



CASE STUDY

Demand-led seed system accelerates adoption of improved bean, sorghum, and groundnut varieties in Tanzania

Authors

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Background information

Producers of Open Pollinated Varieties (OPVs) such as groundnuts, sorghum, and beans primarily source their planting materials from local markets, neighbours, and their own saved seeds, with only 3% obtained from formal or semi-formal seed systems. This heavy reliance on markets and farm-saved seeds has perpetuated the use of outdated varieties that are well-known to traders and farmers. Limited awareness of newer varieties from public seed producers, such as the Tanzanian Agricultural Research Institute (TARI), public universities, and private seed companies, has contributed to low adoption rates. As a result, traders and farmers continue to sell and grow old, low-yielding that are susceptible to pests and diseases and are increasingly unable to cope with climate change and other biotic and abiotic stresses. This trend persists due to the low value proposition of new varieties, limited promotional efforts, insufficient data to guide adoption decisions, and a dysfunctional seed supply system developed by the national agricultural research systems.



Figure 1: *The fields of Open Pollinated Varieties (Sorghum, Beans and Groundnuts) in Nachingwea, Lindi. (Photo credit: CIAT)*

To address this, the ACCELERATE project led by The Alliance of Bioversity International and CIAT through the Pan-Africa Bean Research Alliance (PABRA), has partnered with TARI, the Tanzania Official Seed Certification Institute (TOSCI), and the International Maize and Wheat Improvement Center (CIMMYT). The goal is to accelerate the adoption of new, higher-performing varieties by using demand-led seed system (DLSS) approaches. In this model, traders, aggregators, or processors act as focal points, prioritizing partnerships within the crop value chain. These partners define clear roles for each player to stimulate demand for newer varieties with market-preferred traits and facilitate varietal turnover. The project incentivizes traders, processors, and aggregators, such as Bora Food Company Ltd to invest in grain off-taking and the production of specific varieties demanded to meet their own grain needs as well as those of their customers.

In addition, the capacity of seed and grain producers associated with these traders is strengthened through training on seed and grain production techniques, while also linking them with reliable sources of quality planting materials. Bora Foods, the lead partner in this case, leverages its partnership with TARI, The Alliance, TOSCI, CIMMYT, and private companies to provide business skills, appropriate agronomic techniques for farmers, and post-harvest management practices through its net-

The DLSS approach seeks to drive investment in the off-taking and processing of beans, sorghum, and groundnut grains, thereby creating demand for specific varieties. This investment is complemented by a range of supportive activities, including scaling up early generation seed (EGS) production through TARI to increase the availability of certified and quality-declared seeds for the required varieties. Additional efforts focus on training small-scale farmers in good agronomic practices to improve productivity, advocating for policy reforms to strengthen the Quality Declared Seed (QDS) system, and enhancing the efficiency of production, marketing, and transportation. The approach also incorporates market intelligence through digital tools and utilizes Multi-Stakeholder Platform (MSP) strategies to improve the flow of information.

The project draws on synergies with other seed system initiatives, such as the Accelerated Varietal Improvement and Seed Delivery in Africa (AVISA), the Vision for Adapted Crops and Soils (VACS) Seed Systems Project, and the CGIAR Seed Equal Initiative, among others.



Figure 2: Researchers from TARI Maruku and CIAT visiting Bora Food Company in Rwenzewe, Bukombe District. (Photo Credit: CIAT)

Bora Food's rise under ACCELERATE Project

Based in Rwenzewe Ward, Bukombe District, Geita Region, Bora Food is a private company led by the dynamic young director, Wisdom Mola. The company specializes in the trade of various cereals, focusing on the purchase, processing, and sale of agricultural products. Bora Food handles a wide range of crops, including common beans, sorghum, rice, groundnuts, maize, sunflower, and cassava. In addition, the company processes several products such as maize flour, cassava flour, sunflower oil, rice, and peanut butter. Bora Food's primary markets span the central, lake, and coastal regions of Tanzania, with key areas including Dodoma, Mwanza, and Dar es Salaam. The company also serves a vital market segment within the Geita Region, supplying food products like maize flour, beans, and nutritious flours specifically designed for young children with special needs, including those in local schools.



Figure 3: Mr. Wisdom Mola the Director of Bora Kilimo Biashara sharing his views in one of the stakeholders meeting prepared by Accelerate project in 23rd and 24th August 2024, Arusha, Tanzania. (Photo credit: CIAT)

As a leading purchaser of agricultural produce in Bukombe District, where it primarily operates, Bora Food also sources grain from nearby districts within Geita Region and neighbouring areas in Kagera Region, including Biharamulo. The company works with over 200 farmers through informal agreements, in addition to sourcing from other local growers. Bora Food has also cultivated strong relationships with schools in Geita, where it has been a consistent supplier of food and food products. Recently, in response to the national initiative to enhance nutrition for schoolchildren, there has been a significant increase in demand for bio-fortified maize flour and beans. While this presents a growth opportunity for the company, it also poses a challenge in securing sufficient volumes of bio-fortified crops, particularly beans. To address this challenge, the Accelerate Project has partnered with Bora Food, connecting the company with improved crop varieties, including bio-fortified options. This partnership aims to bolster Bora Food's capacity to meet the rising demand through strategic collaborations and initiatives designed to enhance local farmer production.

Today, Bora Food has the capacity to process and handle 180 metric tons (MT) of beans, 18 MT of groundnuts, and 60 MT of sorghum annually. The company sells its products in local markets, including schools in the Geita Region, the East African Crude Oil Pipeline Project, mining companies in the Lake Zone, and marketplace traders in Geita. The East African Crude Oil Pipeline Project and local mining companies source grains from Bora Food to supply project beneficiaries and mining workers. Additionally, Bora Food serves traders who export sorghum and groundnuts to neighbouring countries, including Rwanda and Burundi.



Figure 4: Researchers from TARI Maruku visiting Bora Food Company in Rwenzewe, Bukombe District (Photo credit: Bora Food)

Through the ACCELERATE project, the aim is to understand the needs and challenges faced by both large and small marketplace traders, with the goal of driving the adoption of new crop varieties. The project focuses on integrating formal, semi-formal including QDS producers, and informal seed systems to accelerate varietal adoption and turnover. Bora Food plays a key role in this initiative, collaborating closely with large traders to explore strategies for creating demand, thus helping to accelerate the adoption of newly released varieties of beans, sorghum, and groundnuts.

Strengthening partnerships to accelerate adoption of new varieties

In early 2024, Bora Food related to the implementers of the ACCELERATE project, gaining valuable insights into the project's activities, including the promotion of new crop varieties, particularly those released in the last decade. The company became particularly interested in bio-fortified bean varieties such as TARI BEAN 2, 4, 5, and 6, as some of these align with the growing demand in the school market. The company also expressed interest in sorghum varieties of TARI SOR 1 and 2, as it plans to launch new flour products, including a sorghum and cassava blend. Additionally, Bora Food aims to expand its peanut butter business by incorporating groundnut varieties like Tanzanut 2016, Nachi 2015, and TARIKA 1 and 2. Moreover, Bora Food is committed to driving and sustaining demand for these newly released varieties among farmers within its areas of influence, ensuring a reliable supply of quality grain for its markets. As part of this effort, the company is working to build the capacity of farmers willing to produce QDS and ensure the availability of these varieties for grain production.

In May 2024, with technical support from the Project, Bora Food trained 20 farmers (13 men and 7 women) in QDS production for beans and groundnuts. Each participating farmer contributed 50,000 Tanzanian Shillings (approximately 19 USD) to TOSCI, with Bora Food providing the venue and refreshments. The 20 farmers, along with four local extension officers, received training on Good Agronomic Practices (GAPs) for beans and groundnuts from TARI. These extension officers will continue to provide guidance and support to the seed producers as challenges arise. The trained QDS seed producers were awarded certificates by TOSCI's Mwanza regional office. Additionally, the farmers received a seed starter pack consisting of 70 kgs of Uyole 16 and 20kgs of TARI Bean 6, enabling them to produce QDS during the 2024 off-season and the 2024/2025 short rainy season, spanning October 2024 to February 2025.

Through this partnership, Bora Food has acquired 320 kgs of beans including Uyole 18, Selian 13,

(TARI BEAN 6, and TARI BEAN 8 varieties, 60 kgs of sorghum. TARI SOR 1 and 2), and 200 kgs of groundnuts including Naliendele 2016, Tanzanut 2016, Nachi 2015, Narinut 2015 varieties, for the current short rainy season. Looking ahead, Bora Food aims to engage around 300 farmers in the next season to produce new varieties of beans, sorghum, and groundnuts, using the QDS seed distributed by the company.



Figure 5 & 6: Training of seed producers on QDS production conducted by Bora Food in collaboration with Accelerate project and TOSCI, Mwanza Region in Bukombe District, Geita region. (Photo credit: TARI)



Picture 6: QDS Farmers getting awareness on the new released varieties and distributed to them for the seed multiplication in Bukombe District. (Photo credit: TARI)



Picture 7: Mr. Anthony Bujiku, a researcher from TARI Naliendele, conducting refresher training on GAP for groundnuts for the QDS farmers working with Bora Food in Bukombe, Geita region. (Photo credit: TARI)

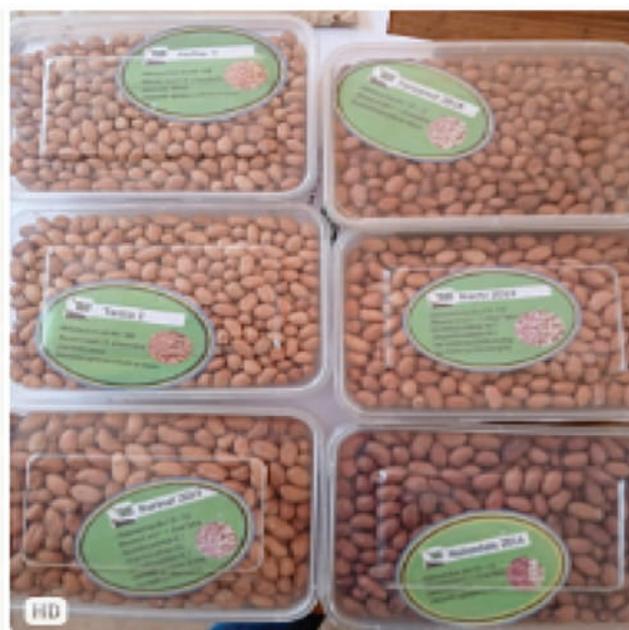
Digital Solutions to Enhance Business Performance and Information Sharing

The ACCELERATE Project has connected Bora Food with Digital Mobile Africa (DMA) to explore digital solutions that address key challenges the company faces, while improving business operations. These solutions aim to enhance communication with farmers, streamline aggregation and stock management, and optimize payment systems. For sustainability, DMA will work closely with Bora Food to gain a deeper understanding of its operations and discuss a framework for digitalizing both business processes and information sharing with the farmers who supply grains to the company.

In his remarks, Bora Food's Chief Executive Officer, Mola, emphasized the importance of digital platforms in fostering collaboration and promoting the adoption of new crop varieties that meet both farmer and consumer needs. He noted,

"Collaborating with stakeholders and seed experts provides a great opportunity for traders, especially in accessing crop varieties that align with market demands. Moreover, shared platforms like WhatsApp facilitate the timely exchange of critical information among stakeholders."

Mola also highlighted the need for these digital platforms to be further enriched to better serve all actors across the agricultural value chain, including farmers, traders, aggregators, processors, input suppliers, policymakers, research institutes, seed certification bodies, regulatory agencies, humanitarian organizations, and government extension officers.



Tulifanikiwa kuzijua mbegu bora za karanga na sifa zake kuendana na mahitaji ya soko. 🙏 Shukran nyingi kwa CIAT, TARI na Bora Kilimo Biashara (BORA FOOD) kwa kufanikisha mafunzo hayo. 14:56

Figure 8: Left - Mr. Wisdom Mola, CEO of Bora Food (in the center), participating in the Lake Zone Nane Nane exhibition in Mwanza Region; **Figure 9** - Mr. Mola sharing feedback on the groundnut stakeholders' platform on WhatsApp. (Photo credit: Bora Food)

Conclusion

The successful collaboration with Bora Food through a demand-led seed system approach is driving significant change in accelerating varietal turnover. Providing technical support to Bora Food demonstrates that engaging traders is a powerful way to facilitate the widespread adoption of improved seed varieties, thus speeding up varietal turnover.

As a key partner, Bora Food has played a proactive role in stimulating market demand for new varieties—particularly bio-fortified beans, sorghum, and groundnuts—critical for addressing the nutritional needs of schools and other key markets. This partnership not only creates sustainable business opportunities but also strengthens food security and enhances the livelihoods of local farmers who produce seeds and supply grain to Bora Food.

By transforming the seed system and driving the adoption of new varieties, the demand-led seed system is proving to be a game-changer. Linking traders, processors, farmers, and seed producers, this system is rapidly accelerating the adoption of improved varieties of beans, sorghum, and groundnuts. Ultimately, this collaboration is reshaping value chains in Tanzania, contributing to a more resilient and prosperous agricultural sector.

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Citation

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