

Disseminating Innovative Resources and Technologies to Smallholders (DIRTS)

Newsletter | July – September 2015



The DIRTS project is an agricultural study that evaluates interventions (agricultural extension, insurance, and inputs) aimed at promoting intensified cultivation through increased smallholder investment in farming activities. The study attempts to measure the impact of these interventions on the productivity levels of smallholder farmers. This newsletter highlights the latest developments of the three-year project.

The Extension Intervention

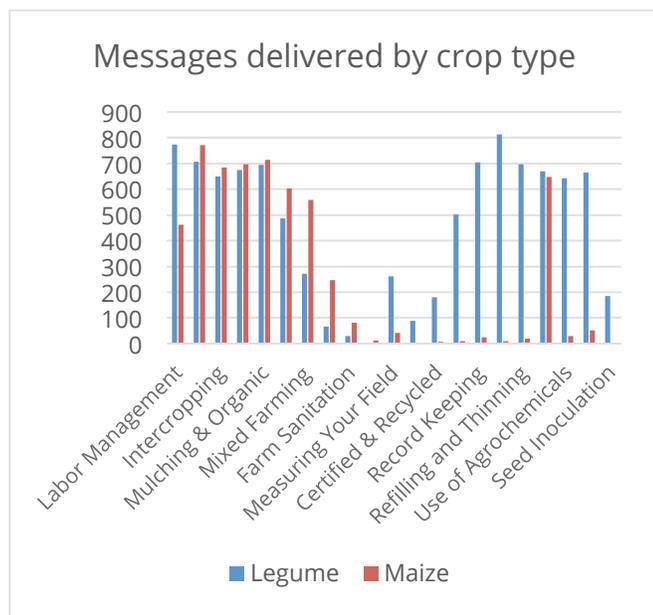


The extension intervention facilitates access to information on recommended agricultural practices for the cultivation of four crops – maize, soya, cowpea and groundnuts. This intervention reaches 20 respondents per community in half of the 162 project communities. By using community-based extension agents (CEAs) equipped with android devices, respondents have weekly visits with CEAs where they get to watch short extension videos most relevant to the activities being carried out by the farmer in each particular week.

Activities

Extension Message Delivery

CEAs continued with the delivery of extension messages to respondents. CEAs began meeting with secondary respondents (mostly female) in project households to share extension messages on recommended practices for legume cultivation. Within the period of July to September, most of the messages shared were about pre & early season and mid-season activities for legumes and mid-season activities for maize. Due to the delays in the onset of regular rains this season, CEAs took a six-week break in the delivery of maize messages within this period to enable the schedule of CEA visits to become re-aligned with activities of respondents.



The number of messages shared by topic.

Successes

Preliminary results from surveys show a positive impact of intervention.

Preliminary results from two midline surveys – the Comprehensive Annual Survey and the Knowledge & Practice Survey – confirm positive impact of the extension intervention. Data from these surveys revealed the following:

- Farmers who were visited weekly by the CEAs scored higher on some questions testing

knowledge of some yield-maximizing practices. Examples of topics in which CEA farmers scored higher than non-CEA farmers were recommended direction of plowing and reasons for non-burning.

- Farmers in extension intervention reported adopting more of some yield-maximizing practices. Examples of practices showing adoption in CEA farmers over non-CEA farmers were germination testing, refilling and thinning, row planting and fertilizer application
- Farmers in extension intervention intensified cultivation (i.e. they reduced the size of the fields being cultivated and ended up investing more inputs (fertilizers, weedicides, etc.) and labor per acre of their fields).

Adoption of CEA by Department of Food and Agriculture, Saboba District

The Department of Food & Agriculture, Saboba District began preparations in September 2015 to adopt the CEA model in several non-DIRTS communities. In this adaptation of the Extension intervention, CEAs will be conducting group meetings with farmers within their communities and sharing extension advice on recommended farming practices with support from Agricultural Extension Agents (AEAs) of the Department. Plans are underway for the recruitment and training of the CEAs by AEAs with help from DIRTS CEAs.

Inspiring CEAs to higher achievements

“As for me, I just wanted to beg my father to increase my farming land from 3 acres to 5 acres so that I will be able to farm more and have more children” – Issah Mutawakil, CEA for Puriya, Mion.

“My senior brothers were all married at 22 so when I turned 21, my father started talking to me about preparing to settle down and raise my

own family" – Adam Abdul Aziz Wumbai, CEA for Kpalsogu, Tolon.

"Several suitors were pursuing me for marriage but I kept refusing because I wanted to do more with my education before settling down. But refusing them was becoming more difficult since I didn't have the opportunity to work, school or do something for myself" – Abibata Abdulai, CEA for Chirifoyili, Tolon.

Prior to joining the Extension Team of the DIRTS project, a high number of our CEAs were high-school

graduates or drop outs with little or no aspirations to further their education. Between June and September, the DIRTS project supported three CEAs (cited above) to apply for admission into the mature students programme to study Agricultural Engineering, Statistics and Education at the Tamale Polytechnic and Tamale Training College respectively. Even though we regret losing our cherished CEAs, we are glad to assist them in reaching higher personal heights and are proud to have been instrumental in inspiring them to achieve more.

The Insurance Intervention



The Insurance Intervention facilitates access to an indexed insurance product against drought. Farmers who either purchase the product themselves or receive it for free (paid for by IPA) are eligible to receive payouts at the end of the farming season if drought conditions detailed in the policy contract occur. Insurance products are marketed in project communities by IPA on behalf of the Ghana Agricultural Insurance Pool (GAIP).

Activities

Certificate distribution

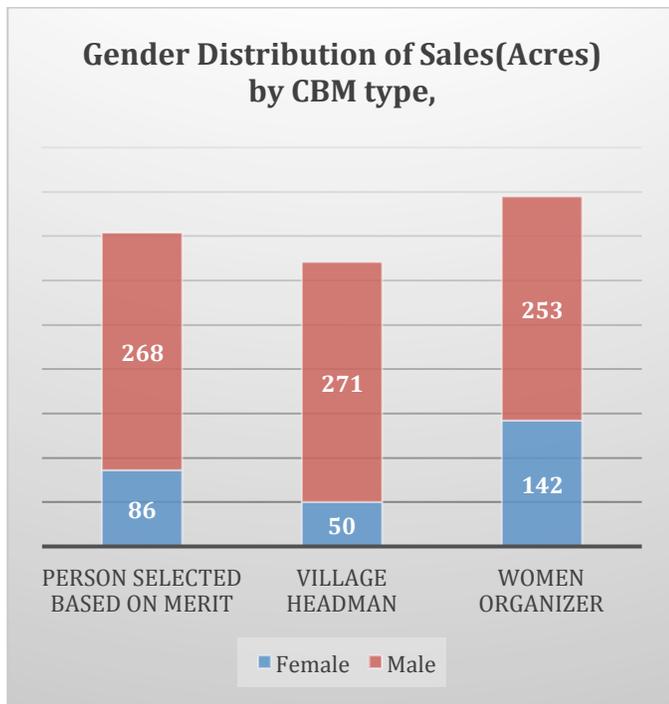
The Insurance team distributed certificates to respondents for all acres insured under the FAARIGU index insurance product marketed by IPA. For the 2015 farming season, a total of 37,517 acres were insured against drought as follows:

- 1,070 policies were bought and paid for by farmers
- 36,501 free policies offered (paid for by the DIRTS project)

CBMs who marketed the insurance product in communities were grouped in 3 categories;

- persons selected based on merit
- village headmen
- women organizer

Based on sales data, the insurance team ran analysis to investigate performance by CBM type (based on number of acres sold) and the gender distribution of policies holders by the CBM type.



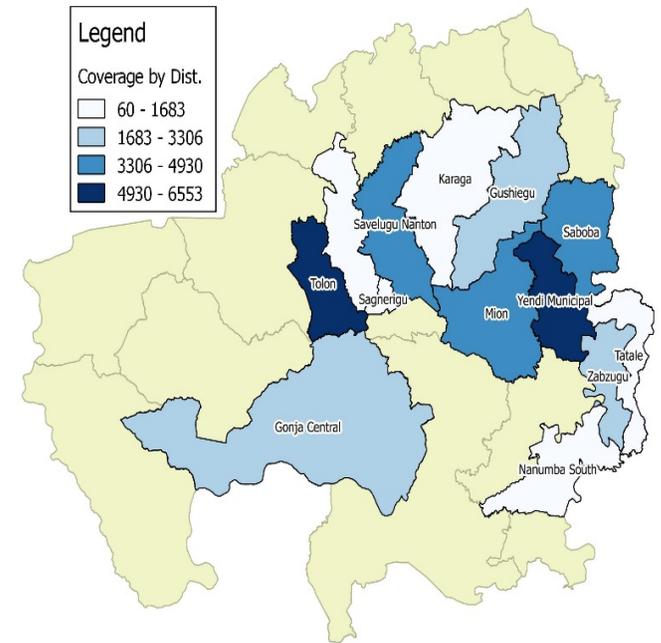
Each category and the gender distribution of policies sold in acres by CBM type.

Closeout Surveys

The closeout survey – a small group of questions to investigate farmers’ understanding of the insurance product and what factors motivated them to purchase the product – was administered to policyholders after certificate distribution. The reason provided by farmers, why they purchased the drought indexed insurance policy, included:

- 85.1 percent of the respondents purchased the product because they saw insurance as contingency for drought
- 8.4 percent of the respondents said they bought because they were convinced by friends
- 6.1 percent said they purchased for profit gains

More information from the closeout survey including other crops smallholder farmers are interested in insuring, preferred outcome under the FAARIGU policy and others will be featured in the next newsletter.



Northern regional map showing the number of acres covered by the insurance policy for the 2015 farming season.

Ongoing Payout Calculations

The Insurance Intervention uses satellite rainfall data received from the National Oceanic and Atmospheric Administration (NOAA) to determine payout outcomes. Between July and September, the Insurance team has been constantly monitoring and analyzing the rainfall data against conditions required to trigger payouts. This activity gives a fair idea about what the outcomes will be so that the team can adequately prepare for notification sessions in project communities at the end of the season. Calculations done by the Inputs team however provisional – as the final computations to determine payouts will be done by GAIP.

AEA Sensitization Tours

The DIRTS Insurance Team partnered with AEAs of the Department of Food & Agriculture to carry out sensitization sessions with community members in all project communities. The purpose of these sessions was to reiterate the contract terms of the insurance policy to aid in preparing farmers to accept the payout outcomes. Analysis of provisional rainfall data strongly suggests that there will be no payouts for the 2015 season so by using AEAs who are quite trusted within communities, the insurance team hopes that community members will be more accepting of any eventual outcomes for 2015 payouts.



Community members gathered for a sensitization session.

The Inputs Intervention



The inputs intervention facilitates access to agricultural inputs at the community level. The intervention engages selected community members (CBMs) to market and take orders for input purchases. These CBMs are then linked to commercial input retailers at district centers, who supply ordered inputs to the communities. Farmers purchase the inputs at market prices, but the project bears the cost of transportation of all orders placed through the CBM.

Activities

Inputs Marketing

Between July and September, the Inputs team carried out three rounds of marketing beginning with delivery of fourth round orders. Due to the delay in the onset of the rains in the 2015 farming season, input orders had been lower than expected for marketing rounds 1 to 4. The fifth marketing round (the second in the July-September period) however coincided with the onset of the rains so the

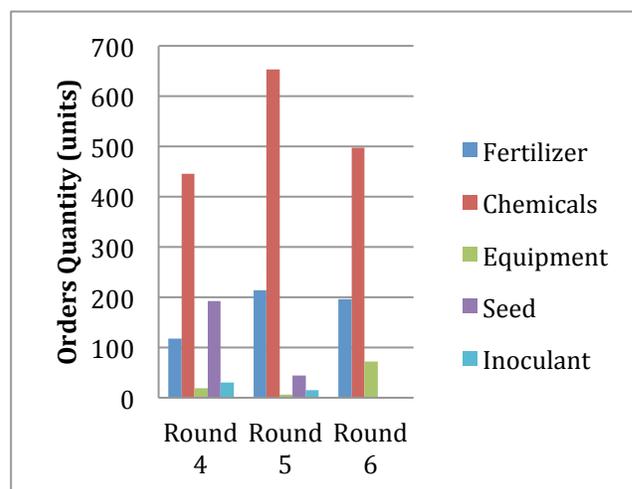
Community Exit Sessions

The sixth and final round of inputs marketing ended in the last week of September. To conclude marketing activities for this year's farming season, the inputs team held exit sessions in all project communities to announce the end of the activities.

The team provided contact information in case of any follow-up questions or enquiries. During these Quantity of inputs ordered in marketing rounds 4 to 6.

sessions, CBMs and other team members met with chiefs, elders and community members to discuss this year's activities.

number of inputs being ordered rose significantly. To meet the urgent demand for these inputs, the intervention revised its protocols to enable weekly deliveries over previous arrangements where inputs were either delivered every two weeks or at the end of the marketing round of four weeks. A sixth and final marketing round was added in September to take advantage of a late surge in orders.



Input orders for marketing rounds 4 to 6.

Research Management Column

Labor Survey and Plot Measurement

The labor survey is a longitudinal data collection exercise carried out every two weeks and administered by Community Survey Assistants (CSAs), community residents hired for this purpose, using Android devices. This survey was launched in April and will last through to the end of the rainy season. The purpose of this survey is to collect sufficient data to support more detailed examination of the role of farm labor costs in agricultural investment decisions and the adoption of new technologies.

The first, second and third rounds of the labor survey were carried out at the household level with data collection on the agricultural activities carried out over the previous two-week period. From the fourth round of the survey, data was collected at the plot level (i.e., for each plot in the household, separately). The plot level survey is in three structures: plot identification, farming activities performed and labor used. The first set of questions deals with the CSAs confirming the accuracy of the preloaded information about each household plot, such as plot name, person responsible, total acreage, soil quality, plot distance and location of plot. To ensure the data collected is constantly updated, CSAs include all new plots and indicate changes in the preloaded information. The second section of the survey collects information on whether any farming activities (e.g. weeding and fertilizer application) were done on each household plot. The final block, conditional on work having been done on a particular plot, collects data on the

type of labor, the quantity of labor (number of workers and days worked), as well as the gender distribution of the workforce.

In addition, a measurement exercise was integrated into the labor survey from the fourth round and will end in the seventh round of the survey. Using GPS devices, the CSAs measure every plot in the study sample and submit data in the main labor survey. To date, the sixth round of the survey has been fully carried out. The GPS data has been extracted for further analysis with GIS data analysis software. The seventh round of the survey will be launched in the second week of October. This will enable us to calculate accurately the quantity of labour and other inputs, and subsequent yields that farmers are able to achieve, per unit of land.

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Savanna Agricultural Research Institute (SARI)
Ghana Agricultural Insurance Pool (GAIP)

LOCATION: Ghana

SAMPLE: 3,240 households
in 162 farming communities

TIMELINE: 2014-2017

THEMES: Agriculture

POLICY Technology Adoption

GOALS:

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