

Documentation on the Digitalisation Tools for Farm Advisory:
The Case study of Call Centres



Cocorico
(centre d'appel en langues nationales)

**Assistance
des paysans
en zone rurale**

 **Appel/SMS
30 07**

Call centre in local languages
Assistance to farmers in rural areas
CALL / SMS 30 07

Introductory Note

This fact sheet has been produced as part of a study to map innovative methods and tools in agricultural advisory services in West and Central Africa. This study was commissioned by CORAF/WECARD (the West and Central African Council for Agricultural Research and Development) and carried out by RESCAR-AOC (the West and Central Network for Agricultural and Rural Advisory Services) across 13 West and Central African countries.

The overall objective of the study was to compile a descriptive directory of innovative agricultural advisory methods and tools for scaling up agricultural technologies and innovations in West and Central Africa.

Several individuals within CORAF, RESCAR-AOC, and beyond, across the 13 countries covered by the study, contributed to the success of this initiative. We extend our gratitude to everyone involved for their contribution.

1. Overview of the Call Centre Method

Agricultural call centres are telephone platforms dedicated to providing farmers with technical, economic, or regulatory information and advice to improve their agricultural practices (Saravanan et al., 2015). These services may be managed by governmental agencies, NGOs, private companies, or agricultural cooperatives. Call centres play a crucial role while facilitating access to relevant information, thereby contributing to improved agricultural practices and supporting farmers in their daily activities.

2. Brief Description of the Types of Beneficiaries Supported by the Call Centre

Call centres are used to assist all categories of farmers, including men, women, youth, and people with disabilities. The only requirement is to have a mobile phone to make a call. Even if a farmer does not own a phone, he or she can borrow one from a neighbour, especially since there are options for free calls, therefore, no need to have prepaid credit.

3. Necessity and Objective of Using Call Centres

Call centres were introduced in a context characterised by insufficient funding for agricultural advisory services, a low ratio of advisory agents to farmers, increasing demands from farmers for training and information, limited material and logistic resources for extension agents, isolated villages, extensive advisory areas, and security challenges that make field visits difficult or impossible for agents in certain locations. The development of Information and Communication Technologies (ICT), including mobile telephony and digital tools, has also fostered the emergence of call centres as an agricultural advisory tool. The main objectives behind the introduction of call centres are: (i) to improve the efficiency and effectiveness of agricultural advisory services; and (ii) to enhance timely access for agro-pastoral sector stakeholders to resources, information, and training.

4. Impact of the use of call centres

Call centres enable farmers to receive personalised advice promptly without the need to travel. This is particularly beneficial for operations in remote rural areas (Nakasone et al., 2014). Compared to on-site visits, telephone or digital advisory services are more cost-effective and can reach a larger number of farmers at a lower expense (Aker, 2011). By providing updated information on best agricultural practices, crop management, and disease prevention, these services contribute to enhanced productivity and sustainability of farms (Goyal, 2010). Additionally, call centres play a critical role during crises (such as droughts, disease outbreaks, or pest invasions) by rapidly disseminating alerts and recommendations to farmers (Mittal and Mehar, 2016).

In the long term, call centres contribute to the professionalisation of stakeholders, adaptation to climate change, increased yields and incomes, and improvements in household food and nutritional security.

More farmers are being reached through call centres. To this end, in Africa, a study by the Technical Centre for Agricultural and Rural Cooperation (CTA) and Dalberg Advisors identified nearly 400 digital agricultural solutions, including call centres, with around 33 million smallholder farmers registered across the continent. These services have been growing at an annual rate of 45% since 2012 (SPORE, 2019). For example, in Niger, the agricultural call centre set up by the *Réseau des Chambres d'Agriculture* (RECA) - the network of agricultural chamber - in 2017 registered 2,029 calls in the first 15 weeks

(RECA, 2018); for the case of the 3-2-1 service in Burkina Faso, an average of 95,000 farmers are reached per month according to data capitalised by the DVRD (2024).

5. Technologies and Innovations Promoted Through Call Centres

Call centres play a crucial part in the dissemination and adoption of technologies among farmers. They use various ICT tools to provide relevant information (FARA, 2009). For example, Interactive Voice Response (IVR) systems allow farmers to access critical information in their local languages. When further details are needed, farmers can be redirected to a call centre staffed with knowledgeable personnel or to extension agents. This model facilitates the dissemination of specific information adapted to local conditions, such as climate or soil type (FARA, 2009).

A study conducted in Burkina Faso examined the impact of ICT on agricultural advisory services. The results indicate that using ICT—including call centres—has transformed advisory services by enhancing access to information and facilitating communication between farmers and advisors (Alexandre, 2018).

Technologies and innovations promoted through call centres include improved seeds, contract farming, fruit fly control, sustainable fertilisation, technical guidelines for specific crops, among others.

6. Average Implementation Costs of Call Centres

The implementation costs of call centres take into account: (i) the costs of establishing the call centre system (in collaboration with a mobile network operator); (ii) the costs of developing the content to be shared with farmers; (iii) translation fees for messages into various languages; and (iv) the costs of calls made by farmers.

The cost of developing and using ICT varies greatly depending on the infrastructure and the extent of coverage. Evaluating the implementation costs of agricultural call centres is challenging. For instance, according to studies by Ouédraogo et al. (2020), “N’KALO”, the market information and advisory service established in Burkina Faso set subscription collection costs in rural areas that ranged from 1 to 60 USD per year (635 to 38,000 FCFA). In Côte d'Ivoire, according to RECA (2018), the total cost of implementing the e-Extension programme was estimated at 600 million FCFA, comprising 300 million for

investments (companies fees, smartphones, etc.), 75 million for ANADER expenses (training, portal updates), 170 million for equipment (servers and software), and 48 million for MTN's telecommunication services (hosting part of the IT infrastructure and covering free calls during an initial phase of 2.5 to 3 million FCFA per month).

7. Strengths and Weaknesses of Call Centres

The main strengths and weaknesses of call centres, as identified during national workshops and assessment sessions as well as through field documentation interviews, are as follows:

Strengths of call centres

- The commitment of the government and its partners to the digitalisation of agricultural services.
- The availability and diversity of mobile network operators willing to engage in digitalisation efforts.
- The growing use of mobile phones by farmers and their openness to innovation.
- Extensive geographical coverage and network reach in rural communities.
- Accessibility of services in local languages.
- The ability to access call centre services using basic phones without internet.
- Free agricultural advisory services offered by some call centres and the speed in service delivery.
- The possibility of obtaining tailored advice from some call centres (via tele-advisors).
- The commitment of farmers to use these communication channels.

Weaknesses of call centres:

In some rural areas, limited access to mobile phones and the internet can reduce the effectiveness of call centres (Aker and Mbiti, 2010). The information provided may be too general and may not account for local specifics (soil, climate, crop varieties), limiting its relevance (Baumüller, 2018). The quality of advice depends on the expertise of the operators and the updating of databases; outdated or incorrect information can have negative consequences for farmers (Goyal, 2010). Communication via phone or SMS may

not be sufficient for conveying complex knowledge that requires practical demonstrations (Glendenning and Ficarelli, 2012).

Additional limitations mentioned by stakeholders in field documenting include:

- security crises that can cause armed group to destroy telecommunication infrastructure;
- the cost of calls for farmers (e.g., 25 FCFA per call after the four free calls provided per month in Burkina Faso),
- insufficient financial resources for maintaining the platforms,
- dependence on mobile network operators,
- and incomplete national coverage by mobile networks.

8. Prerequisites for the Success of Call Centres

For a call centre to operate effectively, an adequate communication infrastructure is essential. This includes sufficient network coverage in rural areas (Kumar & Sharma, 2020) and access to ICT, particularly mobile phones and the internet (Aker, 2011). The services provided must be available, accessible, and adapted to the needs of farmers (Mittal et al., 2010), and call costs must be manageable for low-income users.

The information disseminated must be accurate, regularly updated (Gakuru et al., 2009), adapted to local conditions and farmers' needs (Meera et al., 2004), and delivered in a language and dialect that farmers understand (Chapota et al., 2014).

Operators at call centres need proper training to address the specific technical and socio-economic needs of farmers (Ferris et al., 2014). Additionally, it is crucial to establish a monitoring and evaluation system to measure the impact of call centres and ensure ongoing improvements (Qiang et al., 2012).

Key prerequisites highlighted by organizations during field documentation include:

- Political will to promote e-extension.
- Partnership agreements with mobile network operators.
- Negotiated call rates with mobile operators to facilitate affordable access for all farmers.
- Organisation of informational and awareness sessions to educate users on the tool.
- Involvement of all stakeholders to encourage widespread adoption.

- Creation of a multi-stakeholder committee (including agronomists, researchers, communicators, and representatives of farmer organisations) to identify key themes and messages for dissemination.

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