



Feed the Future Country Fact Sheet

Online Version: <https://www.feedthefuture.gov/article/vouchers-and-insurance-help-smallholder-farmers-build-confidence-agricultural-technologies>

Vouchers and Insurance Help Smallholder Farmers Build Confidence in Agricultural Technologies

Has a new restaurant or shop in your neighborhood ever offered you a promotional coupon to try their product or service? Businesses use this tactic all the time to give consumers an incentive to take a chance on something new, in the hope that first-time customers will become repeat customers.

The same concept – lowering financial barriers to entry while building consumer confidence – applies to scaling up agricultural technologies. That's because, like many people, smallholder farmers aren't always eager to make big changes in their businesses and livelihoods, even if a new technology offers a chance to earn more money. They may be uncertain how a new technology works, or they may understand the technology but be unwilling to take a risk: for example, if they need to borrow from a bank to buy improved seeds, and then face a debilitating event like drought during the growing season, they risk defaulting on their loan.

If farmers aren't willing to adopt a new technology, then even the most groundbreaking innovation in agriculture won't have impact on a large scale. That's why the [Feed the Future Innovation Lab for Collaborative Research on Assets and Market Access](#) (AMA), based at the University of California, Davis, has been using randomized control trials to explore how uncertainty and risk limit farmers' adoption of potentially profitable technologies and testing different strategies to overcome these constraints.

One of the strategies the AMA Innovation Lab is evaluating is "smart subsidies," such as voucher coupons, that temporarily reduce the cost of adopting new, unfamiliar technologies to see if farmers who see better yields and profits with a subsidized technology will continue using it even if the subsidy is withdrawn. NGOs and developing country governments have often used vouchers to subsidize farmers' "cost of learning" about new technologies and their returns, but the evidence base for whether this strategy is successful over time was sparse.

To help address that evidence gap, the AMA Innovation Lab and the [International Fertilizer Development Center](#) (IFDC) launched a multi-year evaluation of a European Union-funded fertilizer voucher program in the maize-growing regions of central Mozambique. Prior to the voucher program, USAID and IFDC had partnered on a project to improve fertilizer availability, but only 20 percent of farmers used any fertilizer at all, so maize yields remained paltry.

Through their evaluation, the AMA Innovation Lab and IFDC found that the voucher coupons provided through the European Union program turned out to be a game-changer. The vouchers made fertilizer cheaper for farmers for two years, during which time they learned how to use it properly and witnessed firsthand how it improved their crops.

Two years after the end of the voucher program, randomly selected farmers who received the coupons had permanently changed their farming practices, using significantly more fertilizer, enjoying 15 percent higher yields, boosting food consumption by nine percent and increasing assets and savings by 20 percent more than their control group counterparts. In other words, the modest period of subsidized fertilizer had a significant, measurable impact on farming practices and, in turn, productivity and income levels.

The AMA Innovation Lab has seen similar success developing insurance products that mitigate risk for smallholder farmers. In Mali, although the technology of cotton cultivation was well understood, its financial risks led farmers to plant only conservative amounts of cotton despite high market demand and the profitability of any cotton they did plant.

Working with PlaNet Guarantee, Allianz Insurance Company and CMDT (the national Malian cotton company), researchers developed an insurance product for cotton farmers and then used a randomized control trial to measure the impacts of cotton insurance on farmer production decisions. Farmers with access to the insurance expanded the area planted with cotton by just under 20 percent and increased use of more yield-enhancing inputs by just over 20 percent.

These pioneering financial tools show that having a big impact on food security requires more than just technological innovation: it also requires understanding how farmers make choices. Reducing the risk and uncertainty in decision-making is an important factor in creating the right conditions for thriving agriculture sectors.