



AgResults Impact Evaluation Project

AgResults is a \$118 million multilateral initiative funded by Australia, Canada, the United Kingdom, the United States, and the Bill & Melinda Gates Foundation to test the use of “pull mechanisms,” which are a relatively new concept in agricultural development. Pull mechanisms use prizes to incentivize private companies to develop and disseminate high-impact agricultural innovations that promote food security and benefit smallholder farmers.

As external evaluator contracted to the UK Department for International Development (DFID), Abt is assessing the effectiveness of pull mechanisms in AgResults pilot projects in Nigeria, Kenya, Zambia, Uganda, Vietnam, and India, and on brucellosis vaccine development.



The Abt team visits the AgResults Nigeria pilot to evaluate the use of the biocontrol agent Aflasafe to increase demand for aflatoxin-free grain.

Project Background

About \$83 billion in agricultural investment is needed to provide food security for the approximately 870 million chronically malnourished people around the world. Many in the development community are looking for new development models that will harness private sector investment to meet these needs.

AgResults was launched as part of a G20 initiative to test “pull mechanisms” as a way to boost private sector investment in agriculture. AgResults pilot projects incentivize private firms to:

- In **Nigeria**, work with farmers to adopt biocontrol agents to reduce aflatoxin growth in maize and generate wider consumer demand for aflatoxin-free maize. Prizes are given to maize aggregators based on how much aflatoxin-free maize they buy from farmers.
- In **Kenya**, develop and increase smallholder adoption of improved on-farm grain storage technologies. Prizes are given to technology providers based on how much storage capacity they sell to farmers.
- In **Zambia**, encourage production of and increase demand for vitamin A-enriched maize. Millers are awarded prizes based on the amount of enriched maize they sell.
- In **Uganda**, boost the production and sale of improved legume seeds (e.g., beans, groundnuts, soybeans). Private seed companies will be awarded prizes for increasing legume seed sales.
- In **Vietnam**, decrease greenhouse gas emissions from rice production. Prizes will be awarded for developing emission-reduction technologies and increasing adoption among smallholders.

QUICK FACTS

- **Evaluation of AgResults**, a multi-donor, \$118 million initiative incentivizing and promoting high-impact agricultural innovations to promote global food security
- **Evaluation contracts from 2013-2024** and funded by the **UK Department for International Development**, as part of its contribution to overall AgResults initiative
- Assessment of **7 pilot programs** in **Kenya, Nigeria, Zambia, Uganda, Vietnam, and India**, and on **brucellosis vaccine development**

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- In **India**, increase Newcastle Disease vaccination of poultry and develop private sector business models. Prizes will be based on chickens vaccinated and villagers trained in vaccine awareness.
- For **brucellosis**, reduce the impact of brucellosis on livestock. Prizes are awarded for research and development of an improved brucellosis vaccine.

Evaluation Process

Learning is a core goal of AgResults. To provide high quality evidence about various aspects of the pilots over time, Abt uses quantitative and qualitative methods to assess the effectiveness of pull mechanisms. This process involves four basic steps:

1. Develop an evaluation framework

Abt developed a common theoretical framework that enables comparison of results across pilots and generalization of results and lessons learnt from AgResults as a whole. The evaluation framework is designed to test the assumptions underlying the theory of change and to understand key pilot features and impacts. We use a mixed methods approach to carry out our research under the evaluation framework—a value chain-based qualitative approach to evaluate the pilot’s impact on private sector engagement in the development/uptake of innovations and quantitative methods to evaluate smallholder technology adoption and consequent increases in income.

2. Develop pilot-specific design protocol

Within the same overall framework, for each pilot, we refine the value chain-based qualitative analysis to the specific context of the market environment in which the pilot is operating and implement the most rigorous quantitative research method feasible—experimental (whenever possible) or quasi-experimental—to assess smallholder-level impacts. For the Nigeria protocol, for example, we are using a randomized controlled trial. In Kenya, where the pilot’s design made setting aside a comparison group infeasible, we are using an interrupted time series approach to test the impact of the



Abt evaluators Tulika Narayan and Betsy Ness-Edelstein in Embu, Kenya with farmers who are using Purdue Improved Crop Storage bags, one of the on-farm storage tools being assessed as a pull mechanism through AgResults project.

pilot on smallholders. Given the importance of the design methodology, each design protocol is submitted for external peer review prior to implementation, including a review by in-country experts.

3. Carry out data collection and analysis

Once the design protocol undergoes a broad review process and is approved, we collect quantitative and qualitative data, at intervals defined by the evaluation design protocol. Our household-level survey sample sizes are determined through power analysis that takes into account the quantitative evaluation design, the expected heterogeneity and variation of impacts, as well as pilot-specific factors such as the expected magnitude of smallholder impacts.

4. Synthesize findings and lessons learned

At the end of the project, Abt will compile a summary of findings to provide a broader perspective on the effectiveness of pull mechanisms as well as lessons for donors interested in applying pull mechanisms in new settings. We will also conduct a sustainability analysis, assessing whether the new markets created by AgResults are likely to endure in the absence of a pull mechanism, and an analysis of whether pull mechanisms are a cost effective tool for agricultural development.

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