Fertilizer Partnerships in Kenya

2SCALE is helping Kenyan rice farmers become more competitive, increasing yields while reducing production costs. One key innovation is fertilizer deep placement (FDP). Instead of being broadcast in powder form, fertilizer is compressed into briquettes that can be precisely placed in the soil. FDP enables farmers to increase their harvests by 30-40 percent while using 60-70 percent less fertilizer.

The local partner is ARM Cement, a private firm that is Kenya’s only producer of fertilizer briquettes (brand name Mavuno). ARM not only produces and sells briquettes but also works with 2SCALE to promote FDP technology. In November and December 2013, the company organized demonstration plots and field days in two important rice growing areas, Mwea and Kisumu. The field days attracted not only farmers but also rice traders, agro-dealers, NGOs and the local administration.

The demonstration plots compared three types of fertilizer application: conventional, urea briquettes, and an advanced briquette combining multiple plant nutrients. The advantages of briquettes were evident: higher yields, lower production costs, more tillers on each plant, longer heads and heavier rice grains. Farmers are willing to purchase briquettes at commercial prices, because they are convinced the investment is worthwhile.

Rice farmer Stephen Mwangi explains why the community is excited. “We would get 4 bags from a quarter-acre. Now we can get 6-7 bags from the same plot, using briquettes. I planted a quarter-acre as an experiment. I am now regretting – I wish I had planted my whole farm using FDP.”

Plans for 2014

Recommendations by the Project Advisory Committee, which met in Accra in December:

- Remain open to innovative business proposals, while targeting a few key value chains in each country, e.g. vegetables in Ghana, dairy in Nigeria.
- In 2014, focus on deepening partnerships established in 2012-2013, with more farmers and additional partners.
MULTINATIONAL TOMATOES

2SCALE partners in West Africa are helping smallholder farmers connect to the fast-growing, highly profitable market for fresh vegetables. The first step (ongoing, excellent results) was field trials and demonstrations to promote new varieties and better crop management methods. The next step will be to build agribusiness clusters linking farmers, retailers, processors, supermarkets and others.

High-yielding, disease-resistant seed varieties from East West Seed International (EWIT) are being rolled out in Benin, Ghana, Mali and Nigeria. The program tested 32 varieties of 12 crops at 22 sites (see table). The aim was to develop a ‘basket’ of options that farmers could choose from.

Demonstration plots were hosted, planted and managed by ‘lead’ farmers selected by the community. EWIT and 2SCALE experts provided training and advice. Field days were organized at most sites, and attracted not only farmers but also vegetable traders, agro-input dealers, extension agents and government officials.

EWIT seeds did well at almost every site in every country. For example, two tomato varieties, Padma and Makis, were tested in Ayetoro in south-west Nigeria, where tomato blight disease causes heavy losses nearly every year. Disease incidence was 45 to 90 percent in traditional varieties, and zero percent in Padma and Makis. The new varieties gave yields 18 to 117 percent higher than the traditional ones. They also had larger, firmer and more uniform fruits, longer shelf life, and fetched better prices.

The Commissioner for Agriculture for Ogun State, Mrs Ronke Sokefun, visited 2SCALE tomato and pepper demonstration sites in Ayetoro in October. “This is exactly what farmers need,” she commented. “The new varieties have performed well, the demonstrations have been successful. The next step is for 2SCALE, the seed company and government extension staff to work closely together so that the seeds reach every vegetable farmer in Ayetoro.”

Maimouna Samanko is a market gardener in Mali who tried out the new varieties. “My customers loved the tomatoes, green beans and the peppers. But the best were the EWIT cucumbers – they are so tasty you do not even have to add salt.”

At the other end of the scale is Grand Popo, a large-scale producer who exports vegetables to Benin, Nigeria and Togo. This season he bought tomato seeds (variety Makis) worth 13 million FCFA, nearly $27,000.
Training on Market Development

Following a five-day workshop in Cotonou, Benin in November, 2SCALE trainers in West Africa have the skills to work with coaches and farmer groups to tap new markets.

The workshop brought together trainers from Benin, Ghana, Mali and Nigeria. They shared examples of successful 2SCALE agribusinesses, and then dissected these examples to see whether the project’s capacity strengthening approach had been effective. The conclusion: the non-traditional approach (multiple ‘learning cycles’ and individual back-up support for agribusiness coaches) had proved crucial in promoting innovation and expanding agribusinesses.

For example, developing cluster maps helped analyze market opportunities much more effectively than conventional training methods. “We did mapping and cluster analysis which helped us identify the gaps precisely,” explains Olugbenga Idowu, who works with a soyabean cluster in Kwara state, Nigeria. “We negotiated with a new processor, who now buys more than 10 tons per month. And because we have a secure market, micro-finance people are agreeing to give us loans, so we can expand even more.”

The workshop focused on marketing of agricultural products, using specially designed training materials. First concepts and theory, then practical examples, followed by a detailed case study (Selling fresh and dried onions to Beninese diaspora in large West African cities), and interactions with a 2SCALE rice cluster near Cotonou.

It’s this interactive approach that has enabled ICRA (which leads the capacity strengthening component of 2SCALE) to build teams that can support agribusiness growth in every target country.

Learning about Money

2SCALE agribusiness coaches in Ghana have always had strong technical expertise. Now they also have the skills to provide support on business and financial planning. Seven coaches from across the country attended a three-day workshop in Afienya city in October. The workshop covered various areas: setting and reaching financial goals, savings options (advantages and disadvantages of different alternatives), equity and debt financing, budgeting, and financial products and services available in Ghana.

The coaches will support agribusiness clusters in five regions (Brong Ahafo, Upper East, Volta, Western and Northern), producing a range of commodities including maize, cashew, guinea fowl, fruits, vegetables, oil palm and soybeans.

“Bad borrowing is a huge problem in Ghana,” explained Joseph Nketia, a coach from Wenchi in the Brong Ahafo region. “Farmers often take money without a clear financial plan. Now I will work with them so that they understand the intricacies of loans. We want to make sure that every loan is a good loan.”

Was the workshop effective? Participants underwent a written test, with 20 questions, as part of a ‘certification’ process ICRA has put in place for all agribusiness coaches. The same test was administered before and after the workshop. Before: average score 8 out of 20 (range 6-13). After: average score 17 (range 14-19).

Opportunities in Ethiopia

Findings from a research study in Ethiopia are helping to identify products and marketing strategies to reach base-of-the-pyramid (BOP) consumers. The study, led by BOP Inc, covered five cities (Addis Ababa, Holeta, Adema, Woliso and Sululta) and their surrounding rural areas. Qualitative and quantitative surveys were supplemented by meetings with government nutrition experts, farm cooperatives and others. A detailed report will be available in early 2014.

Meanwhile, here are some highlights.

Milk consumption by the poor could be significantly increased by increasing women’s awareness about its health value. Many of the women surveyed – in both urban and rural areas – had little knowledge of nutrition. Another opportunity is in processed foods such as soy milk, fruit drinks and tomato sauce, if they can be sold in small, inexpensive packages.

The challenge is to improve nutrition among BOP households. The traditional diet – mostly teff (a small-grained cereal) and enset (false banana) – is high in starch but low in protein. In addition, nutrition is also affected by the widespread practice of fasting twice a week: many households do not eat meat or dairy products on Wednesdays and Fridays.
**Quick Cash for Sorghum Farmers**

2SCALE partners are using IT tools and financial innovation to dramatically speed up payments in agricultural value chains.

The partners are Agrilife, an IT firm that developed the software; Century Microfinance (a private firm that offers small agricultural loans) and Smart Logistics, a procurement agent supplying sorghum to the giant beer-maker, East African Breweries.

Smart Logistics buys sorghum from its network of small-scale farmers in eastern Kenya. Most farmers want immediate payment – otherwise they are tempted to ‘side-sell’ for cash to another buyer, regardless of their contract obligations. But Smart Logistics couldn’t pay the farmers until it received payment from the brewery. Agrilife and Century Microfinance developed a high-tech but easy-to-use solution.

- An online platform tracks what quantities each farmer has delivered. Based on data from the platform, Century offers a loan for up to half the value of grain delivered. Farmers receive the money within a day of applying for the loan.
- In addition, farmers can leverage on the grain deliveries to access credit to buy seeds, fertilizers and other inputs for the next season.
- Payments by Smart Logistics to the farmer (30 days later) are made into the farmer’s account with Century. Loans are deducted and the farmer receives the balance.

In the pilot program last season, 106 farmers and six traders (aggregators) received loans. The pilot was highly successful – simple to monitor, low transaction costs, immediate benefits. It is being scaled up this season, targeting 500-1000 farmers, with a total loan disbursement of KSh 8.8 to 17 million ($100,000 to 200,000) depending on the size of the harvest and the number of farmers. We expect good results and lessons that can be applied in other countries and for other crops.

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**Pilot Dairies in Nigeria**

Action research in Nigeria’s Oyo state is helping small-scale dairy producers to improve animal health and milk yields. The research program is one component of a broad-ranging partnership between the Nigerian government, dairy firm FrieslandCampina Wamco and 2SCALE.

We began with a 3-month pilot program, July to September 2013. Community response was so positive that the pilot sites are being converted into model farms, to serve as permanent demonstration and training centers.

The key technology – feed supplementation – was demonstrated through a simple experiment conducted near the Alaga milk collection center. The community provided 11 cows. In addition to normal grazing, each cow was given 2 kg per day of feed supplement (maize, soya cake and cassava chips). A salt lick was also provided.

The result? Milk yield increased by 50 percent in three cows and by 100 percent in eight cows. Most animals began giving 4.5 liters per day – remarkable for this breed, which is known for hardness rather than productivity.

The action research program included several other components: forage production, herd segregation, focusing care on a few selected, highly productive animals, provision of shade, preventive health care, record keeping, herd hygiene, artificial insemination and a specially designed net to control tsetse flies.

“The new methods are almost like magic,” said Alhaji Sale Galadima, a Fulani elder who has two cows in the demonstration. “Both my cows put on weight, and began giving much more milk, within two weeks. Not only me, but the rest of my family will adopt the practices we learned from the pilot dairy.”

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The 2SCALE project is funded by the Netherlands government and implemented jointly by IFDC, ICRA and BoP Inc. 2SCALE was launched in June 2012. In the next 5 years we aim to develop 500 viable, sustainable agribusiness clusters in 12 countries across Sub-Saharan Africa, reaching 1.15 million farmers.