Crimson Publishers
Wings to the Research

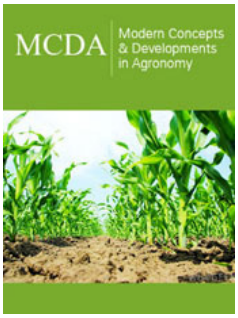
Opinion

How is ICT Helping Smallholder Farmers in Cameroon

Yves Stéphane Ngaleu*

Center for Nigerian Studies at the Institute of African Studies, China

ISSN: 2637-7659



***Corresponding author:** Yves Stéphane Ngaleu, Cameroon

Submission: June 20, 2019

Published: July 01, 2019

Volume 4 - Issue 4

How to cite this article: Yves Stéphane Ngaleu. How is ICT Helping Smallholder Farmers in Cameroon. Mod Concep Dev Agrono.4(4). MCDA.000595.2019.
DOI: 10.31031/MCDA.2019.04.000595

Opinion

Rural development allows the improvement of the population's quality of life. Economic stability can be achieved through actions within the rural areas. In this sense, agriculture is fundamental for the growth of a nation. Thus, it is extremely important to improve the efficiency of resource use and reduce the environmental impact. New technologies are needed to increase the productivity levels [1]. Information and Communication technology in agriculture (ICT in agriculture), also known as e-agriculture, focuses on the enhancement of agriculture 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, with a primary focus on agriculture. ICT includes devices, networks, mobiles, services and applications; these range from innovative internet-era technologies and sensors to others pre-existing aids such as fixed telephones, televisions, radios and satellites [2]. The strategic application of ICT to the agriculture industry, the largest economic sector in most African countries, offers the best opportunity for economic growth and poverty alleviation on the continent. African agriculture is predominantly rain-fed, has low-yielding production, and lacks to critical information, market facilitation, and financial intermediation services [3]. This article will present how I have been using ICT in agriculture to help smallholder farmers in Cameroon.

Agriculture is the backbone of Cameroon's economy, employing 70% of its workforce and providing 44% of its gross domestic product and 30% of its export revenue [4]. The agrarian population in Cameroon (45.06% of the Cameroon's total population) is made up of essentially small-scale peasant farmers and their family members who make up about 70% of the agriculture population [5]. ICT is a new concept in the agriculture domaine in Cameroon, it facilitates access to timely and accurate information for an improved agricultural production. Access to information is crucial in familly farming and especially in rural communities, this is while we developed initiatives to facilitate our work with smallholder farmers. In fact, I work in rural communities as an agriculture extension and advisory service worker with the Cameroon Ministry of Agriculture and Rural Development in other to help smallholders' farmers and their organisations to ameliorate their competitivity. I am the founder of ENJEAL NYS AGRO, an organisation working for the development of agriculture innovation and agribusiness. We are working to put in place ICT tools that will ameliorate agriculture extension and advisory services in Cameroon. The project is Call ICT4AgD (ICT for Agriculture Development) and we carry activities like:

TV and Radio presentation; here we present existing national and international financial opportunities in the domain of agriculture, how to create and manage agro pastoral enterprises and how youths can be involved in value chain. Agriculture Websites (FAO FSN forum, Jangolo, Afaas network, Gfras, Pola Capital, e-agriculture, academia.edu, etc.), web and mobile applications (Jangolo Farmer, google keep, zoom), social media (tweeter, instagram, linkedIn, facebook, google plus etc.) and blog (enjeal nys agro, Afaas, etc.); here we are involved in providing advice and training to internauts on agriculture production, good agriculture practices, climate oriented and smart agriculture, etc. We also participate in proposing and developing deliveries for the development of agriculture in Africa and the World through

sharing of experience, success stories and findings. We also use the application in planning and programming of agriculture activities. Computers; here we are using Microsoft (MS) Word, Excel and Access to collect and analyse data from smallholder farmers. We collect information on specific crops production and help farmers put in place an agriculture working calendar; we also use these tools to evaluate the impact of our services to farmers. We use it for cash flow and economic simulations for project analysis within the Private Public Partnership programmes providing financial assistance to smallholder farmers' organisations. Through MS access a data base system has been put in place to collect information enabling us to have an initial image of farmers' organisation at the moment we start working with them and to have an evolution image as we move on with them.

Tablets are used to provide practical advice and assistance to individual farmers or small groups of farmers. Mobile phones are what we use most and we are going to give more details in this article on how we use it. We use mobile phones to provide information on prices of cocoa in the market and to provide good agriculture practices on many crops to smallholder farmers. In other to ameliorate our agriculture extension and advisory services, we have initiated a Short Message System (SMS) that enable farmers to optimise the use of their mobile phones in their agriculture production, this permit us to better assist them to acquire information, new lessons and to apply it. We usually start with a diagnostic, we collect data, using MS excel to analysis it; this is a facilitation workshop with farmers that enable us to identify the different crops they grow in their locality. In December 2017, in the locality of NKOLNTSA in SAA Sub-Division situated in LEKIE Division in the Center Region of Cameroon we identified that most farmer's agriculture activities were oriented on cocoa, maize, cassava, groundnut, etc. and we decided to work on cocoa and maize by developing short messages that was sent regularly for the optimisation of farmers' capacities. In January 2019 in the locality of NKOLOSSAN, in ELIG-MFOMO Sub-Division situated in the same Division, we identified that most farmers were into crops such as Cassava, Cocoa, Maize, tomato, Okra, pepper, etc. and we added crops such as cassava, tomato and pepper in our list of SMS. Generally, after identifying the crops, we start with a training workshop where farmers' capacities are developed on these crops. Then every week, farmers receive messages through Short Message System (SMS) via their mobile phones and on a specific crop depending on the production period. While receiving these messages we also work practically for them to better understand how they can apply the lessons. For example, in 2018 during the period of pesticide application, after the famers have received the messages on how to apply pesticide, we carried out a practical application where they share their knowledge, ask questions and learn new lessons from each other. After these, if they have problems, difficulties or preoccupations they can send a text via SMS and they will receive a response as soon as possible either by SMS or through calls. ICT is permitting us to work efficiently; through it we have been able to ameliorate our extension and advisory services. Now to touch more farmers in different localities we are working to put in place a website and an unstructured Supplementary service data (USSD) code. This is a communications protocol used by GSM cellular telephones to communicate with the mobile network operator's computers that we are going to use to automate the service we are providing by the SMS. We also look forward to developing mobile application to put at the disposal of the public our cash flow and economic simulation tools.

References

1. NTU International (n-d). Agriculture and Rural Development.
2. Wikipedia (2019) Information and communications technology in agriculture.
3. Etransform Africa, ICT for Agriculture in Africa.
4. Research4Agrinnvation (2017) Potentials and possibilities for German collaboration in agriculture. Cameroon.
5. Holzkämper A, Stöckli S (2016) Small scale farmers' indigenous agricultural adaptation options in the face of declining or stagnant crop yields in the fako and meme divisions of Cameroon, Agriculture.