

Disseminating Innovative Resources and Technologies to Smallholder Farmers in Ghana: Results of the Weather Forecasting Program



Photo: Mohammed Baidoo

In Ghana, and many other countries in sub-Saharan Africa, farmers invest little in inputs, such as improved seed, fertilizer, and other chemicals to improve their yields. One reason for this may be risk associated with factors out of their control, such as weather. As part of the “Disseminating Innovative Resources and Technologies to Smallholder Farmers” project, researchers partnered with a weather forecasting firm to test the impact of providing daily short-term weather forecasts by SMS.

Key Findings

After 1 year:

- Farmers who received the forecasts, as well as farmers living nearby, used this information to change their behavior, timing planting and chemical application for days when light rain was forecast.
- However, there was no discernable impact of the service on farmers’ overall profits.
- Overall, the results suggest that forecasts are inexpensive and effective at changing farmer behavior, but they were not sufficient to increase overall profits alone.

Researchers: Mathias Fosu, Dora Karlen, Shashidhara Koinavelli, Christopher Udry

Partners: Ghana Agricultural Insurance Programme (GAIP), Ghana Ministry of Food and Agriculture, International Food Policy Research Institute (IFPRI), Savanna Agricultural Research Institute (SARI)

Timeline: 2014-2018

Study Sample: 3,240 households in 162 farming communities in Northern Ghana

Disseminating Innovative Resources and Technologies to Smallholder Farmers in Ghana: Results of the Weather Forecasting Program

In Ghana, and many other countries in sub-Saharan Africa, farmers invest little in inputs, such as improved seed, fertilizer, and other chemicals to improve their yields. One reason for this may be risk associated with factors out of their control, such as weather. As part of the “Disseminating Innovative Resources and Technologies to Smallholder Farmers” project, researchers partnered with a weather forecasting firm to test the impact of providing daily short-term weather forecasts by SMS.

Key Findings

After 1 year:

- Farmers who received the forecasts, as well as farmers living nearby, used this information to change their behavior, timing planting and chemical application for days when light rain was forecast.
- However, there was no discernable impact of the service on farmers' overall profits.
- Overall, the results suggest that forecasts are inexpensive and effective at changing farmer behavior, but they were not sufficient to increase overall profits alone.

May 01, 2018