Index Insurance and Climate Risk Management
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IRI is working with partners to provide financial instruments to help smallholder farmers in Malawi to cope with climate risk. Because climate risk has made it infeasible for microfinance institutions to provide stand alone loan products to farmers, farmers have not been able to obtain the high quality seeds and fertilizer that they would like to use. If these inputs were available, the farmers could enjoy substantially increased yields.

IRI has designed the contracts for a drought insurance system that provides the backbone for a package of loans, groundnut, and maize inputs for smallholder farmers. The insurance targets the financing risk, allowing farmers access to loans, which, in turn provide access to inputs, and the cash necessary to pay for the insurance premium.

This package is possible because of a new innovation in insurance. Traditional insurance contracts insure against crop failure, but these lead to perverse incentives to farmers to allow the crops fail. There is also an incentive for less productive farmers to buy insurance and for more productive farmers not to buy insurance. These problems would lead to more payouts, which would in turn lead to higher premiums, and would ultimately make this type of insurance too expensive to be workable.

To address these problems, the new insurance contracts are written against an index. In Malawi, this index is based on rainfall. Farmers have correct incentives to make productive choices, because allowing crops to fail does not increase the insurance payout. Index insurance is also cheaper to implement because the insurance company does not need to send auditors to the field to verify damage. However, the farmer is no longer insured against the damage of crop failure, but only against drought. If crops fail for a reason other than drought, then the farmer receives no compensation. Because index insurance does not protect against all risks, it is usually designed to target a key risk that undermines other mechanisms.

The pilot project in Malawi is insuring groundnut farmers against drought during critical growth periods. So far it appears to be successful. A total of 892 farmers, in farmers' clubs of 10–20 members, bought insurance in 2005 in the pilot project and the number is expected to climb to several thousand for 2006. Partners in the project include Malawi farmers, financing associations (NASFAM, OIBM, MRFC, Malawi Insurance Association), the World Bank CRMG, the Malawi Met Service, and CUCRED. In interviews, farmers have reported that the way that they adapt to climate change and variability is by enrolling in the insurance program. Scale-up in Malawi is primarily limited by the logistical challenges of education and signing of contracts for large numbers of new farmers, as demand is overwhelming. The program is financially self-sustaining, with farmers paying their own input costs, insurance premiums, interest, and even taxes. We are developing similar programs in Kenya and Tanzania, and additional projects are being scoped.

IRI is developing the insurance program to allow farmers to make much more effective use of climate information. Farmers in the program have are aware of the relationships between ENSO and seasonal precipitation but have expressed frustration because they cannot take actions to benefit from this knowledge. They have articulated an interest to shift their crop mix to take advantage of seasonal forecasts, increasing the fraction of their land with drought tolerant crops in response to dry forecasts years and shifting towards higher risk but higher productivity crops in response to wet forecasts. Because, the farmers have complained that the appropriate seeds are not available or affordable, IRI is working to build the forecast into the insurance package, so that the insurance package reflects the best mix of seeds and financial tools for the seasonal rainfall probabilities expected.

Potential figures (you may want to adjust the contrast).