



# ISSUE BRIEF

## Seed Systems: From Procurement to Marketing



CARE 2015 @ Lucy Beck

**OVERVIEW** CARE works with rural households to improve agricultural activities, from pre-production planning to facilitating access to inputs to and marketing and sale of crops. Most of CARE's food and nutrition security programs involve the procurement, distribution, storage or multiplication of seeds for increased agricultural production among small-scale rural farmers.

For over 70 years, CARE has worked in the world's poorest communities to ensure that rural farmers have the resources they need to feed their families and communities. CARE works in 94 countries with more than 80 million people worldwide through more than 1,000 projects, from emergency relief to early childhood education, to maternal and reproductive health. Programs focus on the poor and extreme poor, those who live on less than \$1.25 a day, and have little access to markets, education, or decision-making. Through village savings groups that empower members to gain financial independence, or by providing drought-resistant seeds that better withstand extreme weather, or by working with private sector partners to help farmers reach markets, CARE's projects empower women and men to be agents of change in their communities.

Across CARE's projects, we build farmers' **knowledge base about seed varieties** and farming practices that are suitable for changing environmental conditions, and raise their awareness about **ways to adapt to climate change** and protect natural

resources. A core focus of CARE's work is to **increase production of high-value, marketable crops using quality seeds**. CARE connects farmers to extension agents, input suppliers, and agro-processors to demonstrate to farmers how best to use the seeds, ensure that they are **harvesting, handling and storing** their farm produce to meet quality standards while increasing productivity by adapting to climate change.

## GRAD (USAID—Ethiopia)

### TECHNICAL AREA: SEED MULTIPLICATION



CARE 2013 @ Josh Estey

Through the USAID Feed the Future PSNP Plus program in Ethiopia (now known as the GRAD Program), CARE developed a sustainable informal seed multiplication system with improved seed varieties to improve seed quality and food security in an area where 98% of the seed is farmer produced. CARE brought a government crop expert to the regional Hawassa Research Center to discuss the idea of introducing the new seed varieties within the communities and worked directly with the farmers to identify the best adaptable seed for the area. Through a newly established Farmers' Research Group (FRG), CARE conducted an on-farm trial to develop varieties and crop practices for high stress environments, especially those prone to drought, low nitrogen and pests; involve farmers in that process; and increase awareness of improved seed availability throughout the region, to increase likelihood of adoption by all and access to quality seed for improved market integration. FRG members produced and disseminated seeds on their own - selling some, reinvesting some for the next season, and training other interested farmers in quality production methods. The Program also connected farmers to the government's Agriculture and Rural Development Office, which trained a total of 134 households in the two woredas to become

seed multipliers.

For the individual seed sellers, the USAID Ethiopia GRAD project provided four weighing scales at the central market, so that farmers can weigh their seeds to ensure a proper price. However, the seed multiplier households all became members of local cooperatives in their respective woredas to maintain quality, increase negotiating power, and ensure a sustainable market. The Project facilitated two agreements. First, the primary cooperative bought the seed from the producers with a 10% price mark-up included. Second, the project negotiated a "fair price" and a binding agreement for the primary cooperative to sell seed to the regional Sidama Elto union after the next harvest.

1,136 households accessed improved seed, including 204 female headed households, sourced by the FRG members, seed multipliers, and revolving seed bank recipients (as part of the value chain activities). After the first production period, the original 45 FRG members informally worked with over 186 additional HHs through farmer-to-farmer training, selling, gifts, and exchange. Informal seed multiplication has increased local access to improved seed varieties. 134 HHs were identified to expand the seed multiplication system, received training, planted the improved seed, and harvested, sold, reinvested, and consumed the crop. This work has resulted in strengthened ties with two regional research centers and, after two cycles, a 50% increased yield of seed stock equaling 28,600 kg - on the market or being disseminated within the woredas.

## Pathways (Gates Fdn—Malawi)

### TECHNICAL AREA: SEED MULTIPLICATION AND SEED BANKS

In Malawi, the Bill and Melinda Gates Foundation-funded Pathways program increased production of certified seeds through assisting smallholder women-farmer producers in improving their production, post-harvest and market linkages. The program created awareness of new and improved varieties produced in the country through Department of Agriculture Research and CGIAR. It also improved agronomic skills and general crop management of women smallholder farmers.

Initial seed 1,600 kg was procured by ICRISAT (International Crops Research Institute for the Semi-Arid Tropics), distributed to 160 producer group members for multiplication. To date 1,457 farmers have benefitted from

the community seed bank and 6174 kilograms have been redistributed. Further, Pathways initiated contract seed farming with ICRISAT where selected model farmers from the FFBS groups were targeted. 195 (137F, 56M) producer group members were linked to the initiative. ICRISAT distributed 12,040 kgs of Nsinjira seed variety. This helped farmers to access improved seed varieties and they have sold 27,205 kgs of groundnuts worth MK20,421,042 (\$27,974) over a period of three years. Lastly, demonstration plots were used to promote agronomic practices, pest and disease management and harvest and post-harvest handling management for the program promoted value chains. Cumulatively a total of 325 demonstration plots were mounted for 5 years through agronomy and general crop management interventions.

As a result, Pathways Malawi made newer varieties readily available to farmers for both soya and groundnuts. The farmers got the seeds before they became readily available on the market because of the relationship built with ICRISAT and IITA. Further, availability of improved seed resulted in increased production yields and income, and long-term agronomy, market access and management skills for small holder farmers, especially women, have been strengthened, which is important given existing challenges to receive adequate extension support in the country.

## **TATWEER (AusAID—West Bank)**

### **TECHNICAL AREA: COMMUNITY SEED BANKS**

The TATWEER Project, implemented by CARE in Jenin and Tubas Governorates in the north of the West Bank, aims to reduce vulnerability and increase resilience of vulnerable communities through access to locally available quality seeds to improve household food security. The Project established seed banks to address a critical lack of access to quality seed varieties by farmers in these territories, which are monopolized by Israeli companies. Since 2000, the prices of seeds distributed in Jenin and Tubas have increased seven-fold, even while the quality of these seeds has reduced substantially. Farmers in Jenin are highly vulnerable to external shocks and unavailability of water, drought, frost or floods have kept their income highly unstable, with some farmers becoming tied by lenders or dealers. Traditionally farmers had always paid for the seeds they bought after harvest time, but most local dealers now require them to pay for their orders upfront. While, some farmers had the capacity to store

seeds for future seasons, many smaller farmers were simply forced to abandon farming.



The Seed Bank is community-run facility that has been operating since 2006 by the Jenin Governorate Farmers Association (JGFA). TATWEER's primary intervention was to build the capacities of the JGFA as a strong local mobiliser able to run and sustain the Seed Multiplication Bank during and after the end of TATWEER project. Linking the Seed Bank to a local CBO aimed to enhance the community ownership over the Seed Multiplication Bank as it is established based on their needs, run, and sustained by their elected board members. CARE worked with local JGFA and other CBOs to build their capacity to serve as collectives for more than 1,100 farmers to access high quality and affordable seeds, mainly wheat in addition to alfalfa, hummus, beans and vetch, as well as a place for training and knowledge. The Seed Banks connect farmers together, ensures collective agreements with service providers and private actors through which sales increase the farmer's profitability. Due to the quality assurance provided by the Seed Bank, farmers were linked to New Farm Company (NFC), a Palestinian social enterprise that exported tens of tons of Freekeh (smoked-wheat) to the UK. The Seed Bank not only improved the livelihood of farmers but also opened new market/marketing channels and access to new (external) markets rather than compete against local suppliers. 93% of the participants in the Seed Bank stated that they are applying improved techniques learned under TATWEER of which 60.3% reported an increase in production because of these techniques and 54% an increase in production quality.

Capacity building activities improve their technical, management, planning, and organizational skills building to allow the Seed Bank to better correspond and meet

farmers' demand. JGFA, through the Seed Bank, replaced the services that were previously provided by few local dealers who charged 7 times higher prices for poor quality seeds and equipment rental. CARE also worked female participants to Board members in at least four CBOs, who the Farm Field Business Schools marketing committees.

## ADAPT (Gates Fdn—Zambia)

### TECHNICAL AREA: AGRO-DEALERS



The ADAPT Program in Zambia was 3-year agribusiness project funded by the Agriculture Revolution in Africa (AGRA) and the Bill and Melinda Gates Foundation, implemented in nine districts in three project regions: Copperbelt, Central and Eastern. The project reached 91,000 farmers with improved seed and other agro-inputs by establishing a scalable network of 500 rural agro-dealers. The intent of the project was to facilitate linkages between supply chain actors and the smallholder market to improve the affordability, timeliness, range, and volume of inputs and services reaching smallholder farmers in the target geographic areas.

Building on a maize sector analysis, CARE calculated that enabling smallholders to consistently access high-performing hybrid seeds had the potential to triple productivity from an average of 1.4 tons per hectare to nearly 5 tons per hectare. While the focus of most input supply companies in Zambia is on serving medium-to large-scale producers, CARE partnered with existing agro-dealers — small input suppliers operating along main roads or in rural bomas (town centers) — to develop a network of rural sales agents. Each agent collects orders from rural smallholders and facilitates trade between them and their associated agro-dealer.

The approach avoided competing with existing agro-dealers who had emerged organically and through other development efforts. CARE was keen to support, not supplant, existing private sector actors who were genuinely interested in serving smallholders and supporting CARE's long-term goal. By partnering with agro-dealers who already knew how to work in the input supply sector, ADAPT was better able to reach scale more quickly. These agro-dealers were the missing 'final mile' in getting inputs to rural farmers, bridging the last gap to deliver inputs to the rural smallholders.

In partnership with a local mobile transactions company, MTZL, CARE invested in the development of an e-voucher system that enabled agro-dealers to process sales using SMS to transfer funds to the agro-dealers bank account. The system saved agro-dealers time and money in comparison to traditional voucher schemes (which required the agro-dealer to travel to the nearest town for reimbursement), increased smallholder choice (they could redeem vouchers at multiple agro-dealers) and improved efficiency and transparency (previously, transactions were costly and open to corruption). It also provided agro-dealers an opportunity to build customer relationships with smallholders who might otherwise not have patronized their store. Agro-dealers were also provided an introductory, three-day training focused on basic business skills including record keeping, stock taking and establishing profitable prices. This was followed by a separate training on agriculture inputs. Initial lessons included proper storage and planting techniques for hybrid seeds, safe storage and change to "proper application of agro-chemicals and fertilizer. The trainings established a common base of understanding among all agro-dealers on which CARE then set out to build.

The impact of ADAPT and the agro-dealership model is clear. Local farmers now save 20,000 Kwacha (US \$4) and a full day journey by purchasing vegetable seed and fertilizers at the local agro-dealer shop. Some farmers also have begun growing vegetables during the low season for the first time to help diversify their diets. Farmers saw an 85% reduction in the distance they had to travel to get seeds, and saw their production costs go down. Using their own money, 96,000 farmers had access to improved seeds they would never have used before the program. In fact, the amount of improved seed sold went up 370 times after the project re-design in 2009.

## UBALE (USAID—Malawi)

### TECHNICAL AREA: ACCESS TO SEEDS AND MARKETS

UBALE conducts Diversity and Nutrition for Enhanced Resilience (DiNER) vouchers and fairs to ensure that 40% of the very poor rural households have access to a wide variety of options for improving home nutrition, starting with quality seeds, as well as increasing food security and resilience in the face of climactic variations. Selection of participants is community-based and participatory, based on relative wealth ranking using criteria such as asset ownership (land and livestock) and dependency ratio.

DiNER Fairs achieve the following:

- Promote market orientation;
- Increase overall access to seeds of drought-tolerant grains, biofortified crops, fruit trees, selected vegetables, and poultry;
- Promote program participation by the very poor through outreach from Community Animal Health Workers (Paravets), Seed Multiplication Groups, crop & livestock insurance providers, and agricultural extension service providers; and
- Promote integration by hosting private service providers (PSPs) to promote village savings and loans associations (VSLA) and disseminating key agriculture and nutrition messages

DiNER fairs provide beneficiaries with a market-based system to access diverse and improved varieties of seeds as well as small livestock, such as drought-tolerant grains, biofortified crops, fruit trees, vegetatively propagated crops (e.g. cassava, sweet potato), and selected vegetables and poultry. At the fairs, UBALE staff, alongside district agriculture extension and nutrition staff, provide technical support on growing and utilizing new varieties. Beneficiaries are also linked to FFA activities to assist them in getting through the first production cycle.

Due to the extreme poverty of these beneficiary households, DiNER vouchers are provided at no cost to beneficiaries. DiNER fairs are not designed to be sustained after UBALE ends; rather, once farmers restore their basic productive asset base, other components of the UBALE package for the very poor will help farmers to protect and grow these assets. For example, food for assets (FFA), SMART Skills, and Lead Farmer services on topics like Climate-Smart Agriculture will provide farmers with the necessary skills to increase and diversify

production, marketing of crops and livestock, and ultimately increase income and resilience to market shocks. Lastly, UBALE will be establishing sustainable farmer-based seed production system to produce planting materials of some of the key food crops that are made available initially through the DiNER Fairs (such as tree seedlings, sweet potato, cassava and legumes such as cowpeas and groundnuts). This process will also contribute to ensuring that most communities have sustainable access to diversity in the future.



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## SHOUHARDO (USAID—Bangladesh)

### TECHNICAL AREA: ACCESS TO SEEDS AND MARKETS; AGRO-DEALERS

SHOUHARDO is working to address bottlenecks in getting quality seeds by farmers. We differentiate between micro dealers and sellers, and engage these market actors, as described below.

**Micro seed dealer-** linked to seed company: SHOUHARDO is working with private seed companies to develop micro seed dealers where usual distribution channel is absent. Those dealers are working in remote villages collecting seeds from seed company based on field demand with company defined profit margins. The program provides business skills while the private company provided merchandising and product knowledge and marketing skills to the seed dealers.

**Micro seed seller-** existing without formal links to seed company: The program selected some local entrepreneurs who deal in seeds as well as other inputs. Program linked them with seed dealers located at sub-district level for collecting quality seed based on farmers demand. Those micro seed sellers also linked with FFBS farmers for buying quality seed at village level. This is done when there are no existing sellers. Where there are reputable sellers in the local markets, farmers are connected to them through the

Farm Field Business Schools marketing committees.



CARE 2013 @ Viivi Erkkila

As part of SHOUHARDO's integrated approach to agriculture and climate change adaptation, technical topics include the utilization of drought and flood-resilient improved seeds, conservation agriculture techniques such as minimum tillage, terracing, responsible use of fertilizer and pesticides and integrated soil fertility management (ISFM).

SHOUHARDO connects farmers to input suppliers who are effective and appropriate. CARE is working with input supply companies such as LalTeer Seed Ltd and Brac Seed Enterprise (large Bangladesh input suppliers) through formal MOU at central level. In addition to these national MOUs, and based on existing geographical coverage, the program has identified other companies such as Metal and ACI Ltd to ensure access to quality seeds to program participants. In addition to selling the seeds, the program ensures that the dealers are trained and are providing technical services to Farmer Field and Business Schools. CARE has ensured that the services and knowledge is in line with program aspiration that promote better seeds and appropriate technologies for the small-scale farmers.

## ENSURE (USAID, Zimbabwe)

### TECHNICAL AREA: ACCESS TO SEEDS AND MARKETS

In Zimbabwe, both formal and informal seed systems have been deteriorating since 2000 owing to several factors which

include, climate change/ variability, the fast track land reform program which gave rise to socio-economic decline. In a bid to assist the vulnerable and poor farmers in the communities to help them attain food security, CARE incorporated agricultural input assistance which included seed supply in its agriculture and food security sector.

The key objectives of the Agricultural recovery programs include:

- Improve seed security
- To promote improved and sustainable agricultural practices such as climate smart agriculture and reduce post-harvest losses among farmers
- To strengthen local coping mechanisms through crop diversification, Strengthen local coping mechanisms through crop diversification

Seed Supply Models used by CARE- ENSURE, OFDA and PRP Projects:

- Seed pack supply and direct distribution to the targeted farmers
- Seed supply and distribution through local agro-dealer
- Seed supply and distribution through a voucher system
- Seed supply and direct distribution only to the selected lead farmers for establishing demonstration plots
- Seed supply and direct distribution to the selected lead farmers for seed multiplication
- Linking farmers to agro-dealers for purchase of seed by farmers in groups

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