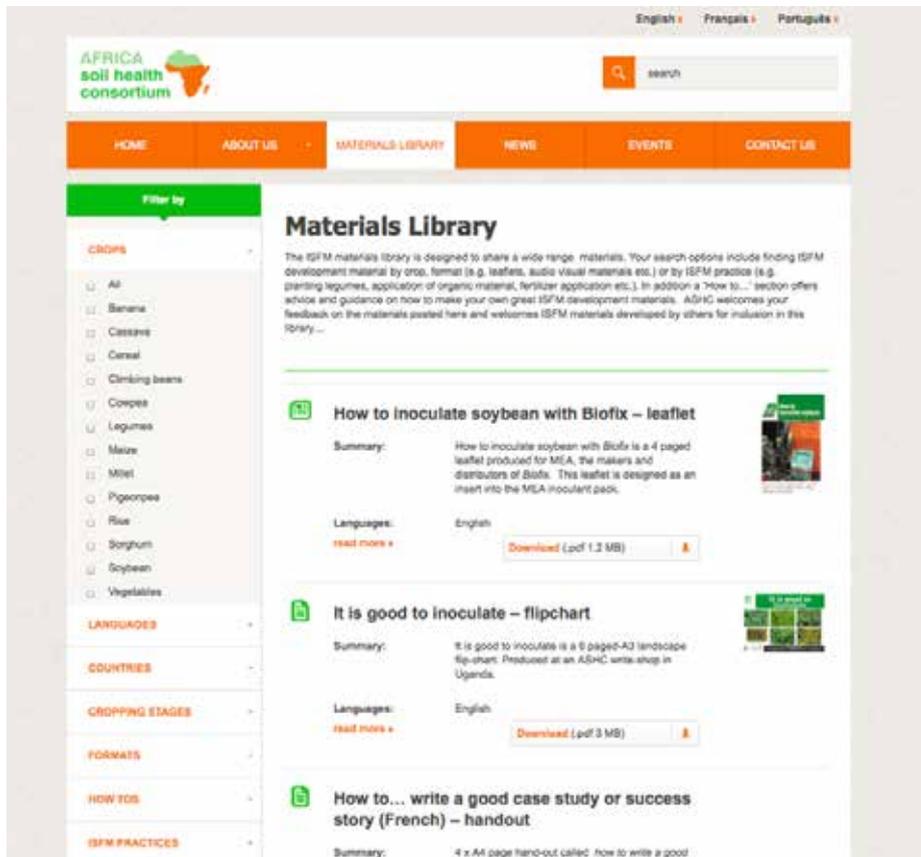
Thanks

I would like to thank the ASHC delivery team and the website developer, Electric Studio, for all their hard work to get the new website up and working.

Do you have ISFM materials you would like to share?

The ASHC website is ready to help promote wider awareness of communications materials that incorporate integrated soil fertility management messages.

Contact Grace Omondi at g.omondi@cabi.org



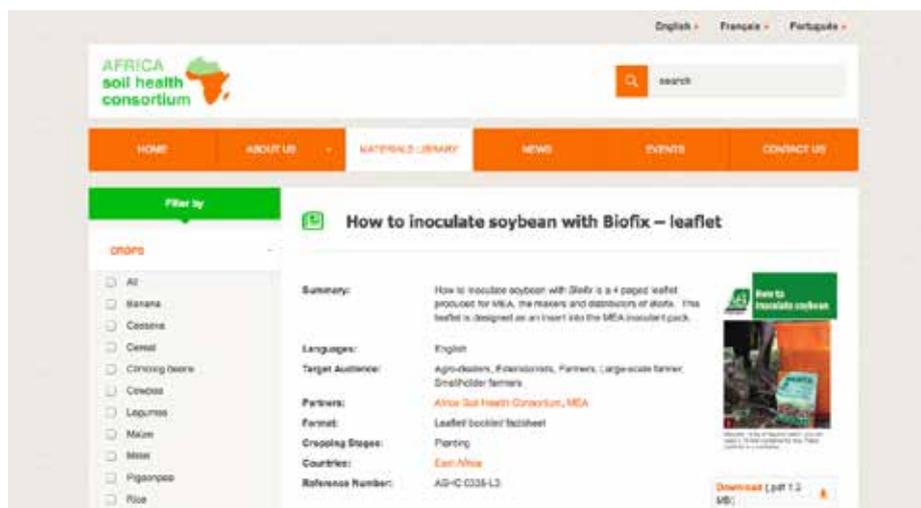
The new ASHC website ISFM materials library has a number of different search options including crops, languages, countries, cropping stages and formats.

Is profit a dirty word?

When ASHC set up its Creative Commons license it took the very deliberate decision to make all its materials open to all, including the commercial sector. This was done on the basis that most smallholder farmers see an agro-dealer at least as often as they do an extension worker. ASHC has recently produced a paper setting out how it works with the private sector.

George Oduor of ASHC explains: *“ASHC is a communications project, however we are encouraging smallholder farmers to use recommended farm inputs. The inputs include improved seed and planting materials, mineral fertilizer, and in some cases it can also include purchasing organic amendments such as chicken manure or seed treatments to improve the ability of beans to fix nitrogen from the air. These inputs may need to be acquired on credit. Financial institutions are often over-looked, private sector input supplier to farms. So the long term success of ASHC will depend to some extent on how we are able to work with the private sector. One of the interesting challenges for ASHC has been to identify how we can effectively work with the private sector.”*

ASHC has developed a large number of farmer-friendly materials using a collaborative process known as a write-shop. Grace Omondi of ASHC explains: *“ASHC brings together research scientists who have the knowledge of proven ISFM approaches with those that can help shape messages. There are two groups central to this process. First is the extension service with their detailed knowledge of how to create messages for farmers. Second is a group of private sector media practitioners who work with the group to deliver messages in different media. To date this has*



included graphic design companies who have worked alongside print and radio journalists. In some cases we are working with the commercial arm of a social enterprise. Working with media organisations to make them better able to service the agricultural sector was seen as critical to ASHC producing a sustainable legacy. They also bring their knowledge and experience to the write-shops which means that we are trading knowledge rather than one of us teaching the other.”

ASHC brings together research scientists who have the knowledge of ISFM approaches and products that have been shown to work with others who can help shape and format this into appropriate messages.

Outside of the write-shop process ASHC has an innovations budget that is used for exemplar projects. The youth initiatives (see the May 2014 ASHC newsletter for details) worked with two private sector communications companies. Well Told Story and Jacaranda Designs are both companies with established products and distribution channels in place.

George Oduor noted: *“The private sector media companies work to very demanding production schedules. This can be a challenge to get all the information and approaches signed off in the timescales that the media dictates. So, we need to select messages we are very confident about for dissemination through these channels. There is so little time to adjust a message once the production countdown has started.”*

We have learned some valuable lessons from these partners. In the case of Jacaranda they showed us how freelance youth workers could be employed to support our projects in schools and get young people more motivated about agriculture. Shujaaz, owned by Well Told Story, helped us to see that to appeal to young people we need to speak their language. In Kenya this is street slang called Sheng (a hybrid of Swahili and English) and also to inject humour and human interest into our messages.”

In 2012 ASHC became the communication partner for another Bill & Melinda Gates Foundation funded project called COMPROII. Efficacy trials in COMPRO I helped to identify 3 biological agricultural

products suitable for taking to scale in the 6 participating countries. These included rhizobia inoculants and so ASHC has been working closely with MEA Fertilizers Limited in Kenya and Notore Chemical Industries Limited in Nigeria as the companies making these products available to smallholder farmers.

Notore has developed a field sales force based on a successful not-for-profit organization model. Farm Input Promotions Africa [FIPS-Africa] works through a network of village based advisors who provide advice but who also sell farm inputs. After attending an ASHC write-shop to develop a manual on rhizobia inoculation in Ethiopia, Notore decided they wanted to work with the ASHC communications team to complete a series of short films.

Notore asked the ASHC team to use its expertise to support development of films on land preparation, variety selection and planting of soybean and urea deep placement for rice. Notore is targeting smallholder farmers with low literacy, owning an average of 1.5 hectares of land.

Grace Omondi reports; *“NOTORE is the second private sector organisation to work with ASHC on farmer level materials on ISFM approaches. What is exciting is that there is demand from Notore for the films. NOTORE asked ASHC for technical assistance to help to ensure the films were farmer-friendly and impactful. NOTORE’s dissemination plan is to first begin with training of their village-based promoters, and then screening the videos to farmers in July 2014. The*

target regions for dissemination are in the states of Kano, Kaduna, Niger, Benue in the middle to upper belt.”

ASHC delivered the films in English in May 2014 and Notore added Ibo and Hausa language translations. The films were disseminated through their village-based promoters across the Nigeria in June/July 2014. This coincided with the introduction of a new range of rhizobia inoculants and the start of field preparation for rice farmers.



Notore asked the ASHC team to use its expertise to support development of films on land preparation, variety selection and planting of soybean and urea deep placement for rice.



Four short films were produced:

- Land preparation for soybean
- Planting soybean
- Inoculating soybean
- Urea deep placement for rice

ASHC was able to supplement Notore’s detailed product knowledge with research undertaken by N2Africa on legumes and IITA on rice in addition to the draft ISFM cropping guides on rice produced by ASHC. This helped to ensure the quality of science.

“COMPRO II has ensured that we focus on private sector input suppliers,” commented George Oduor. *“Often funded projects struggle to find a suitable relationship with the private sector. On one hand there is a nervousness that the private sector has unlimited*



How to inoculate soybean



1 Measure 15 kg of legume seed - you will need a 15-litre container for this. Place carefully in a container.

‘How to inoculate soybean,’ a leaflet produced by ASHC

access to resources and so projects wonder how they can add value. Then there is a concern that profits are being made. Development that ignores the private sector makes long-term sustainability less likely. It is important that projects like ours do not see profit as a dirty word.”

Working with private sector phone and data providers

Getting ASHC information on the right lines

The Africa Soil Health Consortium has developed a guide on ‘How to... produce farmer-friendly text messages for extension campaigns’. This explored the challenges of delivery priority agricultural information within the constraints of a text message. As an example the ASHC team mapped out the messages a farmer would need to support ISFM in maize growing in Northern Ghana. In this case the information became 20 discrete messages based on developing timely communications within the constraints of an SMS message.

About Notore

Notore Chemical Industries Limited joined COMPRO II project in 2012. They are Nigeria’s leading fertilizer and agro-allied company. They have a production plant in Port Harcourt and an already existing distribution network of over 80 partners and over 300 retailers. They employ an executive/agronomist to train and advise the extensionists.

Part of the learning in development of the SMS guidelines sprang from ASHC's commissioning of Fibrelink Communications Ltd to pilot delivery of agronomic information for maize and other crops on smallholder farms in Kenya. Here an important point of reflection was the quality, utility and appropriateness of messages delivered on a mobile platform.

As the first phase of ASHC comes to a close, a critical point of interest is how to ensure that the detailed knowledge on ISFM reaches the larger number of smallholder farmers.

Mobile delivery platforms present a real opportunity to innovate with content delivery systems that are responsive and guided by good communications principles. This is not just about text but the potential is to add voice communications and, as more smartphones exist, to look at sharing short information films by Bluetooth exchanges which can move audio visual content between phones over very short distances. This peer-to-peer exchange of information is

sometimes called a viral marketing campaign.

What ASHC can do:

- Increase access to knowledge and information developed in ASHC by providing it to mobile phone providers
- Share principles of effective and responsive message design for mobile delivery
- Learn and collaboratively document content repurposing lessons for mobile environments
- Identify opportunities for innovations in text, voice and audio-visual messaging including monitoring and evaluation of use and impact

ASHC is very keen to work with partners to establish the best practice for SMS and voice messaging

George Oduor of ASHC said: "ASHC is very keen to work with partners to establish the best practice for SMS and voice messaging so we can share this through our networks. We have used the ASHC write-shop

approach to generate mobile phone content and it works well.

The nature of mobile phones means there is the potential for huge innovations in the way we receive feedback and monitor subscriptions to message campaigns. This will give us an insight into the issues associated with low literacy, which is still closely aligned to low participation of women in education in many countries. Mobile telephony also gives us opportunities to provide as many language options as are needed at relatively low extra cost.

ASHC has materials relating to ISFM approaches in around 10 different crops and we have a website and newsletter that are perfect to share the learning."

Anyone wishing to work with ASHC on mobile phone related experiments should contact James Watiti via J.Watiti@cabi.org



2 Measure one soda bottle (300 ml) of clean lukewarm water.

Pour the water into a larger bottle (500 ml plastic bottle) so that it is easier to mix the gum arabic.



3 Add the 30 g of gum arabic contained (in the smaller packet) in the Biofix pack (the whitish material in a small packet) or 2 tablespoons of sugar to the water.

Mix thoroughly to get an even solution of gum arabic (or sugar). This solution is called the sticker.



4 Add the sticker to the seed.

BENEFITS OF INOCULATION:

- Inoculation ensures good nodulation.
- With good nodulation, the legume can fix its own nitrogen.
- When more nitrogen is fixed, the legume yield increases. Following crops or intercropped also benefit from the fixed nitrogen.
- Inoculants are much cheaper than nitrogen fertilizers.

Extract from 'How to inoculate soybean' which ASHC produced for Mea Fertilizer Limited

ASHC ISFM Cropping Systems Guides launched

“ASHC is pleased to be launching its first’ four Cropping Guides,” explains Lydia Wairegi, ASHC systems agronomist.

“These guides are an important contribution to the ISFM literature. The starting point for each was to find the leading thinkers and researchers in ISFM for specific crops and to consolidate every thing that was known into one practical reference guide.”

In 2012 ASHC launched the ASHC Handbook for ISFM to give an overview of the principles of ISFM. But the needs assessment carried out the beginning of the ASHC project, identified that the big gap in the literature was practical, actionable information based on specific crops. Lydia continues: “the literature reviews we did exposed that most ISFM materials are written as reference

works or textbooks. These are strong on analysis – but light on practical advice. The question we kept asking as we developed these guides was “so what can we do with this information?” As a result we have a very action orientated guide designed for extension teams, ISFM trainers and ISFM researchers.”



Launch plans

The series of four ASHC-written ISFM Cropping Guides will be launched at the “Soil Biofertilization and Sustainable Development in Africa” Congress (2 -6 of November 2014, at the Ecole Normale Supérieure – Rabat, Morocco). This event aims to offer an exchange of experiences on scientific and technological results.

The congress will highlight recent research carried out in the area of biological nitrogen fixation, mycorrhization and soil microbial fertilization as well as provide a forum for discussing practical results obtained in Africa and in other regions of the world. The possibilities of biotechnological applications will also be presented and discussed.

The fifth guide, on maize-legume cropping system, will be launched in late 2014.

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The Africa Soil Health Consortium is coordinated by CABI

Email: ASHC@cabi.org Website: www.cabi.org/ashc

Design by Sarah Twomey