SCALING UP IMPROVED LEGUME TECHNOLOGIES IN TANZANIA

FROM COMICS TO RADIO: TARGETED MEDIA CAMPAIGNS DRIVE ADOPTION OF BETTER AGRICULTURAL PRACTICES

WHAT CANADIAN AND TANZANIAN COLLABORATORS DISCOVERED:

✓ A cost-effective multiple media campaign that scaled up the adoption of improved legume technologies by small-scale farmers
✓ Improved agricultural practices adopted by 19.6% of farmers receiving information
✓ Increased agricultural productivity
✓ Improved access to resources, markets and incomes
✓ Informed policies that promote community-based seed systems with high-quality standards and lower production costs

BY THE NUMBERS

• An estimated 655,662 farming family members (394,023 male and 261,639 female) directly reached with information about improved legume technologies through multimedia campaigns, with a potential combined audience of up to 8 million
• 11,500 listening group members (especially women and youth)
• Tens of thousands of SMS and weekly poll interactions via mobile phone
• The media campaigns resulted in an estimated 128,589 farming family members (77,153 male and 51,436 female) starting to use at least one of the improved legume technology practices (e.g., improved seeds, row spacing, fertilizing, weeding, storing, intercropping)
• 11.8 tonnes of soybean seed and 8 tonnes of common bean seed produced
• 1,682 farmers attended training days at 32 demonstration plots, with an estimated 20,000 more farmers influenced
• 10,000 copies of 10 different extension support materials distributed targeting farmers, extension workers, agro-dealers and other intermediaries
• 341 rural agro-dealers, 14 hub agro dealers, and 22 extension officers trained, including 180 agro-dealers trained on input business management
• Seven key areas of policy areas were influenced through a dialogue process

THE IMPACT:

The more information sources that reach farming households, the more likely they are to adopt new technologies. In this project, farmers heard consistent messages about the benefits of improved legume technologies through information channels (e.g., print and interactive radio), traditional extension approaches (e.g., demo plots, training days), and information tailored for young, elderly, men and women farmers (e.g., comics, radio listening groups). This approach also resulted in suppliers being more responsive to farmer needs (e.g., by ensuring access to inputs farmers need), as well as pragmatic policy reforms to cut input costs (e.g., fertilizer) and facilitate faster registration of seed
varieties that farmers want. All this has boosted market scale-up of new high yielding, disease-resistant seeds and improved uptake of the technologies. Key to the project’s successes have been the involvement of a wide variety of partners covering the complexity of activities: seed supply, research, policy, communications, and interactive radio, as well as the sharing of an agreed technology brief to drive consistent messaging.

THE CHALLENGE:

Improving legume yields is a cost-effective and affordable way to improve food security and nutrition, livelihoods and soil fertility. Despite the well-documented advantages of improved legume technologies validated by N2Africa project (a partner on this project), and the national agricultural research institutes in Tanzania, adoption is slow. The main hurdles were the lack of: information reaching farmers, an effective national extension service, and an input supply system that responds to farmer needs. Those needs included: the timely availability of affordable high-quality seeds, fertilizers, and rhizobium inoculants (for soybeans). Inoculants are a natural process that improves biological nitrogen fixation and a sustainable way to improve legume yields. A collaborative effort was undertaken to more effectively support farmers through shared knowledge and resources, policies and regulations and strengthened capacity of national systems to improve their access to seeds, inputs, and markets.

TRANSLATING RESEARCH INTO ACTION

Multiple media approaches reach more farmers and increase uptake

“We meet every week to listen to programs on soybean and discuss within the group the implications (and) we have established a group garden where we apply the learned practices.”

Members of the Umoja Village Group in Makambako

- Radio campaigns proved the most effective at targeting large audiences with 6 radio series reaching an estimated 508,000 farming family members, with space for listeners to question and discuss the information. Radio listening groups effectively reached women and youth at the community level.
- Scale up strategy proved cost effective: CAD$2/farmer reached directly, and less than CAD$10/farmer who has started to use one or more of the promoted practices
- The use of multiple delivery and communication approaches influenced the uptake of improved bean varieties, fertilizer application, and use of PICS bags (Purdue Improved Crop Storage) to reduce post-harvest loss
- 504,454 copies of Shujaaz comic distributed nationwide (an estimated 75,000 reached young people in bean farming families in the target areas). By 2017, Shujaaz was reaching 23% of all youth in Tanzania.
- Interactive radio series (with polls and phone-ins) launched on four stations in two regions. Capacity developed to ensure stations’ ability to run similar campaigns in the future (e.g., training on the use of information and communication technologies, ongoing support, mentoring, downloadable materials)
- 11,000 copies of 10 different extension support materials (e.g., promoting good agronomic practices) were printed and distributed to farmers, extension workers, agro-dealers, and other intermediaries
- Manual developed on how the public and private sector can invest in communications for development
Influencing decisions that increase use of legume technologies

A farmer in Northern Tanzania began growing improved bean varieties in 2012. Since then she has scaled up — literally and figuratively — three times. She now has a better home and has raised herself out of poverty and food insecurity.

Farmer stories by Spencer Van Dyk for the Pan-African Bean Research Alliance

- 52 participants attended two seed policy meetings that influenced 7 key areas of policy change, including ones to register seed varieties faster, cut input costs, and expand community-based seed systems for new varieties
- Demonstration plots and field days encouraged women and young farmers to participate, enhancing uptake of innovations
- 15 farmer field days for common beans attended by 1,113 farmers (642 male, 491 female; included 976 youth); 16 farmer field days for soybean attended by 807 farmers (501 male, 306 females; including 280 youth)

Improving farmer access to inputs and markets

“The demonstration plot helped us to see and learn soybean production practices. Our community participated in setting up the demo and we have maintained it with the help of our village extension.”

Ms. Esther Mbega, Ward Councillor, Southern Tanzania

- The parastatal Agricultural Seed Agency (ASA) has significantly altered its business model by stocking seeds for both soybean and common bean varieties. Private sector seed producers are following suit.
- ASA developed an agro-dealer network, and 75 agro dealers were trained on input business management
- 14 agro-dealers (12 men, 2 women) and 22 extension staff (17 men, 5 women) participated in train-the-trainer workshops. This “hub agro dealer” model makes inputs such as pest control and soil fertility available locally, and ensures local capacity to train more dealers and extension workers.
- Two companies (Guavay Co Ltd. in Dar-es-salaam and Mtewele General Traders in Njombe) have been contracted to distribute inoculants to other agro dealers and farmers. Demand for inoculants increased from 247 packets in 2016 to 3,332 packets in 2017

WHAT’S NEXT?

The International Institute of Tropical Agriculture is developing distribution channels for inoculant and seed in North and South Tanzania, while farmers continue to demonstrate interest in these inputs. More work is needed to ensure that farmers are organized and persistent in their approaches to marketing cash crops through relationships with trusted buyers. The Tanzania Communications Regulatory Authority expressed an interest to use evidence from the project to explore how policy and regulation can further improve farmers’ access to information. The project team hopes to replicate the approach in other regions.

LEARN MORE ABOUT THIS PROJECT:


KEY OUTPUTS

ACADEMIC PAPERS

Journal of Agricultural Education and Extension, DOI: 10.1080/1389224X.2018.1432495


**OTHER**

*Socially engaged investors guide to communication for development: how public and private investment in communication for development can influence scale-up and adoption in small-scale farming households in sub-Saharan Africa.* SILT project team. (2018) http://hdl.handle.net/10625/57150

*Scaling Up Improved Legume Technologies - Interactive Map.* https://fri-silt.netlify.com/

**VIEW ALL RELATED PROJECT OUTPUTS IN THE IDRC DIGITAL LIBRARY**

https://idl-bnc-idrc.dspacedirect.org/browse?type=project&value=108127

**QUICK FACTS**

Project location(s): Tanzania

Institutions: Farm Radio International (Canada); Centre for Agricultural and Biosciences International (CABI) (Kenya); African Fertilizer and Agribusiness Partnership (AFAP) (Tanzania)

Project duration: November 1, 2015—February 28, 2018

Project budget: CA$ 1,498,174

Project number: 108127

*The Canadian International Food Security Research Fund is jointly funded by Global Affairs Canada and the International Development Research Centre.*