

# Giving Farmers in Malawi a Better Way to Save Their Harvest Proceeds

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As a group, poor farmers in the developing world appear to have many ways they could benefit from a safe place to save. They get much of their income in one or two big lumps each year at harvest times and need to save it for the lean times in between. Not only do they need to save their harvest money for day-to-day expenses later on, they also need to save money from harvest to planting season to fund next year's seed, fertilizer, and other productivity enhancing farming investments. The task of saving for the future is made difficult when relatives and friends ask to borrow money and the financial pressures of daily life make immediate expenditures seem more important than future investments. But it's even more difficult without a savings account, which is the situation for most farmers in the developing world.

## Farmers With Savings Accounts Save and Invest More

New research shows that improved savings options can make a big difference in the lives of poor farmers. A first wave of results from a new study by Lasse Brune, Jessica Goldberg, and Dean Yang from the University of Michigan and Xavier Gine from the World Bank has shown that giving farmers individual savings accounts and the ability to commit their funds until harvest time can make a major difference in the amounts they save and invest in their farms, increase their harvest profits, and even lift their future consumption levels.<sup>1</sup>

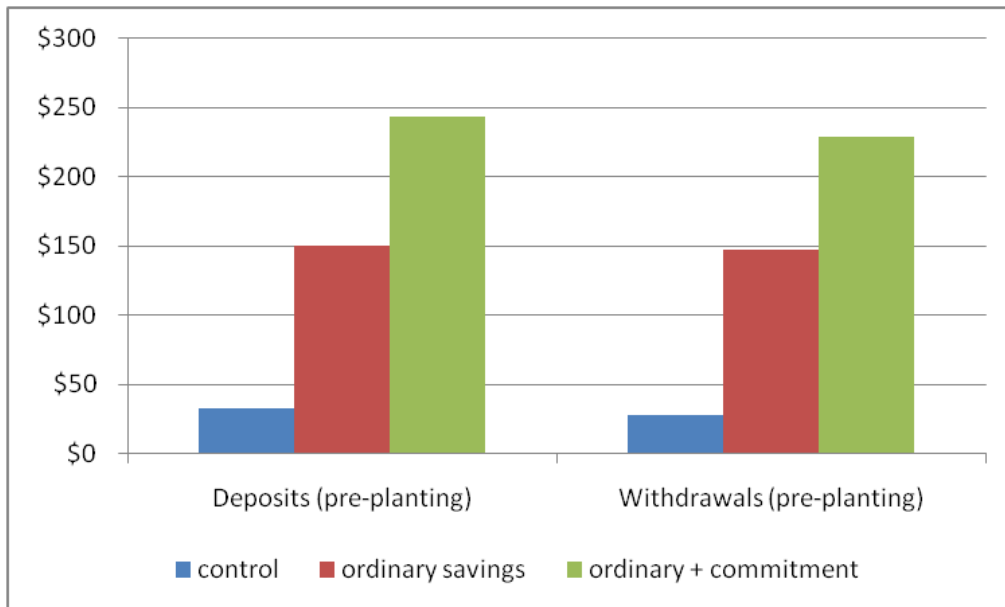
The researchers identified about 1,700 farmers to participate in the study, all of whom were members of farmer groups formed to sell their crops collectively. The researchers visited a random sample of one-third of the farmer groups to give members assistance in signing up for their own ordinary savings account and allowed them to stipulate how much of their harvest proceeds would be transferred into the account. Any remaining proceeds were given to them in cash as usual. The researchers then visited a second third of the groups and gave them the option of having both savings accounts and commitment savings accounts, which allowed the farmers to freeze the funds until a date of their choosing (something like a time deposit), which most farmers set at just before the next planting time. The final third of the farmer groups were randomly selected to serve as a comparison group and were not given help in setting up accounts.

All the groups were tracked from before harvest time in May 2009, when the accounts were given, until August 2010, after the next harvest. Because the groups were randomly selected, the differences in the outcomes and behavior measured after the second harvest can be attributed to the different treatments, i.e., being given ordinary savings accounts and commitment savings accounts and having farm proceeds directly deposited into the accounts.

The differences in outcomes between the groups are striking. Figure 1 on the following page shows that the farmers offered ordinary savings accounts and those offered savings plus commitment accounts saved an average of \$150 and \$243, respectively, while the comparison group saved only \$32. (Some in the comparison groups had accounts before the study started.) This is an increase of 366 percent and 753 percent, respectively.<sup>2</sup>

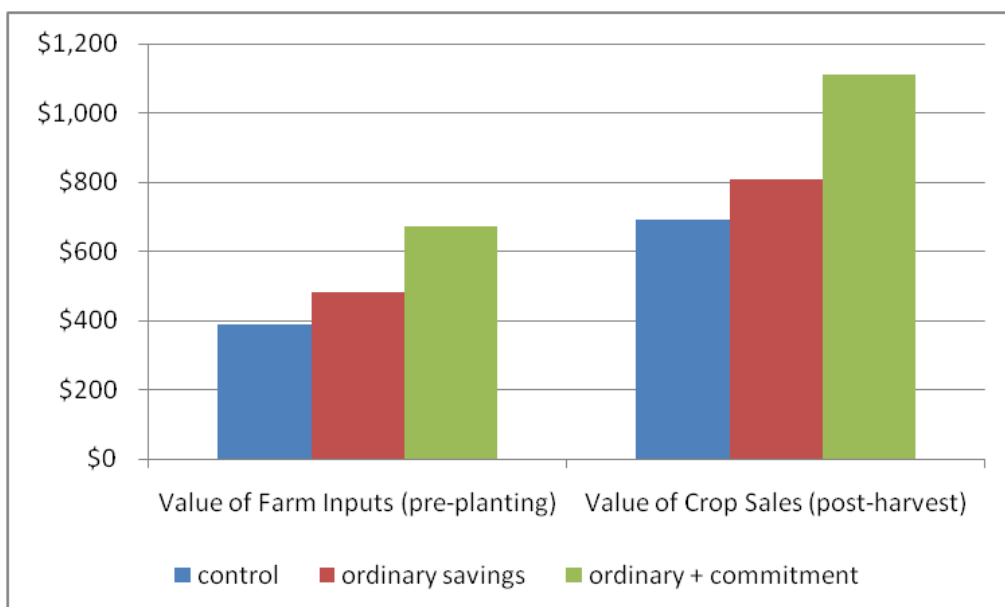
Being offered bank accounts led to greater investments in farm inputs and higher harvest proceeds, especially in the group offered the commitment accounts. Figure 2 on the following page shows that farm inputs were higher in the group offered ordinary savings accounts and higher still in the group offered commitment accounts. In both cases, the average increase in investment is almost exactly the same as the average amount that had been saved. The more intensive use of farming inputs led to a nearly proportional increase in harvest revenues across the two groups offered accounts. (All three groups' farm output value is approximately 70 percent greater than their investment.) While the increases appear in the average investment and harvest proceeds, they are only statistically significant in the commitment savings group.

**Figure 1: Bank Deposits and Withdrawals in Different Groups Before Planting Time\***



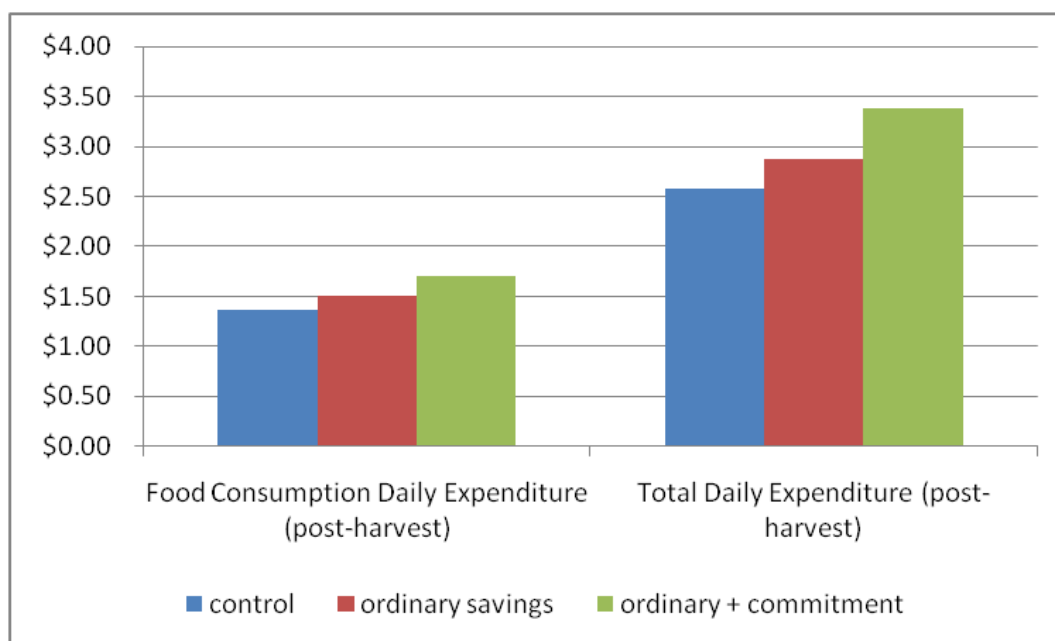
\*A few members of the comparison group had savings accounts before the study began.

**Figure 2: The Value of Farm Inputs Such as Fertilizer, Seeds, and Pesticides, as Well as the Value of Farm Output Sold**



The increased income also led to increased consumption, including increased food consumption. Figure 3 below shows that total expenditure—measured just after harvest time in all three groups—was 11 percent higher in the ordinary savings account group and 31 percent higher in the commitment account group, while food expenditure was 10 percent and 25 percent higher, respectively. Once again, the increases were not statistically significant in the ordinary savings account group.

**Figure 3: Total Daily per Capita Expenditure and Daily per Capita Food Expenditure**



These improvements in farm proceeds and consumption expenditures are large, though they appear reasonable given how much more the treatment group farmers saved and invested in farm inputs. Because the survey occurred right after harvest season, it remains to be seen whether the differences in consumption between groups would remain as large over the long run.

### Ongoing Analysis and Future Work

Going forward, it will be important to illuminate which elements of the interventions helped the farmers meet their savings and investment goals to produce these impacts. To what degree was the direct deposit feature critical for increasing savings? Why did the commitment accounts result in farmers saving more than the ordinary accounts? The study's authors believe that the commitment accounts, which showed the greatest impacts, did so because they either helped farmers refuse requests for assistance or loans from family and neighbours or because they helped them with their own self-discipline during the leaner months before planting season. While both of these forces may have been at play, it's interesting to note that the increases in deposits are almost exactly equal to the increases in farm investments in the two groups. This suggests that the commitment account may have had its impact by increasing deposits (either from higher balances per account holder or through higher take-up of the accounts) rather than by stopping early withdrawals. The authors are still analyzing the data to understand what mechanisms are at work.

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<sup>1</sup> The study is titled “Commitments to Save: A Field Experiment in Rural Malawi”. A related study in Kenya, (Esther Duflo, Michael Kremer, and Jonathan Robinson, “Nudging Farmers to Use Fertilizer: Theory and Experimental Evidence From Kenya,” NBER Working Paper No. 15131, 2009) gave a randomly selected group of farmers the option to buy vouchers for fertilizer at harvest time (when they are cash flush) that would arrive the next planting season (when they are cash poor). Fertilizer usage rates were 32 percent to 39 percent higher among farmers who were offered the fertilizer voucher, though that study does not look at welfare impacts directly.

<sup>2</sup> Not all of this difference between the two savings options comes from individuals holding higher balances in the commitment accounts. Some of the increase comes because more people accepted the offer of the commitment accounts than the regular savings accounts. The authors are still assessing the data, which will tell them the exact differences between the percentage of each group that accepted the offer of the ordinary savings account and the ordinary plus commitment accounts. For comparison to the savings numbers, the average per capita expenditure measured in the follow-up survey was approximately \$500 per person per year in the comparison group.