

Soil Health news

October 2012



Down to earth information...

George Oduor, project manager, Africa Soil Health Consortium thinks they have good things growing...

It has been a busy few months for the Africa Soil Health Consortium. You will see we have a new look newsletter, which I hope that you like, but there is a lot more to report too. This month I have started a blog [<http://goo.gl/fGFGGr>]

In September ASHC participated in the African Green Revolution Forum conference in Arusha. We were pleased to hear Kofi Annan mention integrated soil fertility management in his opening speech and we had a great reaction to our exhibition stand including a visit from President Kikwete.

The ASHC has been wrestling with the challenge of what farmer-friendly extension materials should look like. This is at the heart of the challenge that the Bill & Melinda Gates Foundation gave us. It is not easy balancing the tensions between nuancing messages from detailed painstaking research with the practicalities of making those messages implementable for farmers. So we need to find creative ways of sharing information and our checklist of farmer-friendly information is a step towards this.

ASHC-facilitated write-shops have helped define what farmers want and need from different media. In Ghana it was suggested that print was best in English and audio

visual and live events better in local languages. This was because those who could read, could read English. The Ghana write-shops also saw the ASHC applying a new methodology for developing and checking information on technologies to be up-scaled by partners. This meant by the end of some of the two-day workshops, finished leaflets had been produced.

This month we have a new section of the website called ASHC radio and TV. Here you will find a series of audio files – drawn from the films on ISFM in Africa we commissioned. These are designed for use in radio broadcasts and are available under a creative commons license. We hope that this will encourage widespread use of these materials not just for broadcast but also

for use in ISFM training sessions. Please recommend these resources to anyone you think can use them and send your comments to g.omondi@cgiar.org

ASHC is committed to working with some innovative communications organizations to explore how integrated soil fertility management messages can be packaged and shared.

In the August news section of the website we reported on ASHC's investment in text-based information service for maize farmers in Western Kenya. Africa Soil Information Service (AfSIS) and Fibrelink Communications Ltd are running this service. We are now exploring similar pilots in other ASHC priority countries.

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Good things growing continued page 1

ASHC has just signed a contract with youth media specialists Shujaaz to help us test comics and social media as a vehicle for dissemination of soil messages. This also sees us exploring how we communicate with young Africans.

Young people form an important category within gender – and too often are overlooked in terms of agricultural extension

Farming is not seen as an attractive or viable livelihood for young people. They have too often seen scant rewards for grueling physical efforts.

So we are keen to show young people what farming can be like. Young people form an important category within gender – and too often are overlooked in terms of agricultural extension – despite the worrying trend of the average age of farmers getting older.

Under a special deal with Shujaaz we will be testing the potential for Shujaaz to work away from its Kenya base. We will create versions of the story for anyone to use in Portuguese, French and Kiswahili for starters. We will be able to circulate the story of how ISFM can improve your yields for use in our four priority countries. We will go on to convert the story into any local language where we can find partners prepared

to translate the material. Who knows how many languages we will end up with!

A full version of this text can be found on the website blog section.



Shujaaz the Emmy Award winning producers of comics, social media and radio programmes are working with ASHC to share ISFM messages to coincide with World Soil Day

Team news

We welcome **Grace Omondi** and **James Watiti** to ASHC to communications team. Grace and James will be involved in writing copy and helping to realize graphic designs, implementation of ASHC's house-style and the ASHC communications strategy and be central to our vision of producing exemplar farmer-friendly extension materials. After an exhaustive recruitment selection process and very careful consideration about the skills we needed - we have found two new team members who are already making their mark.



Grace Omondi

Finally we congratulate **Collins Marita** from our evaluation team on completing his masters in research methods at Jomo Kenyatta University of Agriculture and Technology. Martin Macharia, the ASHC graduate research intern, has completed his thesis on modeling within ISFM – we will be asking him to share his findings later in the year.



James Watiti

22-27 October 2012
Nairobi, Kenya

Integrated Soil Fertility Management in Africa: From Microbes to Markets (ISFM Africa)

The ASHC team is launching the ASHC Handbook on Integrated Soil Fertility Management in the Jambo Exhibition Hall at the Safari Park Hotel on Tuesday 23 October between 5:00pm and 7:00 pm. ASHC will also have a stand setting out some of the emerging lessons.

President visits ASHC exhibit in Arusha, Tanzania

The African Green Revolution Forum 2012 Conference attracted a wide range of delegates from farmers to politicians. They shared the passion of seeing sustainable improvement in farm productivity and efficiency. The ASHC team took part with a stand promoting ISFM. Several hundred people came to the ASHC stand over the three-days of the conference.

“The African Green Revolution Forum 2012 gave us the opportunity to explain what we are doing to a very wide range of people involved in all aspects of the agriculture.”

Grace Omondi from the ASHC communication team explained: “The African Green Revolution Forum gave us the opportunity to explain what we are doing to a

very wide range of people involved in all aspects of the agriculture. This ranged from President Jakaya Kikwete of Tanzania, members of parliament and civil servants to funders and farmers... We are now busy following up with everyone who wanted more information on our work. We are indebted to the AGRF for this valuable dissemination opportunity.”

The conference identified 16 work candidate action areas that it is encouraging people to develop into detailed action plans over the next three months. The actions of interest to the ASHC are:

- Strategies for building effective seeds systems – government and ministries should discourage NGOs and others from giving out free seed;
- Strategies for enhancing access to fertilizer – convene an annual



MaryLucy Oronje briefs President Jakaya Kikwete on ASHC's work in Tanzania

- event on fertilizer involving government and private sector
- The AU will facilitate evidence gathering, discussion and consultations on models, recommendations and approaches for building and sustaining science and technology capacity in Africa
- Gender – smart interventions should be designed that empower women to compete with men on an equal footing

Publication news

ASHC produces three major types of publications:

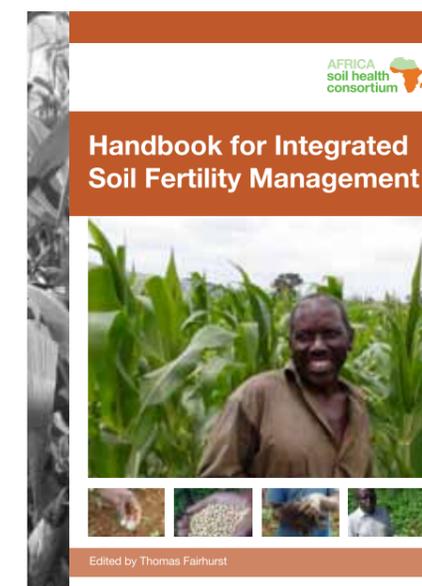
- Materials on ISFM principles (Level 1). This includes the ASHC Handbook for Integrated Soil Fertility Management and conference proceedings
- Materials on ISFM for specific cropping systems (Level 2)
- Farmer and extension worker materials for cropping system in specific locations (Level 3) - see report from Ghana write-shops for progress

ISFM handbook launch

The ASHC Handbook for Integrated Soil Fertility Management (ISFM) will be officially launched on 23 October 2012 in Nairobi at the Integrated Soil Fertility Management in Africa: From Microbes to Markets (ISFM Africa) conference

This handbook presents integrated soil fertility management (ISFM) as a key contributor to improving Africa's soil and crop productivity, especially for the main staples in the continent that include maize, legumes, rice, cassava, bananas, sorghum, millet and coffee.

The handbook is meant for training of extension workers on soil fertility management techniques in sub-Saharan Africa and for workers involved in



The ASHC Handbook for Integrated Soil Fertility Management

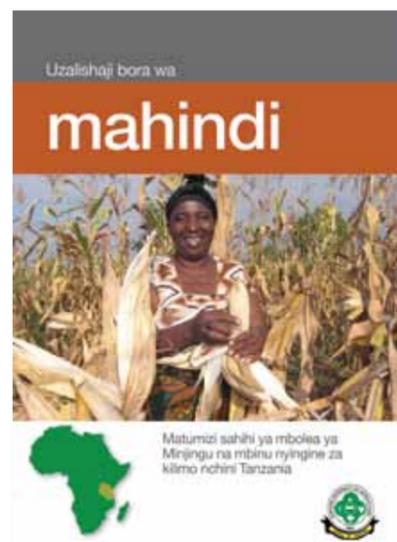
rural development that would like to learn more about the principles of ISFM.

The handbook is also a useful primer on ISFM for educational organizations such as universities and technical colleges, and other organizations involved in the development of policy on agriculture and rural development that need reference materials on ISFM techniques. It is a creative commons publication so can be reproduced

ASHC is delighted to announce that it is to sponsor the publication of the proceedings from the conference “Integrated Soil Fertility Management in Africa: From Microbes to Markets (ISFM Africa)”. This will ensure that the knowledge shared by this valuable conference, will be available to the sector into the future.

and re-used without permission – provided the ASHC is credited.

Produced by the ASHC, this handbook is part of a series of materials and publications on ISFM produced for stakeholders including extension personnel, smallholder farmers, agro dealers, policy makers and training institutions.



Farmer-friendly materials on maize production developed at the write-shop in Tanzania

New cropping systems guides under development

Coffee time at Wageningen University

The Africa Soil Health Consortium plans to develop ISFM pocket guides for five priority cropping systems prevalent across Africa. The targeted end-users include NGOs and public extension services. The guides will also be useful to private sector companies involved in the production and marketing of the target crops and their inputs.

The first of these pocket guides is on the banana-coffee cropping system.

Both banana and coffee are important crops in the highlands of East Africa, in the humid forest zone of West Africa and in lowland Central Africa.

Banana is a key staple food and also provides an important source of income for farmers who trade at local, national and regional markets.

Coffee is a major cash crop for export, and a major contributor to many national economies in Africa.

Some farmers grow the two crops together, but others grow them separately. Growing the two crops together tends to give better returns but information is scarce on how to do this. Hence the need for a pocket guide that can be used for the establishment and management of the banana-coffee system.

Recently, the authors of the banana-coffee pocket guide (Lydia Wairegi, Ken Giller, Thomas Fairhurst and

Piet van Asten) met in Wageningen University to agree on the structure, discuss the content and embark on writing the guide.

During the meeting, the authors came up with a draft of the pocket guide that is still under revision. The authors will later develop materials based on the pocket guides that target farmers, agricultural practitioners and extension workers specifically.

Other pocket guides will include: maize-legume, lowland rice, sorghum millet-legume and cassava.

- **Lowland rice:** Sarah Fernandes, the information and knowledge management officer at AfricaRice is the point of contact for the team of four scientists developing the rice guide. Writing started in October with a view to having a draft guide by the end of 2012. The ASHC sponsored guide will update a publication developed previously – but using more up to date and exclusively African ISFM information.
- **Cassava:** IITA is overseeing the development of the cassava guide. Cassava has for a long time been considered as an “insurance crop” which is grown only where other crops cannot thrive and one that does not require soil amendments. This guide will show how investment in ISFM can lead to significant increase in cassava yield and profits.
- **Sorghum millet-legume:** Andre Bationo (AGRA) and Abdoulaye Mando (IFDC) are leading in the development of the sorghum millet-legume guide. These crops are most important in the Sahelian region, from where national and international experts will be identified to develop the guide.

ASHC team refines its write-shop process

The ASHC team was asked to design a process that would help content generation partners to develop better, farmer-friendly information on ISFM.

The process started by developing rules for producing farmer-friendly information (see box below).

The second stage of process involved producing seasonal/annual cropping system timelines of maize mono-crop or maize legume intercropping farming activities. From this the facilitators pulled out the improved technologies that the participating organizations planned to share more widely. These suggested interventions were added to the timeline and carefully explored in terms of obstacles and benefits for smallholders.

Once these two exercises were completed the group could apply the rules to the information from the timelines and create a manual of all stages from pre-planting to post-harvest. These manual documents can then be used to create a coherent family of promotional materials in a range of different media.

Collins Marita, from the ASHC evaluation team noted: “We had selected a small group of experts to work on the timelines and the process took advantage of everyone’s knowledge. It helped the group to clearly distinguish the current practices from the improved and recommended ISFM practices. This helped produce specific messages. This method is very

precise, efficient way of getting to a shared understanding of the issues of what needs to be communicated. It also threw up inconsistencies within the group in a way which was not confrontational.”



Africare staff and their partners producing a poster at the end of the write-shop in Hohoe

Producing farmer-friendly extension material

In July 2012 ASHC facilitated two write-shops with partner organizations in Ghana. Each was asked to define what they thought constituted farmer-friendly materials. One of delegates was a farmers’ representative, Asiedu Biney. He said: “I want messages that are down to earth...” ASHC has combined the findings of these workshops to suggest a checklist for the production of down-to-earth printed materials.

Technology

- Realistic suggestions of what can be achieved.
- Include an honest assessment of the impact a technology will make.
- Include a clear explanation of any risks.
- An understanding of the impact of a technology on a farming family – not just on the farm production but the unintended consequences (e.g. stover no longer used as cooking fuel can create a burden of collecting firewood).

Text

- Easy-to-understand information.
- Farmers’ jargon, not scientific language.
- Short words and short sentences.
- Written bearing in mind that children in households will do the reading.

Design

- Good design and strong use of colour.
- Layout in a logical order and format.

Economic data

- A clear cost-benefit analysis (even allowing for fluctuating commodity values).
- Clear comparisons – e.g. with improved seed and without, with organic material and without
- Information on likely markets for surpluses.

Images

- Real photographs reflecting real conditions, with named farmers in named locations.
- Clear comparisons – with improved seed and without, with organic material and without.

Language

- In the right language, even in local languages if required.

Measurements

- Use of non-conventional methods to explain qualities and distances based on available and familiar items (e.g. seed sachets, soda bottle tops, cutlass blades, 50kg fertilizer bags).
- Using standard metric measurements whilst ensuring a clear split between domestic storage items and harmful chemicals.

Customisation

- Space for local customisation so that the nearest agro-input dealers and extension service contact details can be written on the print.

These rules are being applied to the design process for all new materials for farmers. They form part of the ASHC quality assurance process which is a tool kit for peer reviewing the materials developed by ASHC.

ASHC in Ghana – special feature

ASHC has four priority countries. In July 2012 the ASHC team started to work intensively with four organizations in Ghana to support the production of farmer-friendly information on integrated soil fertility management approaches. The ASHC write-shop process pools the talents of multidisciplinary teams including soil scientists and experts on cropping systems; communication specialists, technical writers and editors; economists; monitoring & evaluation and gender specialists. This approach has been critical to ASHC facilitating the production of innovative, practical information and materials.

Write-shop 1: Soil Research Institute, Kumasi

Participants: Staff from across the Soil Research Institute and extension service personal from the Ministry of Food and Agriculture, Ghana

Technologies: maize mono-crop and explaining the advantages of strip farming of maize-legumes over intercropping.

Planned output to be produced for the next planting season include:

- Training materials for extension workers/ group leaders in farmers based organisations (flip charts)
- a radio drama (for the part of the region with better FM coverage)
- a farmer's calendar
- a leaflet

Message: 10 tips to increase in maize harvests

- Use simple soil tests
- Keep moisture on your plot
- Get the right certified seed for the right season
- Plant in rows
- Plant when the soil is moist
- 3 seeds per hole – thinning to two plants when you do first weeding
- Use the right amount of fertilizer
- Remove the weeds 6 weeks after planting and add the right fertilizer in the right way
- Harvest at the right time and in the right way
- Dry crop and store in the right way

There are also trouble shooting messages on identifying pests and diseases and the safe use of chemicals. These tips were refined through the write-shop process. A similar set of messages is being developed for maize-legume strip farming.

Field testing: The maize mono-crop messages were tested on smallholders in Wioso, approximately 36 miles from Kumasi. Two focus groups were facilitated. One group was made up of 8 men and a second group consisted of 5 women. Early involvement of farmers is an essential part of the development of good extension materials. ASHC prefers, where possible, to meet farmers on their own turf which is a more reliable way of getting farmer input. It can also be useful to have women only groups to guarantee that their views are able to be captured.

Jane Frances Asaba, ASHC communications specialist, said: "I helped to facilitate the focus group with the women. They were very empowered and there was very little difference between the men and the women in terms of involvement in the farming practices or how they received information. The men tended to do more of the heavy work in soil preparation and the women tended to be more involved in the weeding stages. But the women told us they shared most other roles including spraying chemicals."

In this community radio was not as effective as we had anticipated – because of poor FM reception for some and the multiplicity of radio stations. They also felt they did not have time to sit and listen to radio programmes. However in the course of the discussions it became clear that the farmers had received useful information from radio, television and from films they played on CD players.

Feedback from the delegates attending the write-shop showed a very high level of satisfaction with the process. However some of the delegates felt that a longer workshop would have been more productive. The length of the write-shops is proving to be a tricky balancing act. The pilot exercises in Mali and Tanzania involved a 4-day write-shop and one day in the field. This was seen as too long – and many of the delegates could not commit fully to the five-day process.

Write-shop 2: Africare, Hohoe

Participants: Africare, Ministry of Food and Agriculture in Ghana, Christian Rural Aid Network, a farmers' Representative, Kadjebi District, private sector media companies (radio, film and print)

Technology: improving maize production with cowpea and fertilizer

Planned output to be produced for the next planting season include:

- Training video – targeting farmers to be used by Africare and partners – but especially on Ministry of Food and Agriculture cinema vans
- Radio documentaries and jingles with ISFM messages on the technologies
- Print materials: brochure, leaflet, posters – targeting farmers
- A flip chart for extension workers

Message: The ISFM information materials to be disseminated will target mainly small-scale farmers and cover selected ISFM technologies namely:

- encouraging slash and mulch not slash and burn
- introducing a quick cowpea crop to condition the soil
- encouraging the use of certified seeds for both cowpea and maize
- encouraging the use of the right fertilizer products
- encouraging stover and weeds be used to add organic matter back into the soil
- promoting safer post-harvest practices

The approach involves production of an extra crop of cowpea which has also given farmers more maize than they would have normally have achieved. So it is hoped that some of this extra income will be reinvested in the fertilizer to maintain the soil condition.

In this way farmers can move away from their current approach which is to work the land to exhaustion and then clear new land. This model for land use means that land can be farmed continuously without degrading the soil. It also gives the opportunity for more land to come into production – if there is an allied program looking at better use of mechanized ploughing.

At the end of day one the delegates had identified all of the key messages and produced a first draft of the materials that captured the processes. During the second morning the delegates refined into a 20-point technical guide had been written in layman's terms. The group had also made great progress – completing two draft posters, a practice guide and a plan for a training video.

Write-shop 3: Savanna Agricultural Research Institute (SARI) and University of Development Studies (UDS), Tamale

Participants: Staff from across SARI and UDS, the extension service personal from the Ministry of Food and Agriculture, Seed Producers Association of Ghana, extensionists, media, farmers, Ministry of Food and Agriculture Ghana Urbanet, Village Vision Images and Sounds, P.A.S- GARU, Bishara Radio, Ghana News Agency

Technologies:

- Soybean with phosphorus fertilizer and rhizobium inoculant
- Maize-cowpea rotation with NPK and sulphate of ammonia fertilizers.

Planned output to be produced for the next planting season include:

- Soybean with phosphorus fertilizer and rhizobium inoculant technology guide
- Maize-cowpea rotation poster targeting farmers
- Soybean with inoculant leaflet

- Cowpea leaflet
- Soybean with inoculant poster
- Soybean with inoculant radio-script
- Outline for a poster applying inoculant
- Radio drama/talk show
- Poster explaining rhizobium inoculation to farmers
- Flip chart for extension workers (for maize-cowpea rotation)
- Film (for maize-cowpea rotation) to be disseminated in collaboration with MoFA.

Learning

George Oduor, project manager, said: ASHC now has a highly effective write-shop package that can pull out the key messages very quickly and efficiently. We are also getting better at carrying research with farmers to test the effectiveness of the messaging. The feedback from our partners is that they plan to use these techniques in their communications work in the future.

The challenge remains in all of the locations to get a full set of film, audio and photographs to make the production of the materials a reality. But these assets are currently being collected and we so should see new farmer friendly ISFM materials helping farmers in Ghana very soon."



Dr Francis Tetteh, Soil Research Institute; Nana Sakyibea Addo, Ministry of Food and Agriculture and Jane Frances Asaba from ASHC at the ISFM write-shop in Kumasi

Text service for maize farmers in west Kenya

An ASHC partner has been establishing a text information system for maize farmers in west Kenya. In the first past five months the agricultural advisory services sent a total of 6,665 messages on maize and soil management to a cumulative total of 2,483 farmers.

The service, which is partly financed by ASHC, is being run by the Africa Soil Information Service (AfSIS) and Fibrelink Communications Company Ltd.

Peter Okoth, senior scientist at CIAT and AfSIS, explains why the scheme has become possible: "Three or four years ago, farmers in Kenya didn't have mobile phones. Now almost every farmer or household in the country has one. You can buy a phone for as little as 800 Ksh (US\$10), thanks to low-cost handsets from China. It's an unprecedented opportunity to reach farmers with important crop management information.

Of course, the smart farmers will subscribe to the service, and

then organise group meetings with their neighbours to share the information by word-of-mouth!"

When registering for the service via SMS, farmers are able to indicate their crop of interest and whether they want information on soils, fertilizer application, agronomy, markets or pesticide use. Farmers also have the option to send a separate SMS requesting specific information, which the team respond to on an individual basis.

Farmers have reacted positively to the information. They say that it is a good return on investment. Where a farmer invests around Ksh150 (US \$2) per season (one text per week at a cost of Ksh.10) with the predicted increases in yields this could result in a 1000-fold return on the cost of the texts.

The challenge is to communicate the economic benefits and value of the information to farmers. As farmers become more professional they will see the benefits of timely text based information instead

of traveling to see the extension service for information. The farmers have however identified that getting some of the required farm inputs can still be a challenge as stocks are often very limited. So as the programme develops it needs to find ways of including the agro input dealers more.

George Oduor, project manager at ASHC, who also attended the field day in Nyanza in August, said: "The Africa Soil Health Consortium has invested in a small portfolio of innovative communications project to get ISFM messages out to farmers. We are building up a sense of what works and why. Over the coming months we will be sharing our finding through the website and the newsletter."

For details of the coverage in Kenyan media and the New Agriculturalist – see www.cabi.org/ashc - see the news section.

The African Soil Health Consortium is coordinated by CABI

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