



In many cases, the technical assistance involved in these projects is provided by the same research institution with whom the farmers associations are working on seed research and selection — further deepening their partnership.

IMPROVED SEED DISTRIBUTION NETWORKS

Lacking the necessary connections with local farming communities, researchers often distribute seeds to the government or other large clients, but these distributions do not always trickle down to marginalized farmers. LWR works with partner farmer organizations not only to increase their capacity to multiply improved seed, but also to improve distribution systems to ensure that farmers know about and access improved seed varieties once they exist. To do this, LWR works to build farmers' associations' capacity to:

- increase and improve seed marketing activities;
- strengthen distribution networks; and
- serve as focal points for training in production technologies, sales and marketing;

OPTIMIZED UTILIZATION OF IMPROVED CROP VARIETIES

While developing and improving the supply of quality seed is critical for agricultural success, for real impact, farmers must know that improved seeds exist and understand their value. In addition to improving the production, processing and distribution of seeds, LWR also works to:

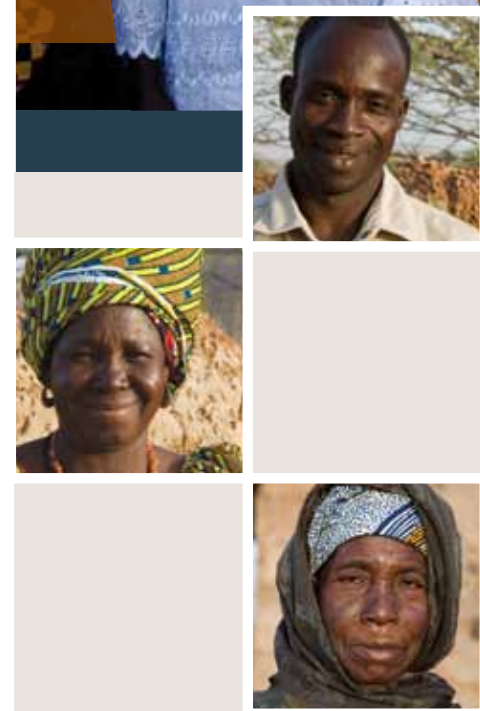
- support outreach to significantly increase the adoption of improved crop varieties by other farmers and their communities.
- increase the demand for and use of quality seeds by increasing farmers' access to credit to purchase the improved seeds and other inputs; and,
- increase access to advisory services to ensure improved crop outcomes.

With these interventions, LWR is working with farmers to increase their participation in the agricultural value chain. As small-holder families participate more fully in the value chain, they will be able to realize higher returns on their production and influence the decisions that directly affect their lives and livelihoods.



LWR'S WORK ADDING VALUE to FARMERS' PRODUCTION

Building Quality Commercial Seeds Systems



THE CHALLENGE OF SMALLHOLDER FARMING

Throughout the developing world, millions of smallholder farmers struggle to find ways to increase their incomes and improve their livelihoods. However, a range of obstacles prevent smallholder farmers from maximizing the return on their production, including:

- Unsustainable land use
- Limited access to inputs (seeds, fertilizer, etc.) due to lack of access to credit
- Lack of technical expertise in production, post-harvest handling and processing of crops
- Limited control over terms of trade due to lack of market information and marketing capacity
- Limited collective action

To address these challenges, LWR uses an agricultural value chain approach to promote sustainable development in rural communities. LWR defines the agricultural value chain as a set of interventions by chain actors and service providers to generate higher value-added for agricultural products and create win-win relationships among chain actors, producers and service providers. With a focus on asset-building that includes food security, income generation and community empowerment, LWR works with partner organizations in 16 countries in Africa, Asia and Latin America to target high-value agricultural and livestock commodities to increase incomes, as well as market strategies to increase the proportion of benefits reaching farmers.

BARRIERS TO FARMER SUCCESS: THE COMMERCIAL SEED GAP

Many small holder farmers struggle from the very start of the agricultural value chain — accessing quality inputs — especially improved seed varieties. As the single essential input of all plant-based agricultural systems, seeds determine the pro-

ORGANIZATIONAL OVERVIEW

Lutheran World Relief (LWR) is a non-governmental organization, founded in 1945 to respond to the needs of communities devastated by WWII. Today LWR works with local implementing partners worldwide to respond to emergencies, seek lasting solutions to rural poverty, and work for peace and justice for all. LWR seeks to empower communities through a philosophy and framework called accompaniment, which emphasizes shared values and jointly-developed objectives to achieve sustainable results.

THE SEED PRODUCTION PROCESS: Developing, processing and distributing improved certified seed is a complex process. It begins with researchers who collect the base material for seed development (germplasm). They then use this to select and improve on particular traits for improved performance. From that process a cultivar is created, from which researchers develop a breeder seed. With the breeder seed, they create a foundation seed, which is then distributed to seed multipliers. Public, private and NGO/CBO seed multipliers then transform the foundation seed into processed seed. The multiplier also ensures that the seed is then certified by a government certification agency before marketing and distributing the final product to wholesalers and retailers, as well as directly to farmers.

LWR works to increase farmer participation and capacity throughout the entire process to ensure that quality, appropriate and desirable seeds are available, accessible and widely used.



ductivity of all other steps along the chain. However, “improved” seeds are often not available, too expensive, or farmers simply may not know about them. In many marginalized areas, chronic supply problems and undeveloped demand keep farmers reliant on seeds that are vulnerable to drought, pests, or other weather disruptions. As a result, farmers often plant seeds they themselves have saved from previous crops, or that they have obtained from other local farmers. This method results in low yields and poor quality crops, and ultimately enduring rural poverty. When improved seeds are in fact available, poor information and high cost mean there is often limited demand for them by local farmers.

Building a reliable supply of competitively-priced, locally-adapted, improved seed varieties would greatly increase agricultural efficiency, productivity, and profitability. However, achieving this requires strong ties among seed researchers, local seed multipliers and distributors, government agencies and extension services, and the farmers who are the end users. Unfortunately, institutional seed research is often conducted without active involvement of the farmers who will use the improved seeds. As a result, the seeds often produce crops that, though hardy and suitable, may not: 1) fit local farming systems and management practices; 2) satisfy farmers’ preferences in terms of physical characteristics or storage properties; or 3) produce sufficient amounts of high-quality by-products (such as animal fodder). In addition, when appropriate seeds are created, there is often a lack of technical knowledge and financial resources among farmers to

effectively multiply the seeds for distribution. Finally, distribution systems are often extremely weak, making it difficult to get suitable seeds in the hands of the farmers who most need them.

On the demand side, as farmers struggle with the costs of production, and a lack of access to credit, they are often unable to afford the higher quality seeds. Farmers may not know about the improved seeds or may not yet be convinced of their benefits. In addition, as described above, farmers’ limited participation in breeding activities limits the adoption of new varieties — in some cases to less than 10% of the crop varieties that are offered.¹

LWR’S APPROACH: IMPROVING SUPPLY AND INCREASING DEMAND FOR QUALITY SEEDS

Building on decades of experience working with poor, small-scale farming communities and more recent collaboration with researchers, LWR works to address both the supply and demand sides of the seed production system. LWR works with partner organizations to: link farmers with researchers to identify and develop improved crop varieties with the best agronomic, nutritional, technological and commercial potential for adoption; increase farmers’ organizations’ ability to multiply and process quality seed; improve local marketing and distribution networks to help ensure that quality seeds reach farmers; increase local knowledge of and demand for improved seeds.

1. New Partnership for Africa’s Development (NEPAD), 2003. “Comprehensive Africa Agriculture Development Programme (CAADP)”.

Participatory Client-Oriented Variety Selection and Research

Effective seed supply systems begin with quality research and development. LWR works with partner research institutions to develop more client-oriented research systems by engaging farmers from the very start of the process. For researchers to access quality germplasm and be able to use it to develop appropriate cultivars, breeder and then foundation seed, they need access to farmers. LWR provides that access, connecting research institutions to farmer associations and engaging both in active partnership. This collaboration seeks to increase farmers’ participation in various stages of the natural selection and varietal development process of:

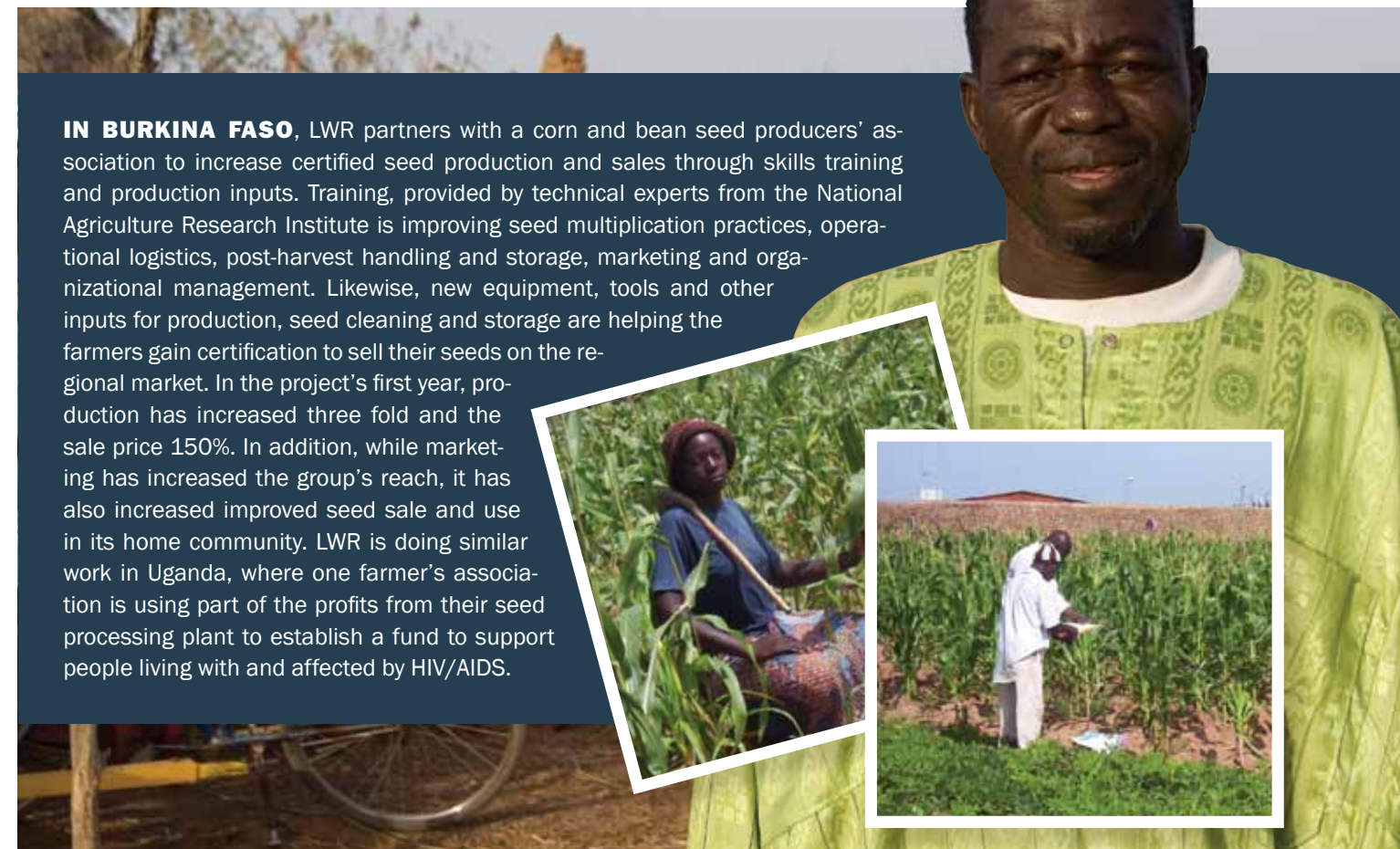
- selection of source germplasm;
- trait development (pre-breeding);
- cultivar development; and/or
- varietal evaluation.

The level of involvement varies from project to project, but in all cases farmers’ increased participation helps ensure a seed that is more appropriate for local conditions and more likely to be widely adopted.

EFFECTIVE SEED MULTIPLICATION

In addition to participatory research and the development of replicable seeds, a supply system needs strong seed multipliers to ensure that farmers can access improved seeds — organizations that can successfully take foundation seeds from researchers and transform and process them into certified seed for distribution and sale. To build the local multiplier capacity, LWR works with farmers’ associations to:

- access needed inputs (via access to financial institutions) to ensure quality seed crop production;
- improve crop husbandry skills in order to become seed producers of improved varieties;
- improve post harvest handling of seeds, such as drying, shelling, treating and bagging; and
- prepare and attain certification for seed and ensure quality control throughout all phases of production.



IN BURKINA FASO, LWR partners with a corn and bean seed producers’ association to increase certified seed production and sales through skills training and production inputs. Training, provided by technical experts from the National Agriculture Research Institute is improving seed multiplication practices, operational logistics, post-harvest handling and storage, marketing and organizational management. Likewise, new equipment, tools and other inputs for production, seed cleaning and storage are helping the farmers gain certification to sell their seeds on the regional market. In the project’s first year, production has increased three fold and the sale price 150%. In addition, while marketing has increased the group’s reach, it has also increased improved seed sale and use in its home community. LWR is doing similar work in Uganda, where one farmer’s association is using part of the profits from their seed processing plant to establish a fund to support people living with and affected by HIV/AIDS.