

Investments in Strengthening Seed Markets are Investments in a Productive and Resilient Mozambique

Summary and key facts



Although a new generation of drought tolerant and high yielding maize varieties are now available, their use by farmers is still very low



Thin seed markets, poor infrastructure and expensive distribution networks means that improved seed is often expensive, not available on time and only in limited quantities



Investments in widespread information delivery and promotion can fuel farmer adoption and help grow seed markets and businesses

What is the problem?

Lack of awareness and access to climate-smart varieties put farmers at risk

Grown by 95 percent of smallholder farmers, maize is the single most important staple and source of food security and nutrition in Mozambique. Legumes, such as cowpeas and pigeon pea, are other important crops providing many families with vital sources of protein and income. A majority of farmers must adopt new crop varieties bred to stand up to increased climatic stresses for food and income security. However, seventy percent of farmers grow outdated maize

and legume varieties, reused season after season putting a healthy harvest at risk.

Although a new generation of maize varieties that are drought or disease tolerant and high yielding are now available, their widespread use is still limited by challenges in the nation's seed value chains. Due to inefficiencies in the seed systems, improved seed is often expensive, untimely and in limited quantities.

Extension services face challenges sharing reliable timely information with farmers. Including:

- One extension officer covers farmers within an average radius of 30 kilometers.
- Extension support and transport infrastructure are poor in rural Mozambique.
- Extension service stations and farmers' groups are relatively far from one another, at an average of about 11.5 kilometers.

What solutions were identified from research?

Information campaigns can drive adoption even under difficult market conditions

Research conducted since 2010 by Mozambican scientists under the Sustainable Intensification of Maize-Legume Cropping System for Food Security in Eastern and Southern Africa (SIMLESA) found that when smallholder farmers are provided with reliable and timely information and access to new seed varieties and fertilizer they are able to make informed decisions, experiment with and adopt climate-smart varieties.

Accurate information eliminates doubt and increases farmer certainty about new practices and varieties, reducing perceived risks and encouraging adoption. In 2016, SIMLESA reported 42 percent of farmers provided with information on improved varieties adopted and were experiencing an increase of up to 21 percent to crop productivity.

Extensive community demonstrations as part of the SIMLESA project were key to success in increasing seed demand among farmers. Reliable information acted as a catalyst for farmer's to trial and seek out improved seed. Through demonstration plots, field visits and extension services

farmers in SIMLESA project locations were able to see first-hand how climate-smart varieties performed. With the guidance of extension about 8 in 10 farmers who participated in field days around the demonstrations chose to plant drought tolerant crops. The main lesson from these efforts is that providing information and improving awareness raises seed demand considerably.

Public-private partnerships facilitated by SIMLESA boosted farmer access and awareness of climate-smart technologies. Collaboration between private sector, nonprofit and government institutions increased the number of demonstrations resulting in outreach to nearly 200,000 farmers in 2017. However, given the infrastructure challenges, enhancing the reach of extension services necessitates transport for technicians to cover greater distances. free SMS services that allow farmers to request and receive information also show potential in raising farmer awareness.

Maize productivity in Mozambique

800 kg
per hectare

less than half the average for the Southern Africa region.

Building on over eight-years of SIMLESA research suggests scaling out access to climate-smart seed and complementary farming practices will improve maize production to

1 ton
per hectare

improving food security for the nation.

Opportunities for policy action

Invest in promotional campaigns and demand creation



Invest in mobile and ICT capabilities of extension services

The project demonstrated that once farmers access the information they need they begin to try new varieties. Important opportunities in the short to medium term is to improve transport for extension agents so they can efficiently cover distances. Increased

physical mobility will only be effective when accompanied by use of mobile platforms. This will require investing in ICT skills and require sharing the extension budget between physical infrastructure and training agricultural personnel in mobile and ICT approaches.



Promote public-private partnerships in seed promotion

One way to enhance large scale demonstrations is to promote public-private partnerships for mass scale farm demonstrations. SIMLESA improved seed

demonstrations effectively shared information with farmers and encouraged adoption. Through public-private partnership costs were shared and farmer reach was extended.



Prioritize demand creation and deepening of seed markets

The notion that good and extensive demonstrations create market demand should be used as the basis to create new and larger markets as a public good as individual agribusinesses do not have the incentives to invest in these activities as they cannot exclusively recoup the benefits of their efforts. When markets begin to grow, it's probable there will be a strong business case for seed companies and agro dealers to invest in distribution because they can now operate at scale.

One way to deepen markets is through intensive promotion and educational campaigns on new varieties, their benefits and how farmers can get the most out of them. Policy action can therefore be based on using seed industry associations in Mozambique in conjunction with the relevant ministries and nonprofits to promote the improved varieties across the country. Agribusiness willing to invest in large scale seed demonstrations or rural distribution should be supported. Ideas regarding start-up capital or underwriting credit facilities for such investments with strong development impacts can be considered.

Why act now?

If the seed sector in Mozambique is not strengthened and production of climate-smart seed continues to be below what is required, this will continue to push prices beyond the reach of smallholder farmers. Thus keeping demand low and seed companies will not be able to profitably expand. Climate

change will further undermine maize yields. Coordinated investments by the public and private sector in demand creation to support seed business development through is vital.

References and sources

1. Dias, Domingos J.B., Eduardo P. Mulima, Maria da Luz Q. Cadeado, Custodio J.F. Jorge and Jose D. dos Santos Chiocho, (2019). Enhancing Resilience and Sustainability on African Farms: Key Findings and Recommendations for Mozambique. SIMLESA Project Country Synthesis Report. CIMMYT/IIAM. El Batan/Maputo.

Please also visit us at:

www.simlesa.cimmyt.org for more publications and data on Mozambique and other SIMLESA program countries

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