

Proceedings of the Annual Conference of the Agricultural Extension Society of Nigeria

Number: Twenty-Seventh Annual Conference

Theme: Enhancement of E-Agricultural Extension Systems

Date: 26-28, September 2022

Venue: Nnamdi Azikiwe University Awka

ISSN: 1595 – 1421.

Website: <http://info@ajol.org> .

Email: agricultural.extensionnigeria@gmail.com; editorinchief@aesonnigeria.org

Enhancement of E-Agricultural Extension Systems

<https://dx.doi.org/10.4314/jae.v27i1.1S>

Kashifu Inuwa, CCIE

Director General/CEO,

National Information Technology Development Agency (NITDA) Abuja, Nigeria

A keynote address presented at the 27th edition of the Annual Conference of Agricultural Extension Society of Nigeria (AESON), held at the Nnamdi Azikiwe University Awka 26th – 29th September 2022

Protocols

May Peace, Mercy and Blessings be upon you all.

It is my pleasure to be here today at the 27th annual conference of agricultural extension practitioners in Nigeria to give a keynote speech on the theme "Enhancement of e-agricultural Extension Systems". As aptly put in the theme of the event, digitalization of agricultural processes including the extension services requires continuous improvement to catch up with the technology influence on the sector. NITDA already put digitalizing agricultural extension services into its major strategic focus areas. The effort of the Agricultural Extension Society of Nigeria (AESON) in this direction is a direct support to government initiatives for the agricultural sector and is commendable. This is a clear demonstration of the desired need for all stakeholders in the both public and private sectors, and all associations such as AESON to come together and drive initiatives that can guarantee food security and national prosperity.

Nigeria has 34 million hectares of arable land. Only 42% of this arable land is cultivated according to researched data. The demography of Nigeria's population shows that half of the population is aged under 19 years. This shows great opportunity in human capital. Despite all these opportunities in the land resource and youthful manpower, there is low patronage of the abundant natural resource in the arable land has created a socio-economic crisis for the country, some of them are unemployment and inability to meet the food demand of the society. The youth unemployment rate in the country is as high as 42.5%. The country has yet to take advantage of its competitive advantage, especially in Agriculture, to address the growing challenges of not meeting domestic food requirements, food security, and Nutrition.

To address some of these challenges using technology, the National Information Technology Development Agency (NITDA) introduced the National Adopted Village for Smart Agriculture (NAVSA). This is in line with the policy directive of the Federal Ministry of Communications and Digital Economy (FMoCDE) to introduce digital technology and innovations

through an ecosystem approach to enhance agriculture practices in Nigeria. NAVSA is aimed at connecting the supply (e.g., farmers, value chain players, etc.) and demand (e.g. agro vendors, smart solution providers, etc.) sides of agriculture to create maximum value in the agriculture sector. The goal of the project is to attract youths and women into farming as a business, increase farmers' productivity and income, tackle the challenge of unemployment, enable economic growth and diversification using technology in Agriculture, and help the nation to attain a national policy on food security and taking hundred millions of Nigerians out of poverty.

Extension services are important parts of the agriculture value chain. It helps deliver good agriculture practices and knowledge, including agricultural technology to farmers and rural dwellers in both developed and developing countries. It has become evident that agricultural extension services are essential for effective production at all levels. Its roles in boosting agricultural productivity, increasing food security, improving rural livelihood, and empowering farmers economically cannot be overemphasized. It provides critical support for rural farmers to meet the new challenges confronting agriculture and its transformation in the global food and agricultural system.

However, over the years, extension services have had their share of challenges that are constraining their outcomes. One of the major challenges is the ratio of extension workers to farmers. We do not have enough extension personnel and expertise to serve the number of farmers in Nigeria. There are poor logistics to support on-farm activities with farmers. The resources to ensure continuous capacity building, research and development for extension workers to effectively carry out their assignments in a continuously changing world are not sufficient. There is no up-to-date information regarding market access and timeliness. These, among others, are many challenges facing extension services in Nigeria.

These challenges are impacting negatively on good agriculture practice scalability, agriculture information dissemination support, research extension linkages and efficient communication with farmers. Improvement in these areas would have a tremendous contribution to productivity, food security and nutrition, quality of livelihood, and economic activities of farmers, especially in the remote and rural areas where most of the food production is taking place.

To provide an alternative means of addressing these challenges, there has been a clamour for e-extension services. I believe we are doing well through the current e-extension efforts but there is still a huge gap to be covered. We, however, need to move from the mere deployment of mobile technologies for voice and messaging solutions to full-blown digital use cases that have the potential to address the stated challenges in a transformative manner. Digital is central to every successful sector or business today; the agricultural extension system is not an exception.

Building an enhanced e-extension system requires innovative adoption of digital technologies in extension activities.

Digital extension as defined by FAO refers to delivering advisory services with the use of context-specific text messages to interactive voice responses (IVR), smartphone applications that link farmers to multimedia advisory content, farm inputs, and buyers. It also involves the use of geoinformation technologies, drones cloud computing, and data analytics to collect, store, and analyze data to improve extension services and farmers' activities. Digital agricultural extension is scalable and cost-effective. It allows farmers to have access to actionable information, support, and knowledge much faster, more efficient, effective, and more impactful even in terms of coverage.

Recently, emerging technologies such as the Internet of Things (IoT), Artificial Intelligence (AI), Machine learning, Geo-Information Technology and satellite, Big data analytics, 5G, Blockchain, and robotics among others are going to shape the future of extension services. Digital technologies for extension services are playing an increasingly important role in reshaping the agrifood sector. However, those trying to introduce such technologies must overcome enormous challenges to succeed.

It is good to note that these technologies in themselves will not improve the extension services but appropriate use. If we want to enhance the extension services, there is therefore a need to be aware of the shift from e-extension to digitalized extension services. We must also work to engage critical stakeholders, build a cooperative digital extension ecosystem, attract funding and digital infrastructure, and as well build the right skills and orchestrate attractive motivational schemes for the extension personnel. We should know that this will not be an easy task. We must fasten our belts and be ready to get the work done.

I must, once again, commend AESON for providing this platform to discuss these important issues that are very significant to the growth of the agriculture sector and the survival of the country at large. The shift to digital extension and a cooperative digital ecosystem approach will go a long way in providing the needed infrastructure and skills needed to enhance the e-extension system.

To this end, I would like to give my word that we are on this journey together with you. We will ensure an adequate enabling environment is provided to optimally leverage digital technologies to enhance e-extension systems for the benefit of farmers, make Nigeria a digital agriculture hub in Africa and ultimately increase the contribution of agriculture to the country's GDP.

Thank you for listening and God bless.