INNOVATIONS IN EXTENSION
AND ADVISORY SERVICES
INTERNATIONAL CONFERENCE
PROCEEDINGS

CONTRIBUTING TO EXTENSION – THE QUESTION AND ANSWER SERVICE VOUCHER SYSTEM

P. Kasangaki[1] and V. Oguya[1]

ABSTRACT

The Technical Centre for Agricultural and Rural Cooperation (CTA) has supported a demand-driven agricultural question-and-answer service (QAS) for years. In 2006, it was decided to focus on farmers and extension agents as the primary beneficiaries and to explore proactive approaches such as the QAS Voucher System (QAS VS). This paper demonstrates how a traditional information service was transformed into a new form of extension. It shows how the service was successfully scaled-up from 50 farmers to thousands in Uganda through the mass media and how it has contributed to improving livelihoods. Its realisation was supported by CTA, in collaboration with the Rural Empowerment Network (REN), the National Agricultural Research Organisation (NARO) and the Federal Agency of Agriculture and Food of Germany (BLE). The service uses a variety of tools and a range of actors including field agents, rural information brokers, information scientists, extension agents and researchers. Information request forms and digital cameras are some of the tools used to capture farmers' problems. These problems, together with relevant photographs are published on the internet and, through an established system of experts, farmers receive timely and relevant responses to their problems. The QAS VS is a complement to extension services; it taps into and fills gaps in existing extension and rural advisory models in Uganda. It has been extremely successful and has the potential to be up-scaled in Uganda and other countries.

KEY WORDS: *DIGITAL CAMERAS, INFORMATION BROKERS, TIMELY RESPONSES, UP-SCALE*

1 Rural Empowerment Network (REN), PO Box 9602, Kampala, Uganda.

INTRODUCTION AND OBJECTIVES

In researching the challenges and choices facing the global community in relation to the future of food and farming, it was found that the application of existing knowledge and technology could increase average food yields two- to three-fold in many parts of Africa (GO-Science, 2011). In line with this and as part of its mandate to improve access to agricultural and rural information in the African, Caribbean and Pacific (ACP) regions, the Technical Centre for Agricultural and Rural Cooperation (CTA) has been supporting the provision of a demand-driven information service to meet the agricultural information needs of end-users through a question-and-answer service (QAS). Initially, the service served a broad base of users, but from 2006 the focus was primarily on serving farmers and extension agents.

Farmers continually seek and receive information from many different sources. However, it is still a challenge for them to access written sources of information due to factors such as low literacy levels and language barriers, particularly in relation to international languages such as English. Following the 2006 decision to focus more on serving farmers and extension agents as the main users of the QAS, CTA and its partners began to experiment with more proactive methods of providing the QAS to these groups of users, such as using a voucher system (VS). Collaboration between CTA and the German Federal Agency of Agriculture and Food's Information Systems for International Cooperation in Agricultural Research and Rural Development (BLE-ISICAD), led to the introduction of the QAS voucher system (QAS VS). In 2006, CTA and BLE-ISICAD began working with the Rural Empowerment Network (REN), a non-governmental organisation (NGO), as the main partner in providing the service in Uganda.

In common with many African countries, agriculture plays an important role in Uganda's economy. Though agriculture's share in Uganda's gross domestic product (GDP) has steadily declined as the service and manufacturing sectors have grown, agriculture still employs over 80% of the national workforce. Agricultural commodities account for nearly all of Uganda's foreign exchange earnings, with coffee accounting for about 19.9% of exports in 2007 (UBOS, 2008).

This paper examines how a traditional information service, the QAS, came to help fill the gaps left by the extension and rural advisory services in Uganda. Public sector rural advisory services (RAS) are under-funded and underperforming, reaching only a fraction of the farming community. NGOs and the private sector are only partly filling the gap. Farmers, therefore, tend to rely on informal channels of RAS, in particular their peers. There are unexploited opportunities to strengthen the RAS – for example, through appropriate policy advocacy and capacity-development support (Anderson, 2007; World Bank, 2007).

In this paper, 'extension' refers to all the different activities that provide the information and advisory services that are needed and demanded by farmers and other actors in agri-food systems and rural development (Christoplos, 2010). This term is taken to be synonymous with 'rural advisory services'.

The QAS VS uses a number of information tools to identify farmers' questions and respond to them. When the service was introduced to Uganda, pilot project activities directly covered 50 farmers in central Uganda. By June 2009, the service had reached 900 farmers in seven districts – Kasese, Kayunga, Kyenjojo, Mityana, Nebbi, Soroti and Wakiso – in five agro-ecological zones. Hundreds more farmers have been reached indirectly through radio broadcasts, local communication, farmer radio listening groups and local information archives. The overall objective of the project was to contribute to improved agricultural productivity, food security and rural livelihoods in Uganda by providing timely and accurate responses to farmers' questions on best agricultural practices.

MATERIALS, METHODS AND DATA SOURCES

Vouchers are the means by which questions are identified from farmers and answers are provided to them. A voucher is the right given to a farmer or group of farmers to receive a customised response

to solve a specific problem. It entitles them to submit an information request that addresses their problem and in return receive a response from an expert. It is a practical, demand-driven way of drawing out and addressing farmers' actual information needs. Each farmer or farmer group is allowed to ask one question. The system thus helps farmers or groups of farmers to prioritise the most important problem they are facing.

To circumvent the human-resource challenges faced by a number of extension service providers, the QAS VS uses field agents (FAs), who are farmers or people who reside in the farming communities where the project operates and who understand both English and the local language. They are responsible for distributing vouchers. FAs capture the farmers' information requests using a standard form. They also take photographs to illustrate the request. At least three photographs are taken and used when the request is published online. The FA submits the farmers' questions to a rural information broker (RIB). An RIB is a person in the rural community with information and communications technology (ICT) skills or someone who owns a cyber-café. The RIBs publish the farmers' questions online.

The answering service (AS), in this case REN in collaboration with the National Agricultural Research Organisation (NARO), identifies an expert through an expert database to answer the farmer's question. The AS interacts with the expert to ensure that the answer is provided in a timely fashion. If required, a representative of the AS will visit the expert to help him or her with the formulation of the answer.

The AS may also use CTA's QAS network to identify experts from outside the project region to respond to questions if the need arises. The AS sends the expert an e-mail with the link to the information request and asks them to respond to the question. Once the answer is provided, the AS publishes it on-line.

When the answer to the question is available, the RIB prints the answer and submits it to the FA. The FA explains the answer in the local language to the farmer and helps him or her to complete the evaluation questionnaire which is returned to the RIB who will publish it online. All these actors are only paid for the services rendered when a farmer gives a positive evaluation of the answer provided.

The internet platform for all questions and their answers (a tool used by the service) was developed by BLE-ISICAD in collaboration with partners in Benin, Jamaica and South Africa. The platform also profiles farmers' demographic information, which is useful for policy-makers and researchers. The information is open access. The project website is a public good and anyone is free to use the information.

All questions and answers have been compiled into hard copy information archives at suitable locations in the project sites. The archives are simple files that contain printed versions of the questions and their answers. They are stored in public places (e.g., a community centre) that can be easily accessed by farmers. The archives are proving to be a useful way of improving agricultural information delivery to farming communities; the results of the project benefit not only the farmer who asked the question, but also other farmers in the community and other project partners.

The QAS VS uses a number of ICTs that enable two-way communication between the research community and the end-users of the research. ICTs can improve and enhance two-way information flows and there is substantial evidence that without two-way information flow, development efforts fail (Zijp, 1994).

The most frequently asked questions (FAQs) and their answers are selected and radio scripts are produced in English. The scripts are then translated into five local languages (Ateso, Luganda, Luo, Rukonzho and Runyakitara) that are spoken by farmers in the project area. This is one approach to overcoming the language barrier. Scripts are developed and broadcast as 15-minute radio programmes to the project sites. The use of radio as a tool by the QAS VS has reached about 5 million listeners. Copies of the radio programmes are distributed to farmer listening groups for sharing best practices and initiating discussions. They are also available from the project website. Farmer listening groups also offer farmers an

opportunity to share their experiences of what they put into practice from previous listening sessions.

The core activities in the project involved capturing and responding to information requests, delivery of answers, and evaluation of the service by the farmers. A total of 900 requests for information were responded to during the three phases of CTA support to the project. During the third phase of CTA support to the QAS VS project in Uganda, one requirement of the project was to distribute vouchers to women. This was in response to the critical role women in low-income countries play in agriculture, and the contribution of agriculture to improving their livelihoods. Purposively empowering women and focusing on their unique challenges in accessing information is expected to contribute to important productivity gains and poverty alleviation. The analysis that was carried out for this paper examined gender distribution of vouchers by site and thematic scope.

More female farmers (490 or 54.4%) benefitted from the project than male farmers. In addition to deliberately targeting female farmers, the trend of the service reaching more women than men is not surprising, as there are more female than male farmers in the project sites (Table 1).

To further measure impact, a structured questionnaire was used to interview 150 randomly sampled participating farmers to gather data and information on the extent to which the project had improved their farm production. A statistical package SPSS was used for data analysis.

TABLE 1: GENDER DISTRIBUTION OF VOUCHERS ISSUED BY SITE

District	Male	Female	Total
Kasese	45	55	100
Kayunga	97	103	200
Kyenjojo	72	78	150
Mityana	39	61	100
Nebbi	66	84	150
Soroti	42	58	100
Wakiso	49	51	100
Total	**410**	**490**	**900**

TABLE 2: DISTRIBUTION OF VOUCHERS BY THEME

Theme	Kasese	Kayunga	Kyenjojo	Mityana	Nebbi	Soroti	Wakiso	Total
Crop production	54	120	84	58	75	56	68	515
Animal production	32	56	36	28	45	36	21	254
Pest control	5	4	6	1	9	4	5	34
Marketing	2	4	9	5	9	1	2	32
Forestry	2	4	6	1	6	1	1	21
Post-harvest processing	2	4	3	2	3	2	1	17
Aquaculture	1	4	3	2	3	0	2	15
Natural resources management	2	4	3	3	0	0	0	12
Total	**100**	**200**	**150**	**100**	**150**	**100**	**100**	**900**

RESULTS AND DISCUSSION

Table 2 gives a detailed analysis of the different information requests by theme. The information requests were diverse, the most popular was on crop production (515 requests), followed by animal production (254), with pest control (34) a distant third. This is a clear indication that most farming activities in the project sites involve crop production.

Table 3 shows that the QAS VS had a positive impact on farmer productivity, with many farmers realising a 51–75% increase in crop, animal or aquaculture productivity.

Table 4 shows that there was an increase in farmer engagement in marketing, post-harvest processing and pest control, with the major increase reported in the range 26–50%.

CONCLUSIONS, RECOMMENDATIONS AND IMPLICATIONS

The results show that the QAS VS is an effective method of providing information services to farmers. During the three phases during which CTA provided support to the service in Uganda, an improvement was reported in farmer productivity, with most farmers realising an increase in crop, animal or aquaculture productivity. Farmers also reported increased engagement in marketing, post-harvest processing and pest control activities. This supports the conclusion that the days when agricultural extension was synonymous with the work of public sector agencies are over (Christoplos, 2010). The QAS VS was developed primarily as an information service and not as a possible approach to extension. Organisations that are not usually categorised as 'extension agencies' are currently providing some of the most innovative extension services (Christoplos, 2010). The CTA-supported QAS falls into this category and those involved in providing extension services are urged to consider using the QAS as a possible extension approach. No single method of providing information to farmers or extension approach can meet all of the complex agricultural challenges of Africa. Decisive action is needed, including the QAS VS which has proved to be an effective method of meeting the actual expressed information needs of farmers. To make the service cost-effective, FAQs identified and best practices documented as answers can be converted into radio programmes to reach more farmers.

The QAS VS relies upon and uses existing structures in the communities it serves (e.g., FAs and RIBs), and as such may not be expensive. However, support is needed for staff to provide the service and to cover the cost of producing, translating and airing radio programmes on best practices to FAQs. The Government of Uganda is thus urged to consider the QAS VS as one of its approaches to national extension services. Its support should not be left to development partners only as their priorities may not coincide with those of the farming communities who have confirmed that they benefitted from the service.

The QAS VS is a promising and complementary approach to providing extension services. It is an 'island of success' with potential for further scaling-up in Uganda and elsewhere. Governments must consider alternative methods of providing extension services, such as the QAS VS. Effective extension services require government commitment and sustainable sources of finance. The injection of project resources to agricultural extension projects can mobilise extension efforts for a short period of time, but their sustainability has generally been poor (Christoplos, 2010).

TABLE 3: EFFECT ON PRODUCTIVITY BY ENTERPRISE

	Increase of productivity (%)							
	< 0	0–25	26–50	51–75	76–99	100	> 100	Total
Crop production	5	15	20	65	25	17	3	150
Animal production	2	9	8	37	8	15	6	85
Aquaculture	0	1	1	4	2	0	0	8

TABLE 4: INCREASED ENGAGEMENT BY THEME

Theme	Increase in engagement (%)							
	< 0	0–25	26–50	51–75	76–99	100	> 100	Total
Marketing	5	15	60	22	30	15	3	150
Post-harvest processing	4	10	63	13	34	12	14	150
Pest control	3	20	57	32	17	16	5	150

Accountability and promotion of a farmer-led extension model is an integral part of the QAS VS. Key elements in improving the performance of decentralised agricultural extension systems have been identified as maintenance of transparency and accountability to stakeholders. If decentralisation is to work, agricultural extension workers must be accountable to those who benefit from their services and to the agencies that fund the programmes. In other words, a transparent system of accountability is important for shareholders and stakeholders alike in taking ownership of these programmes and monitoring the impacts of a decentralised extension system (Swanson and Rajalahti, 2010). Development partners and governments that are seeking decentralised approaches to providing extension services are thus urged to consider the QAS VS as a viable option. It can be used to improve the evidence base upon which decisions are made for satisfying the needs of the agricultural community and to monitor and assess progress and impact.

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