

DAAS: AGADVISORY BOT IMPLEMENTATION GUIDE

DIGITAL GREEN
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Background

Digital Green Ethiopia, in the Digital Agriculture Advisory Services (DAAS) project, has been implementing digital advisory services for two value chains namely wheat and dairy in collaboration with key partners in the last four years. Meanwhile, the expansion of value chains to other major crops like: maize, teff, barley, faba bean, haricot bean, avocado, coffee and soya bean has been considered for the last year of the project. Likewise, expansion to new woredas has been found mandatory to entertain variable value chains included.

The digital channel that will be used to disseminate the advisories is telegram bot. Access to telegram bot is only for Development Agents and it is DAs that will disseminate advisories to target farmers through appropriate means. The total number of DAs targeted are 2793 (two thousand seven hundred ninety three) to reach about 500,000 farmers in 68 targeted woredas.

To achieve the reach of the planned number of targeted farmers (500,000), a well-thought approach on how DAs will reach farmers with telegram bot-enabled advisories and track farmers feedback and data is a critical tool. In light of this requirement, relevant brainstorming discussion with Regional Heads and Field Coordinators, on possible options to effectively & efficiently reach farmers was conducted.

Thus, a telegram-bot implementation guideline, which is informed by contexts from each target area, is prepared to smoothen the implementation process and relevant data tracking efforts.

Objective of the Guideline

To effectively facilitate dissemination of advisories through telegram-bot II implementation and capture farmers' data

Approaches to reach Farmers

Based on the target area contexts, strategic integration of the dissemination activities with existing government initiatives that gather groups of farmers on a regular basis and community-based organizations regular meetings were considered as potential entry points. Accordingly, the following government-led initiatives, community-based organization meetings and other informal farmer groups meeting events are possible entry points to disseminate advisories in a focused manner.

The overall approach could be categorized under classification of the primary extension communication methods: **Individual Extension method, Group Extension method and Mass**

extension method. The first two seem more appropriate for telegram bot-based advisory dissemination systems.

Individual Extension method

A Development Agent (DA) used to contact individual farmers during house to house visit, field visit, through phone call, in-office or come across (on roads, social gatherings and market places). Unarguably this opportunity creates a conducive environment for DAs to provide agricultural advisories for individual farmers on specific practices effectively. Therefore this approach can also be used to provide advisories using telegram bot.

Farmers training on Extension packages (both Meher & Belg)

Annually, farmers are trained on updated extension packages for both meher and Belg season cropping. During the event, Farmers clustered into smaller groups for ease of management. This practice is across all target areas, and Development Agents can use this event to reach groups of farmers with seasonal telegram-bot enabled advisories.

Commodity based clustering initiatives

Different Farmer Producer Clusters (FPCs) were organized by the government based-on potential commodities across the targeted woredas. Development agents can also reach organized clusters of farmers with different advisories across value chain activities. This setup also enables DAs to record data on farmers' reach, willingness to adopt, type of value chain and advisory category and one-time record of farmers' profile.

Development Groups approach

The development groups approach is being widely used for video-based advisory by Digital Green. In new Woredas where Digital Green is not operating, development groups may not be fully functional however with little facilitation effort it can also be used to reach groups of farmers with telegram-bot enabled advisory. The number of farmers in one development group ranges from 25-30.

Women-led model groups

There are different organized model groups of women in different development activities having regular meeting events. Intentionally, DAs can use this group to disseminate advisories and track feedback and data accordingly. This group can be a target to reach more women with dissemination of advisories.

Modular training Initiatives (Farmers Field School approach)

A group of farmers(60 members), organized and trained on practical demonstration oriented skills on key sectors: ***Crops, Natural Resource Management and Livestock management***. The training is provided for selected farmers once in a week. There is a regular training session until farmers' graduate on specified skills. Development Agents can use this group of farmers to reach seasonal advisories and record the necessary data. This experience is common in the Jimma area.

Farmer cooperatives Regular meeting & general assembly events

Different farmer cooperatives have regular meetings and annual general assembly events conducted in each kebele. Large sizes of farmers used to be gathered in such community-based organizations. Development Agents can also use these events to reach group farmers at a point and disseminate seasonal advisories and capture data.

Soil and Water Conservation activities campaign

There is seasonal community mobilization in each target area for both physical and biological SWC activities, which could take place at dry period and kiremt. Large number of farmers used to participate in SWC activities for at least 40 days during each period (physical and biological activities). Here also DAs can use this opportunity to disseminate advisories channeled through telegram-bot.

Lemat Tirufat-based initiatives

A group of farmers organized into targeted value chains and supported to boost productivity. There is regular meeting with groups of farmers at Kebele center. Development groups can also use this opportunity to reach farmers.

Fertilizer distribution events

A group of farmers travels to fertilizer distribution centers to collect fertilizers during Belge and main season. . During the fertilizer distribution events, farmers usually gather and stay in one compound for extended time. Development Agents can use this group of farmers to disseminate advisories as appropriate.

Therefore, DAs can use context specific and appropriate approaches from the above list of possible options to reach more farmers with advisories. Apart from the above indicated

alternatives, DAs can reach farmers individually during different activities they work in Kebeles. This also creates an opportunity for DAs to disseminate relevant & timely advisories.

Recommended Action Plan to Reach Farmers

During telegram-bot use skill training for DAs, clarification on the target number of farmers to be reached by each DA should be communicated. Briefing on potential approaches to reach farmers should be conducted in plenary discussion. After brief discussion each DA should identify his/her appropriate feasible approach to reach farmers and record necessary data.

Quality assurance and Quality control mechanism

Quality assurance practices are an important aspect of Digital Green's work as it facilitates measuring the effectiveness and quality of the work and services delivered to the community. In order to ensure and maintain the quality of Telegram Bot implementation, the following major QA practices will be conducted:-

Content Review

The advisory contents on Good Agricultural Practices (GAP) for each selected value chain are adopted from MoA POPs and reviewed by the Digital Green content review team. Furthermore, the reviewed advisory contents will be reviewed by regional teams and scrutinized against regions PoP content updates. The final advisories will be translated to local languages to ensure ease of understanding. As part of QA practices, the final advisory/content will be evaluated against Gender, CSA, and Accuracy of the language translation by the content review team. Only approved advisory/content will be shared with the product team for Telegram dissemination. In addition, the seasonality of the disseminated advisory/content will be evaluated against the cropping calendar on a monthly basis.

Monthly Progress Monitoring

Digital Green MEL team will provide timely feedback on the implementation of telegram-bot enabled advisories disseminated through DAs on a monthly basis. The progress report will include quantitative monitoring including DAs Telegram Bot Engagements, Reach and Adoption data (Target vs Achievement)), Feedback Summary, etc... In addition, the summary of data analytics report on the implementation status will be shared with target woredas to make necessary adjustments to improve the quality of implementation. Woreda Focals and DA supervisors closely follow up the implementation of telegram-bot enabled advisories by DAs. In addition to their routine monitoring process, woreda SMS

will be granted access to dash-board with data analytics visualization and could provide timely feedback to their respective DAs.

Periodic Assessment and Feedbacks

Paper-based periodic qualitative assessment will be conducted in the sample selected woredas to analyze comprehensive telegram-bot enabled advisory implementation performance. The qualitative assessment will help to understand the challenges, the potential improvement areas, and draw lessons and feedback from DAs, Farmers, and Woreda Experts perspectives. The final assessment report will be shared with product and program team, regional team, and with telegram implementation woredas.

Telegram Data Cross Verifications

Reported farmers reach and adoption data by the DAs should be crossly verified. The information is analyzed to provide information on the accuracy and reliability of the reach and adoption data records. 2% of the Telegram reported reach and adoption data should be crossly verified by regional field coordinators/the woreda SMS. In addition, in order to detect the over reported farmers reach data, the Telegram system should flag when DAs exceed the total # of Unique farmers reached within the kebele.

Telegram-based data recoding

When disseminating advisories using the telegram-bot, Development Agents can record various data points related to their interactions with farmers. These include farmers' profiles, the number of farmers reached, their willingness to adopt, practice adoptions, the type of advisory provided, and the value chain type. If a DA's profile is not found in the system, they are expected to register themselves to begin recording data. This registration process ensures that all DAs are accounted for and can actively participate in data collection and reporting. DAs should follow the designated registration procedure to create their profiles and gain access to the telegram-bot for data recording. This proactive approach helps maintain the integrity and completeness of the data collection system, enabling smooth implementation and monitoring of agricultural advisory services.

The telegram-bot is designed to handle multiple data points as the number of value chains and types of advisories increases, enabling timely feedback for improved implementation. DAs are required to keep daily or weekly updates of their activities regarding advisory dissemination, registration of farmers in their Kebeles, and adoption rates. It is crucial that the records entered are accurate and up to date. Woreda supervisors will monitor the DAs' records and share any issues or challenges in the telegram group created for the woreda, facilitating collaboration and addressing challenges quickly. This system ensures that data collection is efficient and supports informed decision-making in agricultural extension services.