

Agriculture

Helping farming families produce and earn more



PHOTO: TOM GILKS

Three-quarters of the world's poor live in rural areas and depend largely on farming. Identifying ways for these farming families to increase productivity and earn more money has the potential to improve food security, increase financial stability, and alleviate poverty.

Although agricultural productivity has increased dramatically in recent decades, some regions of the world still are not producing enough food to live beyond subsistence. In Sub-Saharan Africa especially, food production remains persistently low compared to other regions of the world, even though tools for improving farm productivity are available. The use of yield-improving inputs like fertilizer and improved seed is remarkably low in most of Africa due to high costs, limited availability, and other factors.

IPA's research in agriculture has investigated a number of approaches aimed at increasing investment into and productivity of small-scale farms, with the aim of helping farming families grow more food and earn higher incomes.

Key Agriculture Policy Lessons

1. Tailoring financial products to farmers' seasonal cash flow can increase investments in agriculture.
2. Increasing farmers' access to capital appears to increase agricultural output.

Policy Impact: Water tanks improve lives of dairy farming families in Kenya

Dairy farming is common in Kenya's Central and Rift Valley provinces, but it is also common for farmers to lose one of their few cows to drought each year. An IPA study found that offering dairy farmers a loan product to purchase a water storage tank increased milk production of cows owned by farmers who did not have access to piped water when the study began. In addition, it reduced the time girls spent fetching water by 35 percent, and increased the probability that girls were enrolled in school by 4 percentage points. In response to this evidence, the partner in the study scaled up the loan product.

Read more » www.poverty-action.org/study/encouraging-adoption-rainwater-harvesting-tanks-through-collateralized-loans-kenya

Key Findings

We have completed more than 40 studies in the field of agriculture with our partners and affiliates. Explore a few of our key findings below and find a full list of our agriculture studies at www.poverty-action.org/agriculture

Selling well-timed vouchers increased fertilizer use¹

Offering farmers in Kenya the ability to save harvest income for future fertilizer purchase was as effective as offering a 50 percent subsidy on fertilizer at planting time. *Read more » www.poverty-action.org/study/nudging-farmers-use-fertilizer-experimental-evidence-kenya*

Allowing farmers to pay for insurance at harvest substantially increased demand²

Giving sugarcane farmers in Kenya the option to buy crop insurance at planting time but pay at harvest time, several months later, increased demand for insurance by 67 percentage points, relative to farmers who had to pay upfront. This simple change in timing worked much better than a discount: reducing the cost of insurance by a third didn't increase demand at all. *Read more » www.poverty-action.org/study/agricultural-microinsurance-cane-farmers-kenya*

Offering farmers loans increased incomes and agricultural output, and improved food security³

In Zambia, access to both food and

cash loans increased agricultural output, decreased off-farm labor, and increased local wages. Food security also improved: when offered food or cash loans, households were almost 40 percent less likely to experience food insecurity during the lean season, they consumed significantly more protein, and they had a more diverse diet. *Read more » www.poverty-action.org/study/impact-food-and-cash-loans-smallholder-farmers-zambia*

Microloans tailored to farmers' seasonal cash flow led to larger harvests⁴

In rural Mali, providing farmers with an innovative loan product, which was dispersed before the planting season, but repaid after harvest, led to a significant increase in farm investments and agricultural output. The repayment rate among women who elected to take out loans was perfect, and 65 percent of clients chose to borrow money again. *Read more » www.poverty-action.org/study/agricultural-microfinance-mali*

Access to weather insurance increased farm investment⁵

Risk, rather than a lack of capital, appears to drive underinvestment in agriculture in Northern Ghana. When farmers were offered weather



insurance they spent more on inputs such as fertilizer and pesticides, land preparation, and labor. *Read more » www.poverty-action.org/study/examining-underinvestment-agriculture-returns-capital-and-insurance-among-farmers-ghana*

Reducing barriers to saving increased the amount of land cultivated, investment in inputs, and household consumption⁶

In Malawi, farmers with access to formal savings accounts saved more during both the harvest and planting seasons. They also cultivated significantly more land, invested more in agricultural inputs, and increased their consumption. *Read more » www.poverty-action.org/study/reducing-barriers-saving-malawi*

Sources

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3. Fink, Günther, B. Kelsey Jack, and Felix Masiye. Seasonal credit constraints and agricultural labor supply: evidence from Zambia. No. w20218. National Bureau of Economic Research, 2014.
4. Beaman, Lori, Dean Karlan, Bram Thuysbaert, and Christopher Udry. Self-selection into credit markets: Evidence from agriculture in mali. No. w20387. National Bureau of Economic Research, 2014.
5. Karlan, Dean, Robert Osei, Isaac Osei-Akoto, and Christopher Udry. "Agricultural decisions after relaxing credit and risk constraints." *The Quarterly Journal of Economics* 129, no. 2 (2014): 597-652.
6. Brune, Lasse, Xavier Giné, Jessica Goldberg, and Dean Yang. "Facilitating savings for agriculture: Field experimental evidence from Malawi." *Economic Development and Cultural Change* 64, no. 2 (2016): 187-220.

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Innovations for Poverty Action (IPA) is a research and policy non-profit that discovers and promotes effective solutions to global poverty problems. IPA designs, rigorously evaluates, and refines these solutions and their applications together with researchers and local decision-makers, ensuring that evidence is used to improve the lives of the world's poor. Our well-established partnerships in the countries where we work, and a strong understanding of local contexts, enable us to conduct high-quality research. This research has informed hundreds of successful programs that now impact millions of individuals worldwide.

