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MSD interventions prove effective in improving agricultural productivity in Mozambique



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Increasing access to modern agricultural inputs benefitted both the targeted smallholders and the wider community

An innovative MSD intervention in Mozambique has helped increase use of agricultural inputs and access to critical market information among smallholder farmers, according to a new [policy brief released by IFPRI](#). These results extended beyond the direct beneficiaries as well, highlighting the potential for such interventions to provide wide-ranging benefits.

The Innovation for Agribusiness (InovAgro) project (funded by SDC and implemented by DAI Europe in partnership with COWI Mozambique) aimed to smooth market hurdles that reduce access to, and adoption of, modern agricultural technologies and inputs. This lack of access to and use of modern inputs plays a substantial part in the low agricultural productivity and low market participation that characterizes smallholder farming in Mozambique.

[InvoAgro developed several value chain interventions \(VCIs\)](#)

The VCIs were focused on:

- > access to certified seeds and other inputs
- > development of agricultural buying networks through commodity aggregator traders
- > access to loans, savings groups and other financing mechanisms

- › access to land tenure (land titles, national identification cards, and tax registrations).

These interventions were designed to help increase household income and strengthen financial security for poor smallholder farmers by increasing participation in profitable value chains (maize, soybeans, pigeon peas, sesame, and groundnuts); increasing farmers' overall productivity of these important crops; and increasing total volume of production for each crop. The VCIs were implemented in 11 districts in northern Mozambique.

Evaluation using RCTA recent evaluation of the InvoAgro project involved use of a modified randomized controlled trial (RCT) to examine the impact of the agricultural input VCIs at the household and market levels. These VCIs featured the use of agro-dealers, training by lead farmers, and demonstration plots.

The RCT specifically examined household input use, agricultural productivity, land rights, and empowerment of women and youths. At the market level, it examined long-term impacts, sustainability, spill-over effects, and unintended effects of the VCI, both positive and negative.

Panel data was collected in 2015, 2017, and 2019. A fixed effects analysis was used to account for any external influences, such as government policy or farmers' natural learning, and compared household and market-level outcomes before and after the VCI for both beneficiaries and non-beneficiaries.

Positive results, including spill-over effects

The InvoAgro project was found to significantly improve households' likelihood of using pesticides, herbicides, and fertilizers among households that were exposed to a single VCI and those who received all three VCIs (agrodealers, lead farmers, or demonstration plots). The same results held true for households' access to information about agricultural input and output markets in both the short and the long term. The project also increased beneficiaries' maize productivity and enhanced their likelihood of engaging in commercial value chains.

The project positively impacted non-agricultural income-generating activities for women and youth, as well as overall household welfare (particularly exposure to the three-VCI package).

At the market level, a large proportion of households continued to use modern farm practices after being exposed to InvoAgro VCIs compared to other non-MSD VCIs, particularly for soybeans and pigeon peas. This suggests that MSD VCIs like InvoAgro are particularly successful at sustaining their benefits in the long term.

The project also led to significant spill-over effects. Households within a certain proximity of InvoAgro households were more likely to have adopted modern agricultural technologies (in this case, certified seed varieties) between the 2016-2017 and 2018-2019 seasons than households further away from InvoAgro households. This result highlights how the benefits of MSD interventions like InvoAgro can extend beyond direct project beneficiaries and impact the wider community in positive ways.

The importance of ensuring inclusive policies

The project evaluation did uncover several negative impacts, however. The VCIs encouraged households to specialize in particular crops, thus reducing overall household crop diversification. This also resulted in reduced access to and control over land for women and youth in the short term, although the result for women was reversed in the long term.

The research team suggests that these results could be driven by the increased competition for land stemming from more commercialized, more profitable agricultural practices encouraged by the project.

From a policy perspective, challenges related to the inclusion of women, youth and other vulnerable groups in agricultural development need to be taken into account when designing MSD and other value chain interventions.

This blog was originally posted by IFPRI on their [Food Security Portal](#)

> Read IFPRI's policy brief: [The impact of market system development approaches: the case of InovAgro in Mozambique](#)