

Improving access to information for rural and agricultural development using ICTs in northern Uganda: Lessons and experiences

Achora, J.C.¹

¹Women of Uganda Network, Kampala, Uganda

Corresponding author: jachora@wougnnet.org

Abstract

Access to information by rural farming communities is one of the major constraints to agricultural development in Uganda because of inadequate extension service delivery. The use of information communications technologies (ICTs) can potentially leverage this bottleneck. Although the application of ICTs in rural development is not new, its application in a particular setting makes it a unique experience. The Women of Uganda Network.(WOUGNET) initiated a project in 2005 to improve access to information through use of ICTs by rural women in Apac District, Northern Uganda. In this paper experiences learnt from the innovative application of ICTs in accessing Agricultural information are shared. To date, women farmers can access information on markets, improved farming methods and development information through use of mobile phones and radios. There are however still major challenges in the skills level of the target group, the type of content and costs involved in the use of the ICT tools.

Key words: ICTs, m-Agriculture, eAgriculture, extension, information, Uganda, women farmers

Résumé

L'accès à l'information par les communautés agricoles rurales est l'un des principaux obstacles au développement agricole en Ouganda à cause de la prestation de service de vulgarisation insuffisante. L'utilisation des technologies de l'information et des communications (TIC) peuvent potentiellement tirer parti de ce goulot d'étranglement. Bien que l'application des TIC dans le développement rural ne soit pas nouvelle, son application dans un contexte particulier, la rend une expérience unique en son genre. Le réseau des femmes Ougandaises (Women of Uganda Network : WOUGNET) a lancé un projet en 2005 pour améliorer l'accès à l'information grâce à l'utilisation des TIC par les femmes rurales dans le district d'Apac, dans le Nord de l'Ouganda. Dans ce document, les leçons tirées de l'application innovatrice des TIC dans l'accès à l'information agricole sont partagées. À ce jour, les femmes-agriculteurs peuvent accéder à l'information sur les marchés, sur les méthodes agraires

améliorées et à l'information sur le développement grâce à l'utilisation des téléphones portables et des radios. Il ya cependant encore des défis importants dans le niveau de compétences du groupe cible, le type de contenu et coûts liés à l'utilisation des outils TIC.

Mots clés: TIC, m-Agriculture, e-Agriculture, vulgarisation, information, Ouganda, femmes-agriculteurs

Background

Agriculture is the major source of livelihoods for rural farming communities in Uganda and is the mainstay of over 80% of rural households. Agriculture is however largely at subsistence scale and productivity is low. The agriculture sector is considered the priority sector for eradication of poverty in the Plan for Modernisation of Agriculture (GOU, 2000). Transforming from the subsistence to market led agriculture is needed to attain this goal and contribute to rural development. A variety of priority areas including information access and service delivery are important and constitute the major pillar of the National Agriculture Advisory Services (NAADS). However, access to information and service delivery are still major bottlenecks that require innovative approaches to counteract.

Women of Uganda Network(WOUGNET) is a non-governmental organization initiated in May 2000 by several women's organisations in Uganda. WOUGNET's mission is to promote and support the use of ICTs by women and women organisations in Uganda as tools to empower them and effectively address national and local problems of sustainable national development. As part of its mandate to improve rural women's access to agricultural information and ICTs, WOUGNET with support from the Technical Centre for Agricultural and Rural Cooperation (CTA) initiated project entitled "Enhancing Access to Agricultural Information using ICTs in Apac District" (EAAI) in 2005. This project has been implemented in Apac District, one of the least developed districts in Uganda, and targets grassroots women farmers as the main beneficiaries.

At the project inception, a baseline survey conducted by WOUGNET in the four subcounties of Apac, Akokoro, Akalo and Bala sub counties in Apac district, found that 62% of the respondents had access to agricultural information through radio, which was the dominant means, however 19% were not satisfied with the quality of the information. Use of other ICT as a source

of information was almost non-existent for example only 0.8% used phones. Another study conducted in 2005 by Forum for Women in Democracy (FOWODE), on “Enhancing women’s entitlements and effective participation in the National Agricultural Advisory Services (NAADS) programme in Uganda”, found out that only 14 percent of households in Uganda had access to agricultural extension service. This undermined efforts to improve agricultural productivity since lack of information is one the most limiting factors to increased agricultural productivity the world over.

Literature Summary

In Africa, higher priority needs to be assigned to rural and agricultural development and this should be reflected in both policy and investment (Bage Lennart, 2004). While higher productivity and outputs are pre-requisites for sustained poverty reduction, without access to information and efficient markets, small scale farmers in developing countries are at an enormous disadvantage.

In Uganda Agricultural activities form the economic backbone of the country. During a research carried out by WOUGNET under the “Rural Women Voices Project” in 2008, it was observed that while agricultural activities were unstable and could not be relied on, there was need to boost the information needs of rural communities using different kinds of media. Indeed there was low technology adoption and adaptation rate by rural farmers but there were also differences in the way men and women adapted and adopted technology.

The experience in Uganda for instance demonstrates that although telecentres, set up to improve information access to rural communities by International Development Research Centre (IDRC) with gender consideration in mind (IDRC, 1987), mainly men used the facilities and as a result, the WIRES project (set up by Council for Economic Empowerment of Women-CEEWA) was set up to address such gaps. Women, besides feeling uneasy using the ICTs facilities in the presence of men had other short coming like domestic schedule, husband restrictions, low literacy levels, low income level, technophobia, language and social cultural restrictions (APC 1997; Huyer 1997; Kole 1998; Huyer and Sikoska 2003).

Project Description

This project was initiated in 2005 in Apac district, Northern Uganda. Apac is one of the districts with high poverty levels amongst the rural communities. Four sub counties were selected

in the two counties of Mazuri and Apac. Within the four sub counties, 12 parishes were mobilised and organised in groups of 30 members. Kubere Information Centre (KIC) was set up to be a link between the women groups and information and service providers. The KIC is located in a market place area, set strategically to target women as they go to the market. One of the gender issues in development is women's time to participate in development initiatives. This was a strategic move to proactively engage women. At the inception of the project baseline survey was conducted to determine the scale and scope of use of various ICTs.

In the project implementation two major strategies are used:

(i) Use of e-agriculture. e-agriculture is an emerging field focusing on the enhancement of agricultural and rural development through improved information and communication processes. More specifically, e-agriculture involves the conceptualization, design, development, evaluation and application of innovative ways to use information and communication technologies (ICTs) in the rural domain. WOUGNET employed ICTs and mobile applications in improving access to agricultural information and the main ones used includes the radio, i.e., the Community Radio at District level and Radio cassettes at group level.

(ii) m-Agriculture. This refers to the application of mobile technologies in agriculture. The project initiated use of mobile phones to access information by farmer groups. Collaborations were made with FoodNET in 2005-2006 to support provision of market information (MTN market information service) and trainings were also given to women farmers in the use of mobile telephony to be able to access market information through mobile phones. Other applications that can be useful in agriculture include mobile money transfers branded as ZAP for Zain, m-sente for UTL and Mobile money for MTN.

To facilitate these strategies, web based social networking tools were adapted and are used at the KIC. They include:

- Really Simple Syndication- RSS eg the Kubere Information centre portal linking to the WOUGNET website or other global websites

- Twitter and face book linked to the WOUGNET website – informative rather than sharing. WOUGNET has 206 facebook friends and 228 followers on twitter, and following 25, plus 545 tweets.
- Blogs for instance participating in global forums like Blog Action day 2009 on Climate change and writing blogs for social change.
- dgroup discussions
- Flickr to store pictures of the Organisation/picasa to store and edit
- In addition, WOUGNET was added on the CTA partners portal whose purpose is to facilitate networking and sharing of information mainly on agricultural information within the Africa, Caribbean and Pacific(APC) region. This portal can be accessed at <http://partners.cta.int/wougnet/Pages/Home.aspx>

These methods complement the traditional methods of information communication such as Notice Boards, Community meetings and Listening clubs.

Capacity buiding and engagement. WOUGNET implements a series of activities to support the rural women (Pictures 1 and 2). The capacity of women farmers has mainly been built through training on use the various tools at the KIC and other methods such as field and exchange visits to other parts of Uganda other than the Northern region.



Picture 1. ICT Training.



Picture 2. Exchange visit.

Some of the strategies WOUGNET has used include;

- Engagement of rural women farmers, in forums together with agricultural experts and policy makers. Such forums include the Lango forum on e-Agriculture held twice a year in Northern Uganda.
- Partnerships and collaborations with research institutions, universities and other NGOs engaged in the field of agriculture.
- Intellectual divides –*Categorises the types of users, considers their intellectual abilities.* Information has been re-packaged into Audio cassettes. WOUGNET is currently testing the conversion of the audio tapes into MP3 format using the Audacity software. The audio cassettes are also distributed at group level to be used in listening clubs.
- Private-public sphere divide, women are socialised to occupy the private spaces (homes) while men are socialised to occupy both private and public spheres. This means that information access encountered at village kiosks, tele-centres and other public arenas may be inaccessible to the women. *In this case, the spaces are considered, when packaging information, also the technologies most accessible to women in the homes are considered, such as radios and mobile phones, and are used to communicate with them.*

Summary of the WOUGNET activities at the community level:

- Fifteen established groups of women farmers trained to participate in radio talk shows. This establishes ownership of the content and ultimately improves the relationship and perception of the radio to the women farmers.
- Women farmer groups trained on cell phone use, SMS features particularly
- Training on how to use computers
- Audio recording of radio programmes and taking these back to the women farmers
- Recording the women's opinions and bringing them back and playing them on radio with experts on hand to respond to queries
- Video shows projected on laptop(s) when the women's groups are visited
- Video shows at KIC offices on Television

- Reading and borrowing reading material at KIC offices
- Newspaper reading. Free for all daily
- Field exchange visits such as the one by women farmers from Apac to Kayunga in central Uganda
- Lango forum on e-agriculture held twice a year with some interactive presentations such as market seeking through SMS during the first Lango forum in July 2008.

Progress To date

Phones. At the project inception, awareness level of phones was at 75% with only 25.3% of the 402 respondents ever having used a phone. The reason for non-usage was the high costs involved. Also, 36.9% responded that the service was not locally available and those that did not have a phone were at 34.1%. However the mobile telephone is one of the key tools that has been used in this project and usage has increased to nearly 60%.

Computers. Computers have been the least used, with only 12.3% out of 397 who knew what a computer did and only 8 had ever used a computer and none owned a computer in 2005. Training in computer use has been one of the activities carried out at the centre. Given the low literacy levels of the target group, (85% of the Project beneficiaries are illiterate) only 8 women have so far been trained.

Fax. As for awareness and usage of a fax, only six respondents knew what a fax machine did and among the only four had ever used it. Currently, nearly 22% of target women have had access or used fax.

Challenges

- The mode of agricultural information delivery in the local media does not favour rural communities eg the Market information on TV is broadcast at night and in English. Even the national Newspapers (Newvision) on the Thursday pullouts may not benefit a rural farmers who cannot afford Newspapers nor read and write.
- The low literacy rates among the women impacts on the way the project has to package and deliver information and services to the beneficiaries.
- Low awareness of ICTs in rural areas in comparison to urban areas is a major challenge
- Limited agricultural information materials in the local language i.e., Luo.
- Lack of subject matter specialists to authenticate the information at the project level has also proved to be a major challenge.

Lessons Learnt

- Low productivity levels and quality of products to meet the growing market hampers profitability and drive to commercialisation
- (a) Information and Communication Technologies projects are possible with rural communities. However no one technology can be used in isolation. Innovative use of the available technologies has to be made.
- (b) At infrastructure level, policies have to be in place to support such initiatives. In Uganda, a conducive environment exists for ICT projects. Governments programmes include the Rural electrification programme, the Rural communications Development fund under the Uganda Communications, a Ministry of ICT and a Parliamentary committee on ICT, among others.
- (c) Partnerships and collaborations are of paramount importance. For instance in the WOUGNET project, it was important to collaborate with Agricultural research institutions and agricultural based organisations both at the National and local levels. To scale-up some of its activities and access agricultural experts, WOUGNET has now joint project with Makerere University, Faculty of Agriculture to expand use of ICTs to support rice-legume value chains.
- (d) ICT projects at community levels need long time frame. Since ICT projects do not provide tangible inputs or outputs, people take long to appreciate them. The process of transfer from information to a final product is a process and the community needs time to understand, so such projects cannot be hurried.

Acknowledgement

Thanks are due to CTA for funding WOUGNET and to RUFORUM for facilitating dissemination of information on WOUGNET activities.

References

- Annual Community Meeting (Review meeting for project period may 2008 to February 2009) held at Apac e-Society Hall, Apac District Local Government 11th February 2009, Meeting Report by Janet Cox Achora
- Kubere Information Centre – Radio Script No 7 – 16th/06/2008. Agricultural Information Service. Topic: Moringa growing Funded by CTA project No-3-32-7-240-8
- Kubere Information Centre: A Report on the Lango Forum on e-Agriculture Held on 31st July 2008 Omodi Hostel Apac. By Moses Owiny

Lango Forum on e-Agriculture at the Apac District e-Society Community Hall 10th February 2009 – By Moses Owinyi
Paper presented to the Lango Forum on the state of e-Agriculture in Uganda. Charles Ogang, Vice President – Uganda National Farmers Federation
Progress report – Phase one: Promoting and Improving Access to Agriculture Information Using ICTs in Northern Uganda. Implementation Area Apac District, Northern Uganda. Progress report to Technical Centre for Agricultural and Rural Cooperation (CTA).
Strengthening and Improving Access to Agricultural Information using ICTS Apac District Northern Uganda. Project No. 3-7-32-150-6 Final Progress Report march 2007 – November 2007.
UNESCO's IPDC Funded Project: Rural Women's Voices Project Apac District. Implementation Area, Apac District, Northern Uganda. September 2008.