



the challenge

How can we improve small-scale farmers' profits and welfare?

Despite the development of agricultural technologies such as high-yielding seeds and fertilizers, many smallholder farmers have not benefitted. Yields in South Asia, and particularly sub-Saharan Africa, lag behind the rest of the world. To improve smallholder productivity and profitability, policymakers need to know what prevents farmers from adopting technologies, what strategies can overcome those barriers, and how farmers and other rural households could benefit.

finding solutions

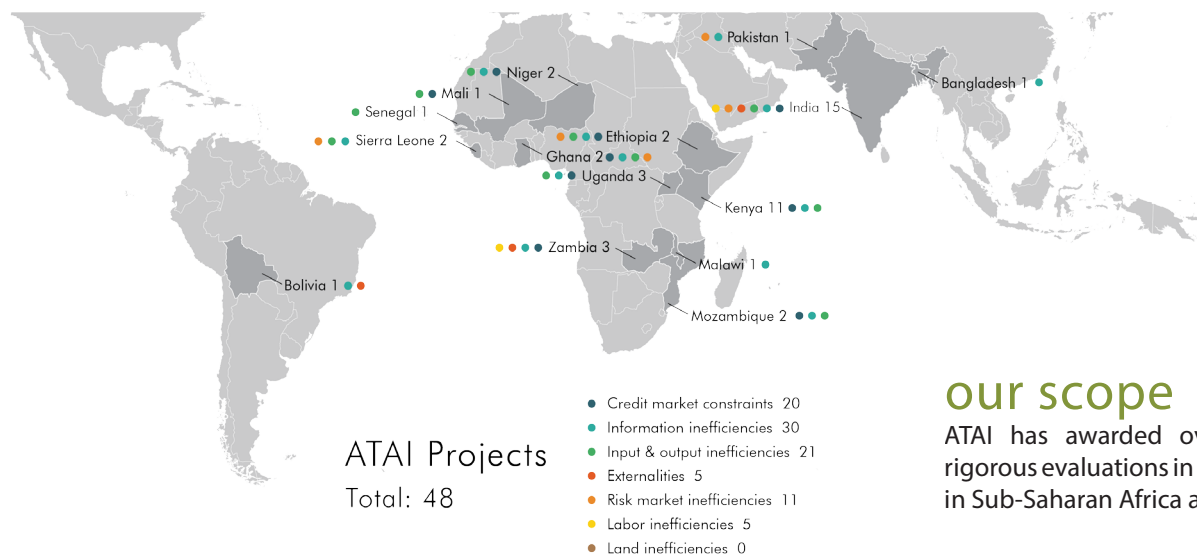
We scientifically evaluate what helps and what hinders farmers' adoption of technologies and access to markets.

The ATAI research network conducts randomized controlled trials (RCTs) in collaboration with governmental and NGO implementing partners. Together we design, pilot, and rigorously evaluate a range of innovative approaches to improve the **adoption** and use of agricultural technology, ultimately to **impact** smallholders' yields, profits, and nutrition.

our approach

Our research network and staff share findings and support evidence-informed policy and practice.

ATAI studies evaluate strategies to overcome common constraints to adoption. Each study targets one or more of the following: (1) credit and savings constraints, (2) information inefficiencies, (3) risk market inefficiencies, (4) input and output market inefficiencies, (5) labor market inefficiencies, (6) land market inefficiencies, and (7) environmental externalities. In this way ATAI research furthers the frontiers of global public knowledge with support from staff and leadership, who translate, synthesize and disseminate a growing body of evidence.



our scope

ATAI has awarded over \$10 million for rigorous evaluations in 15 countries, focused in Sub-Saharan Africa and South Asia.

evaluation highlights

Increasing farmers' liquidity in Kenya

Researchers partnered with One Acre Fund to offer a harvest loan aimed at improving grain storage and farm profitability. The take-up of the loan was 60 to 70 percent, and the loan led to significant increases in farmer storage and subsequent farm profits. The researchers are continuing the study to better understand the longer-run impact of the loan on farmer behavior. (Ted Miguel and Marshall Burke)

Promoting early seed adoption in Sierra Leone

Researchers sought to encourage adoption of NERICA, a new rice variety with higher yields and a shorter growing period. Results indicate that NERICA increased yields but only with intensive training and brought forward the first harvest by a month. (Rachel Glennerster et al)

Weather index insurance in Ethiopia

Farmers were offered a weather index insurance product to protect against the risk of fertilizer investment. Preliminary results indicate that it had a palliative rather than transformative effect: it protected farmers who already had relatively high rates of fertilizer use against risk, but it did not increase fertilizer demand among farmers who had not previously invested in inputs. (Craig McIntosh et al)

our progress

ATAI has synthesized a body of evidence, the "Emerging Insights" series, distilling findings from ATAI and complementary studies. These outputs inform efforts to improve productivity and profits by mitigating risk, providing credit, sharing information, and improving input and output market access.

ATAI shares this growing evidence base to inform policy and practice. In the past year, the program has shared evidence with our donors and research partners, in addition to governmental, non-governmental, and multilateral stakeholders tackling these development challenges.

evidence informing policy & practice

Precision Agriculture for Development (PAD)

Drawing on results from ATAI studies in India and Kenya showing that voice and SMS mobile technologies were effective in providing information to farmers and affecting their production decisions, researchers have launched PAD, an initiative using evidence to develop an effective mobile-technology agricultural advice service.

Resilient Rice

ATAI study results show that farmers growing flood-tolerant Swarna-Sub1 seeds had higher yields in flood conditions and, feeling protected from risk, invested more in their farms. This evidence supported the International Rice Research Institute to help an estimated 10 million Indian farmers gain access to stress-tolerant seed varieties. ATAI published a summary report "Resilient Rice" to disseminate these promising results.

Water tanks

J-PAL Africa partnered with the Rwanda Agriculture Board to launch a pilot program offering dairy farmers low-deposit loans for rainwater harvesting tanks. The program is based on evidence from an ATAI evaluation in Kenya that found positive effects on loan take-up, milk production, and girl's school enrollment. The Rwandan government, the Mfashankire Savings and Credit Cooperative, and the IAKIB Farmer Cooperative are involved to adapt this pilot program to the local context.



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