

Research Application Summary

**Promoting use of ICTs for empowerment of rural women farmers in Uganda**

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**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 address this blockage. 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, lessons 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, internet 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: Agriculture extension, ICTs, northern Uganda, women farmers

**Résumé**

L'accès à l'information par les communautés rurales agricoles est l'un des principaux obstacles au développement agricole en Ouganda en raison de la prestation de services d'extension inadéquate. L'utilisation des technologies de communication de l'information (TCI) peut potentiellement résoudre ce blocage. Bien que l'application des TIC dans le développement rural ne soit pas nouvelle, son application dans un contexte particulier rend son expérience unique. Les femmes du réseau ougandais-WOUGNET (Women of Uganda Network-WOUGNET) ont lancé un projet en 2005 pour améliorer l'accès à l'information grâce à l'utilisation des TCI par les femmes rurales dans le district d'Apac au Nord de l'Ouganda. Dans cet article, les enseignements tirés de l'application novatrice des TCI pour accéder aux informations agricoles sont partagés. A ce jour, les agricultrices peuvent accéder aux informations sur les marchés, aux méthodes agricoles améliorées et à des informations de développement grâce à l'utilisation de téléphones portables, à l'Internet et aux radios. Il y a cependant encore des défis majeurs à relever au niveau des compétences du groupe cible, du type de contenu et des coûts liés à l'utilisation des outils TCI.

Mots clés: extension de l'agriculture, les TIC, nord de l'Ouganda, les agricultrices

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## **Background**

Agriculture is the major source of livelihoods for rural farming communities in Uganda and is the backbone of over 80% of rural households. Agriculture is however largely practiced at subsistence level and its scale and productivity is low. Yet the agriculture sector is considered the priority sector for eradication of poverty in Uganda as articulated in the Plan for Modernization of Agriculture (GOU, 2000). Transforming the sector from subsistence to market led agriculture is needed if the country is to attain its goal of eradicating poverty and ensuring food and nutrition security, and the overall Sustainable Development Goals (SDGs) target for the country. A key focus relates to transforming agricultural sector to support rural development and improved livelihoods. This requires addressing a number of challenges including information access, knowledge management, service delivery and skill gaps to spur the sector that is pivotal for improving the lives of especially the rural populations. In particular, improving access to information and service delivery to women farmers is key since they are responsible for nearly 70% of agricultural production in the country.

Women of Uganda Network (WOUGNET) is a nongovernmental organization initiated in May 2000 by several women's organizations in Uganda. WOUGNET's mission is to promote and support the use of Information Communication Technologies (ICTs) by women and women organizations in Uganda as tools to empower them and effectively address national and local development problems. 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 a project entitled "Enhancing Access to Agricultural Information using ICTs in Apac District" (EAAI) in 2005. This project was implemented in Apac District, one of the least developed districts in Uganda, and targeted grassroots women farmers as the main beneficiaries (WOUGNET, 2005, 2007).

At the project inception, a baseline survey was conducted by WOUGNET in the four sub counties, i.e., Apac Sub County (S/C) at Akokoro S/C in Apac District, and Akalo and Bala S/C now in Kole district. The survey found out that 62% of the respondents had access to agricultural information through radio, which was the dominant means, however only 19% were 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 the Forum for Women in Democracy (FOWODE), on "Enhancing women's entitlements and effective participation in the National Agricultural Advisory Services (NAADS) program 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 of 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 a massive 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, this could be improved by boosting the information needs of rural communities using different channels. Indeed there was low technology adoption and adaptation rate by rural farmers but there were also differences in the way men and women adopted technology. For example, a related study showed that although telecentres were set up to improve information access to rural communities by the International Development Research Centre (IDRC) with gender consideration in mind mainly men used the facilities. Consequently, 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 schedules, husband restrictions, low literacy levels, low income level, technophobia, language and social cultural restrictions (Hafkin and Huyer, 2006; Owiny, 2008; 2011).

The issues highlighted above in terms of low literacy rates and limited access to information to women are some of the core issues WOUGNET is addressing. The target district, Apac, Kole, and Lira are largely agricultural with women being the main agricultural producers. It is hypothesized that harnessing opportunities through access to ICTs would enhance women access to information and increase agricultural productivity in the target districts.

### **Project description**

The Project, Enhancing Access to Agricultural Information Using ICTs in Northern Uganda 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 (in the then Apac district) were selected in the two counties of Mazuri and Kole now Kole District. Within the four sub counties, 12 parishes were mobilized and organized in groups of 30 members. Kubere Information Centre (KIC) was set up to serve as a link between the women groups and information and service providers. The KIC is located in a market street, 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 start of the project a baseline survey was conducted to determine the scale and scope of use of various ICTs. In the project implementation, strategies used to reach grass root women farmers were:

**Radio programs.** This involved presentation on a given topic for 30 minutes, questions, and answer periods for 30 minutes, where the radio panelist responded to questions raised by radio listeners. This was a weekly series that gave information on best practices in agriculture, market prices and markets, sources of agricultural inputs, pest and disease control, credit facilities, information on post-harvest handling (including losses), group dynamics, enterprise development, early warning, etc.

**Dissemination meetings.** Each sub county by then had one agricultural extension worker according to the local government structure. Sub county meetings were held to disseminate information to farmers according to their priority need. The project supported the extension workers to move and participate in such meetings to answer farmer's questions at parish level.

**Listening clubs.** Radio Cassettes were distributed with pre-recorded agricultural information on audio tapes which were played. Questions generated from the meetings were answered by agricultural staff and later replayed back to the farming communities.

**The Kubere information centre.** The centre was open to both women and male listeners, including persons from outside the target sub-counties. This enabled non target beneficiaries come to the centre to learn about the project and access agricultural information

**Mobile phones.** These were given to farmer groups in the 12 parishes. These ICTs tools were given to the communities and the groups used them in the following ways: to call during weekly radio talk shows and during listening club sessions to listen to prerecorded discussants that were not present at the meeting to clarify on a particular topic or when they did not understand the response given. This was very exciting to rural women farmers because this was something they could not do before. Much as WOUGNET made efforts through those channels, access to information and service delivery are still major blockages that require innovative approaches to address.

**Lango Forum on e- Agriculture.** This event was held twice a year in Apac District, in Northern Uganda. The purpose of the forum was to sensitize rural women and the community at large on the role of ICTs in rural and agricultural development. Forum participants shared knowledge and experiences on how ICTs have been or could be applied in agriculture and rural development within the region, highlighting both the benefits and the challenges. Participants included farmers, district leaders, and civil society organizations from Apac, Gulu, Lira, and Oyam districts, and stakeholders from other areas of Uganda (see <http://wougnet.org/2010/02/third-lango-forum-on-e%E2%80%93agriculture-improving-information-access-for-agricultural-and-rural-developm/>)

**Field exchange visits.** Field exchange visits were arranged for women farmers from Apac to St. Jude Family project and Rural Training Centre in Masaka and Kayunga District, respectively to learn and share experiences.

In the above processes partnerships and collaborations were key and vital to WOUGNET. For instance, WOUGNET collaborated with Agricultural research institutions and agricultural based organizations both at national and local levels. To scale-up some of its activities, WOUGNET has since been participating in the implementation of a Cassava Community Action Research Project (CARP) of Makerere University (Mirembe *et al.*, 2016; Opolot *et al.*, 2016). The University has used the setup of WOUGNET to reach out to cassava farmers in the area with WOUGNET leading several of the activities including facilitating students' attachments to various farming group. In the process Makerere has provided support to

strengthen Kabeere telecentre. The University staff and students have also engaged to strengthen the ICT skills of the farmers and participated in providing information and answers to queries posted by farmers (Mirembe *et al.*, 2016; Opolot *et al.*, 2016).

**WOUGNET Progress to date.** To facilitate the above efforts, web based social networking tools were adapted and are used at the KIC. They include:

- (i) The Kubere Information Centre portal linking to the WOUGNET website or other global websites
- (ii) Established groups of women farmers trained to participant in radio talk show, this has created ownership of the content and in the end improved the relationship and awareness of the radio to women farmers.
- (iii) Twitter and face book linked to the WOUGNET website – is another informative way in which WOUGNET shares its information to its groups
- (iv) WOUGNET Blogs for instance is used in participating in global, national and local forums
- (v) dgroup discussions
- (vi) Flickr to store pictures of the Organization
- (vii) U –Tube to disseminate activities of the organization documented in Videos: These methods supplement the traditional methods of information sharing such as Notice Boards, Community meetings and Radios.
- (viii) WOUGNET implements a series of activities to support the rural women. For example, in 2010, WOUGNET opened another rural information Centre in Amuru district, called Riber- Ber Information Centre to help farmers access market information using mobile phones. Innovatively using a combination of ICTs which included, radio, mobile telephones, listening clubs and face to face meetings, women farming communities were equipped with skills to enable them access farming information for improving their farming as well as general knowledge base.
- (ix) Reading and borrowing reading material at Kubere Information Centre offices. This is offered freely and on daily basis.

**Phones.** At the project inception, awareness level of phones was low 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 constituted 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 80%.

**Computers.** Computers have been the least used, with few trying to operate the computer and this is attributed to high level of illiteracy. Hence most of them end up sending their school going children for computer training.

### **Challenges**

- (i) Low awareness of ICTs in rural areas in comparison to urban areas is a major challenge
- (ii) Limited availability of agricultural information materials in the local language, Luo.

- (iii) Lack of agricultural specialist to confirm the information at the project level has also proved to be a major challenge. This has partly been addressed by linking with Makerere University CARP team, and the College of Agriculture and Environmental Sciences and College of Computing Science.
- (iv) The mode of agricultural information delivery in the local media does not favour rural communities. Even the national newspapers (New Vision and Monitor) on their Thursday and Wednesday pullouts may not benefit a rural farmers who cannot afford newspapers nor read and write and for those who have access to TV broadcast this may also not work because messages are mostly delivered in English rather than the local languages.
- (v) The low literacy rates among the women impacted the way the project and information had to packaged and delivered to the beneficiaries.

### **Lesson learnt**

- (i) Low productivity levels and quality of products to meet the growing market hampers profitability and drive to commercialization in the target areas.
- (ii) At infrastructure level, policies have to be put in place to support such initiatives. In Uganda, a conducive environment exists for ICT projects. Government's programmes include the rural electrification program, the Rural Communications Development fund under the Uganda Communications, a Ministry of ICT and a Parliamentary committee on ICT, among others.
- (iii) 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 organizations at both the national and local levels. To scale-up some of its activities and access agricultural experts, WOUGNET has a joint project with Makerere University to further consolidate Makerere University's engagement with rural communities with the objective of improving livelihoods, adapting better farming technologies developed by Makerere University and better access to agricultural information.
- (iv) ICT projects at community levels need a long time frame to ensure impact. Since ICT projects do not provide immediate tangible outputs, people take long to appreciate them. The transfer of information to a final product is a process and the community needs time to understand, so such projects should not be hurried
- (v) Leaders should integrate ICTs into their development plans, hence implementing the integration of ICTs at Grass root level would be made easier
- (vi) Information provided should also be relevant to the needs of the target farmers/ users

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## References

- Government of Uganda (GoU). 2000. Plan for Modernisation of Agriculture. Ministry of Agriculture, Animal Industry and Fisheries, Entebbe, Uganda.
- Hafkin, N.J. and Huyer, S. 2006. Cinderella or Cyberella? Empowering women in the knowledge society. Bloom fields, USA.
- <http://www.e-agriculture.org/blog/female-farmers-and-use-icts-agriculture-uganda-experiences-wougnet> : By Moses Owiny Submitted on Mon, 05/03/2012 - 20:47
- <http://wougnet.org/2009/08/how-can-icts-promote-sustainable-agriculture/>
- Mirembe, D.P., Obaa, B.B. and Ebanyat, P. 2016. Developing and piloting a multi-channel ICT-enabled model to enhance University engagement with smallholder farming communities in Uganda. *African Journal of Rural Development* 1(1): 13 - 21.
- Opolot, H.N., Obaa, B.B., Isubikalu, P., Ebanyat, P. and Okello, D. 2016. Quality and dissemination of information for strengthening University-farming community engagement in northern Uganda. *African Journal of Rural Development* 1(1): 23 - 34
- Owiny, M. 2008. Kabeere Information Centre. A Report on the Lango Forum on e-Agriculture held at Apac on 31st July 2008.
- Owiny, M. 2011. Female farmers and the use of ICTs for agriculture in Uganda: Experiences from WOUGNET. E-agriculture, <http://www.e.agriculture.org/blog/female-farmers-and-use-icts-agriculture-uganda-experiences-wougnet>
- WOUGNET. 2005. Progress report – Phase one: Promoting and improving access to agriculture information using ICTs in Northern Uganda. Implementation area Apac District, Northern Uganda. Progress report Technical Centre for Agricultural and Rural Cooperation (CTA).
- WOUGNET. 2007. Strengthening and improving access to agricultural information using ICTS in Apac District Northern Uganda. Project No. 3- 7-32-150-6 Final Progress Report, March 2007 – November 2007.