

Disseminating Innovative Resources and Technologies to Smallholders (DIRTS)

Newsletter | January – June 2016



The DIRTS project has entered its last year of implementation. It has successfully concluded marketing rainfall insurance for the third year and has started delivering CEA messages, testing a new delivery approach. Evaluation activities are ongoing. This newsletter captures highlights from the first two quarters of 2016.

Rainfall Index Insurance Intervention

2015 Payout Distribution

In 2015, farmers in all the 162 DIRTS communities bought a total of 1,070 policies in 137 communities. Also, 1,587 randomly selected farmers and all the 162 chiefs were each offered three policies for free, to secure a minimum of insurance holders to analyze the relative impact of insurance on farmers' decisions over the agricultural season. This insurance, dubbed "Faarigu", was designed for maize crops, and had a flexible start date. This means the policies could start on any day from May 21 to June 20, depending on the amount of accumulated rainfall. The early part of the 2015 farming season was characterized by some dry spells. As a result, a payout of GHS 25 per policy was triggered in all the communities except for two.

It is remarkable that **the farmers who purchased insurance policies in 2015 were cumulatively entitled to GHS 26,750 in payouts** as a result. This compensation is likely to have shielded them against the loss incurred due to the early season's drought. The DIRTS team undertook distributing the cash payouts in February. The activity only ended as recently as June, due to the difficulty in tracking a share of the payout recipients, who



A policyholder in Central Gonja receiving the 2015 season payout

had left their homes for seasonal migration or permanent relocation. Distribution of payouts met farmers' gleeful response. Incidentally, the bulk of payouts were distributed roughly at the same time as the new policies for the 2016 season were marketed.

Farmers mentioned they would re-invest part of their payouts into acquiring insurance for the upcoming season.

2016 Marketing Season

In the light of farmers' feedback on the timing of Faarigu's coverage, GAIP agreed to revise its features to better reflect farmers' seasonal experience. Key areas of revision were the parameters and the start date of the policies, translating into an expansion of product portfolio. The original product assumed the season to start within an ideal planting window spanning May 20 to June 19. Accumulated rainfall over the period triggers the start of the policy cover. In 2015, accumulated rainfall triggered the coverage to start on June 20 for the vast majority of communities (98%). However, our project data showed that in 2015, 99% of the DIRTIS farmers planted by June 4 – thus a few weeks earlier than start date triggered by the original design of Faarigu.

Taking 2015 to be a representative year, GAIP and IPA agreed to market **two separate products: one for early and another for later planters**. Each policy starts on the same day across all communities (known as static start date, unlike the less user-friendly flexible start date experimented up to last year): "early" Faarigu starts on May 21, while its "late" counterpart starts on June 10. Coverage for both products lasts for 120 days.

Marketing for the two policies started on April 18, and ended on June 8. **A total of 1,801 policies were sold in 2016**. We pursued the same marketing mode as the first two years of implementation, i.e. through Community Based Marketers (CBMs). Like last year, in cooperation with GAIP and Savanna Radio, IPA aired an insurance radio drama on the weekend radio program Batoro (May 7 and 21). The Batoro program is a widely patronized Saturday night drama session hosted on a public radio (Radio Savanna) with significant coverage in Northern Region. The Faarigu policy was explained through an

audio drama featuring conflicting crop insurance decisions by fictional characters.



Faarigu insurance on air on Radio Savanna

Community Extension Intervention

Qualitative Survey

In preparation for the Community Extension Agent (CEA) program in 2016, a qualitative survey was conducted in the first quarter to understand findings from our earlier Knowledge and Practice Survey. We wanted to understand **why farmers seemed to have learnt some message topics, and not others, and why some practices were being adopted, while others were not**. Additionally, the qualitative survey was carried out to inform how best to propose CEA messages to recipient farmers in 2016. In total we conducted in-depth interviews with 164 respondents and held 1 focus group discussion with farmers in each of the 41 communities sampled.

Data revealed that almost all respondents in the focus group discussions and in-depth interviews had a positive appraisal of the CEA intervention. Most of the farmers, although convinced that the messages were useful,

could not quite instantly adopt all recommended practices. Two main constraints were mentioned:

- limited funding to procure farming inputs at the desired time
- a time constraint that prevented farmers to adjust to the message content before full buy-in

Some of the practices that farmers reported adopting for the first time in this project, include

- site selection (i.e. actively scoping for and selecting a soil type suitable for each crop)
- field measurement
- germination testing
- planting in rows using recommended spacing
- not burning weeds after clearing/weeding.

Some of the farmers explained:

"In view of the anticipated benefits of adopting the practices I learnt from the videos, I spent more time working on my farm. Most of this time was spent on land preparation and weed control"

"I reduced my farm size because from the extension videos I watched, which taught be that this would enable me to properly manage it"

From individual to group messages

Importantly, the majority of farmers interviewed said they would prefer watching the videos in groups as opposed to one-on-one interactions with the CEA. During the same interactions, female farmers also expressed a strong preference for watching the videos in groups of fellow women only. Therefore, unlike previous years, when CEAs only showed the videos to 10 selected farmers who were included in the study, all farmers in the community are now free to join the video message viewing. The 81 CEAs organize four meetings every week in their community

At each meeting CEAs are using their tabs to administer a diagnostic survey to the group of farmers. The answers recorded on the CEA app inform the two recommended extension messages to show in the gender-segregated, crop-specific meetings with farmers. The extension videos are shown on 21-inch LED TV sets. Communities without electricity were provided with generator sets.

After the videos are shown, farmers are invited to ask questions to the CEA and this is usually followed by a group discussion on the topic.



CEA using his tablet to administer a diagnostic survey at a women's group meeting

To date, farmers' participation in the meetings has been high. Mean attendance recorded at group meetings over the period stood at 19 and 17 participants for male and female farmers' meetings, respectively.

Popular messages in the pre and early season

In total, 3,698 messages were delivered from the last week of May to the end of June. The two charts below show how frequently the various pre- and early season videos were shown to farmers in the project communities. As expected these are closely aligned to the activities that farmers were engaged in in late May and June: land selection, land preparation and seed selection.

The two tables on the below show the 5 most popular messages on maize and legume.

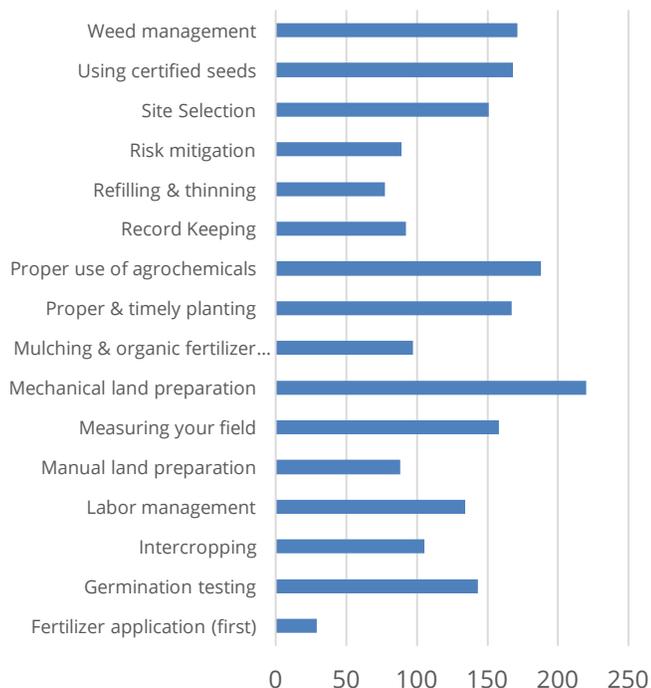
Table 1: Total participants viewing maize videos

| | Maize message | Total participants |
|---|-----------------------------|--------------------|
| 1 | Mechanical land preparation | 3033 |
| 2 | Proper use of agrochemicals | 2962 |
| 3 | Weed management | 2757 |
| 4 | Using certified seeds | 2455 |
| 5 | Measuring your field | 2359 |

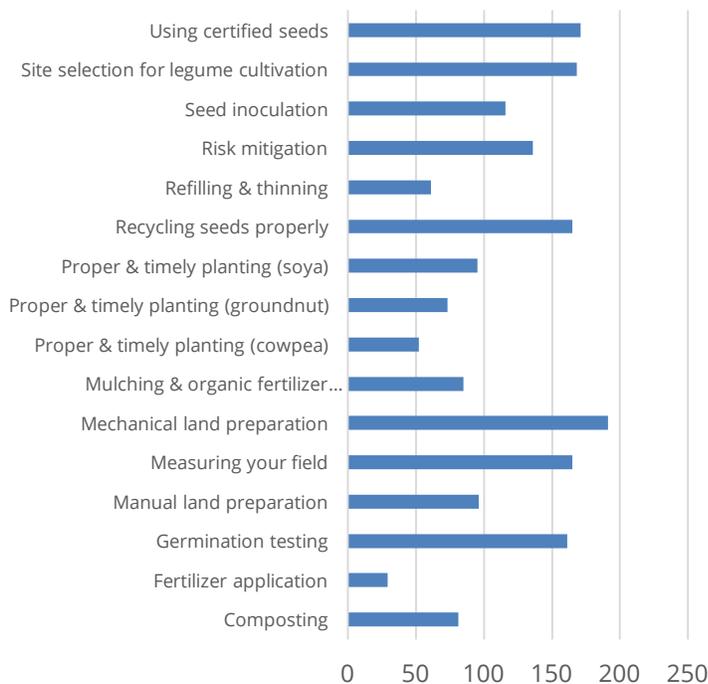
Table 2: Total participants viewing legume videos

| | Legume message | Total participants |
|---|-----------------------------|--------------------|
| 1 | Measuring your field | 2749 |
| 2 | Mechanical land preparation | 2705 |
| 3 | Recycling seeds properly | 2599 |
| 4 | Using certified seeds | 2454 |
| 5 | Germination testing | 2442 |

Number of times maize videos were shown



Number of times legume messages were shown



Research Management Column

In 2015, IPA collaborated with Ignitia Ltd, a tropical weather forecasting business. The partnership **aimed to test the impact of the weather forecast SMS service**, provided to a sub-sample of the DIRTS households in 108 communities. Outcomes of interest included the timing of key farming activities such as planting, land preparation and fertilizer application with or without receiving the daily, monthly and seasonal forecasts from Ignitia. The 2015 data shows some interesting responses, which we hope to better understand by continuing the study for a second year.

Data collected in 2015 suggests that **the daily forecasts partially determine when households decide to plant**. Households who receive a forecast that it is likely to rain the next day are much less likely to plant today. This suggests that daily forecasts help households delay their planting until after it rains. The same pattern holds for households that are neighbors of those who receive forecasts, indicating that farmers not receiving the forecasts directly still change their planting timing in response to the forecasts, perhaps because information is being shared within communities. Conversely, non-neighboring households that do not receive the messages are shown to not change their planting timing decisions, suggesting that where weather information doesn't directly or indirectly reach, planting aligns less well to rainfall events.

Households who receive a forecast in the morning that it is likely to rain today are much more likely to apply fertilizer today. Receiving a rainy forecast for the following day just as strongly reduces the probability of fertilizer application today. This **suggests that people aim to have chemical use coincide with or immediately follow rain and that again daily forecasting gives them advanced knowledge that permits them to more likely achieve this timing**. As with planting, the timing of fertilizer application by households that are neighbors of those who receive forecasts is similar to that of farmers who directly receive the forecasts. As in planting, non-neighboring control households also do not change their behaviors as they apply chemicals.

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| PARTNERS: | Ghana Department of Agriculture International Food Policy Research Institute (IFPRI) 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 GOALS: | Technology Adoption |



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