



Dairy Farmers' Experience with IVR Messages in Ethiopia

Introduction

Digital Agricultural Advisory Services (DAAS) assists the Ministry of Agriculture in Ethiopia to strengthen the use of digital extension channels to train extension agents – Development Agents (DAs) – who provide advisory support to farmers. DAAS also supports the Ministry to directly provide advisory services to Ethiopian farmers through various digital methods. The project is a partnership between Digital Green (DG), Precision Agriculture for Development (PxD), and the Government of Ethiopia. In the partnership, PxD works with **8028 Farmer Hotline service** run by the Agriculture Transformation Agency (ATA) to develop and deliver targeted content for dairy farmers through Interactive Voice Response (IVR) on mobile phones.

Lean Data researchers conducted a study to understand

Research methods

- Survey via phone interviews with 1,057 farmers who received advisory messages on their phones via 8028 IVR calls.
- The sample comprised of farmers who solely listened to the IVR call, those who heard the call on speaker phone and listeners who dropped off and did not complete calls.

the uptake, effectiveness, and impact of advisory messages on dairy farming, sent through 8028 IVR calls. This summary highlights insights and findings on farmer profiles, the IVR calls' effectiveness, the listeners' experience, and the impact of the calls on primary and secondary listeners.

Key Findings

1. Listeners value convenience, ease of understanding and usefulness of the information provided:

- Overall, listeners give the dairy advisory information through the 8028 IVR call a Net Promoter Score of 49, which reflects high loyalty and satisfaction.
- Satisfaction was driven by the information's convenient usage, easy and understandable language, and usefulness.

2. The dairy farming advisory information is impactful and leads to tangible improvements:

- Close to 8 in 10 listeners report improvements in their quality of life.
- Almost all listeners mention improvements in their way of farming and cattle management. Improved cattle care, feed preparation, and feeding are the top changes reported in ways of farming.
- 9 in 10 farmers report having achieved increases in money earned.

3. Listeners who can apply the IVR advisory in full experience better impact than partial applicants

- Listeners who applied all the information they heard to their dairy farming (65%) were much more likely to experience greater impact on their quality of life than listeners who applied 'most' (29%) or 'some' (11%) of the information.
- 4 in 10 listeners were unable to apply all the information they heard
Unclear information and lack of access to credit are the top barriers to applying all

4. Female listeners report lower understanding, application, and uptake of AI services

- While all listeners report advisory information to be useful, fewer female listeners report ease in understanding, application, and uptake of the information shared.
- About 9 in 10 male farmers applied information, compared to only 7 in 10 female farmers. Similarly, close to 8 in 10 male farmers used artificial insemination (AI) services to get crossbred cattle, compared to 65% of female listeners.

5. Close to half of the female listeners are final decision makers in dairy farming-related decisions.

- 4 in 10 female primary listeners are the final decision makers in their household's dairy-related decisions, compared to 9 in 10 male primary listeners.
- Female secondary listeners are least likely to be final decision makers, with only 1 in 10 solely making decisions.
- While average cattle ownership was slightly higher for male primary listeners, females listeners were more likely to report owning crossbred cows.

6. Most listeners share information with family members and their community and are more likely to share with members of the same sex in a community forum.

- Female listeners are more likely to share information with other females (79%) than males (46%). Male listeners shared more often with male community members (64%) than with females (47%).
- Male listeners are more likely to share information through family gatherings than females, while female listeners are more likely to share information in one-to-one conversations and village level community groups compared to males.

7. Male household members are more likely to undertake time-consuming activities, while female household members take up chores that take less time.

- 9 in 10 male listeners undertake dairy farming activities such as purchase of feed and 7 in 10 take up preparation of feed. On the other hand, 8 in 10 female listeners report milking cows and milk processing

8. Smartphone usage penetration and access to IVR calls is low overall.

- Only 6 in 10 female primary listeners owned the phone they received the IVR message on, and a similar proportion share it with another family member. All male primary listeners have their own phones.

9. Partial listeners are from slightly better off households than other listener groups.

- 35% of female partial listeners live in poverty (under \$3.2 dollar per day). Their main reasons for not listening to the IVR call fully was being at work. They also disconnected the call because they were at work, had poor network connectivity and language barriers

10. IVR Effectiveness

- All listeners found the information shared on IVR useful, while 9 in 10 found it easy to understand, 8 in 10 applied it, and 6 in 10 used the AI service.
- Listeners who applied all the information are much more likely to report 'very much improved' cattle management (84% vs. 43%) and 'very much increased' money earned (63% vs. 21%) than those who applied 'most', 'some' or 'none' of the information.
- Messages on the uptake of AI service to get crossbred cattle and information on caring for pregnant cows were ranked as the most valued pieces of information received on IVR
- 7 out of 10 male and female respondents started using AI services after listening to IVR calls.
- Female secondary listeners, who currently rear at least 5 cattle are more likely to apply all information received, compared to other groups (60% vs. 25%). Similarly, listeners who have at least 4 crossbred cows and calvers are more likely to apply all of it (73% vs. 45%).
- IVR calls has a Net Promoter Score of 49 and varies slightly by listener type with female secondary listeners reporting the highest NPS. Only 7% of listeners, overall, report having a challenge with the IVR calls.

Conclusions and recommendations

1. **There is opportunity for Digital Green and PxD to increase the reach to women farmers, and disseminate messages to improve female involvement.** Because some women do not have access to mobile phones, the partners should try other innovative ways of conveying messages to them.
2. **While women farmers found the IVR information useful, they could not listen to the full message because they were busy with another task when they received the call.** Making call-backs at a more appropriate time that picks up from where the listener left off could increase the retention and application from this group.
3. **The partners should consider providing messaging around joint decision making to increase female levels of decision-making ability in the household.** IVR messages should reinforce the need for more equitable distribution of dairy activities within households.
4. **Incentivize women to share messages with other women in their household, and community.** Encouraging and incentivizing women to share messages with household and community members can increase Digital Green and PxD's impact on farmers not just by interacting with them directly, but also through their family members.
5. **Increase access to credit to encourage use of AI services.** While comparable proportions (3 in 10) men and women are not using AI to get crossbred cow, women are more likely than men to report lack of access to credit as the main reason they did not use AI (53% vs. 31%). Improving women farmers' access to financial products could increase the adoption of Artificial Intelligence to get crossbred cattle and potentially increasing IVR's effectiveness.