Incentivizing e-Agriculture and Agribusiness Incubators for Youth Employment in Nigeria

Ibisime Etela[1] and Anthony O. Onoja[2]

[1]*Department of Animal Science, University of Port Harcourt, PMB 5323, Port Harcourt, Nigeria*
[2]*Department of Agricultural Economics and Extension, University of Port Harcourt, Port Harcourt, Nigeria*
Email of corresponding author: ibisime.etela@uniport.edu.ng; Mobile: +234(0)7034378380

Abstract
The paper explored how agriculture can be made more attractive for youth employment for attainment of economic diversification in an oil-based economy. It took a quick x-ray of the nation's agricultural policies vis-à-vis youth employment in agriculture, identified some challenges militating against youth interestedness in agriculture and proffered workable solutions that could drive youth interest in agriculture. It is argued that, agriculture should be promoted as a sustainable livelihood source and as an initial entry point to propel Nigeria into a green economy where there is inclusivity and equity, resource use efficiency and minimal environmental risks in line with United Nations (UN) Post-2015 Sustainable Development Goals. In an era where the world economies are driven by knowledge, integration of information and communication technologies (ICTs) and agro-tourism into agricultural activities as obtainable in any truly business venture will make agriculture attractive to the youth. Positive changes in the way we consider the youth as mere beneficiaries of agricultural interventions to seeing them as co-actors/players in the agriculture space and along the e-agriculture value chain will lead to improved agricultural productivity. The use of ICT and promoting establishment of functional Agribusiness Incubators in strategically selected Nigerian universities is needed. Agricultural policy reforms that support training youth farmers and prospective ones as impact entrepreneurs will engender youth involvement in agriculture, give them a sense of ownership and protection from unfavourable policies including subsidies that, apparently, restrict or even hinder youth involvement.

Keywords: Agribusiness incubator; e-Agriculture; Policy reform.

JEL Classification: O3 Innovation; Research and Development; Technological Change; Intellectual Property Rights

1. Introduction

Although much discourse have been organized on the importance of agricultural development to fast-tracking rural development in Nigeria, there is yet, to be seen the expected leap in terms of progress. There is still difficulties in harnessing available resources to enforce the expected changes because, rural development is influenced by an array of very complex inter-related challenges that are difficult to define since different stakeholders in the development process often have different and most times conflicting needs. As a result, critical analysis of existing resources and scenarios must be conducted with all stakeholders involved as vital information required for developing the right policies can only be obtained by those for whom such policies are targeted to ensure ownership and prevent early burn-out during policy implementation. High unemployment rate is one of the global challenges identified by the United Nations (UN) and has so been captured

as one of the goals to be met by 2030 under the UN Post-2015 Sustainable Development Goal (SDG) 8 (Decent Work and Economic Growth) - to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (SDG, 2015).

In Nigeria, there have been efforts by the Federal Government in partnership with the Food and Agriculture Organization of the United Nations (FAO) to engage youths in agriculture with one of the most recent being the nation-wide Youth Employment in Agriculture Programme (YEAP) launched in September 2013 and implemented by the Federal Ministry of Agriculture and Rural Development (FMARD). The YEAP was designed to create decent employment and develop innovative enterprises through empowerment of 750,000 young commercial farmers and agribusiness entrepreneurs or agripreneurs (FAO, 2016). Reports showed that, the YEAP was able to train and provide starter packs to a total of 6,618 youths (3,893 females; 2,725 males) by December 2014 (FAO, 2016). Encouraged by the success recorded then, the FAO pledged to continue supporting YEAP to help mainstream decent employment in agricultural policies and programmes for youths and women among others through promotion of youth-friendly information and communication technologies (ICTs) for agricultural knowledge management and dissemination.

Sustaining the gains from the YEAP will lead Nigeria to meeting SDG Goal 8 Target 8.6 (By 2020, substantially, reduce the proportion of youth not in employment, educate and training) and Target 8.9 (By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products). In spite, of the reported slight success of the YEAP programme, much still needs to be done to address the issue of youth unemployment through decent jobs with e-agriculture standing out as a key entry point into a green economy nation. There is the need to implement policies that would engender inclusive green economy with the youth accorded the required priority as they are pivotal being the highest users of social media and other ICT tools, young agripreneurs and dynamic decision makers whose voices should be heard and implemented for sustainability (Fulai et al., 2015). In line with this school of thought, Nigeria needs to have a policy direction, which will promote the introduction of courses in Agribusiness at all levels and establishment of Agribusiness Incubators in selected Nigerian universities where Agriculture and its Allied courses are offered; as a sustainable driver for youth employment in agriculture.

Nigeria with a population of over 185 million people and a youth unemployment rate of about 24.0 per cent compared to 11.7 per cent in the fourth quarter of 2014, Nigeria still faces the challenges of job creation and providing decent work for the ever growing youth population (Trading Economics, 2016). The over dependence on crude oil is also not helping matters as often times desperate efforts are made to maintain oil production thus, leading to unstable economic climate. However, formulating and implementing policies on e-Agriculture promises to diversify the economy and has the potential to engage a high proportion of the unemployed including the youth (37.7 per cent unemployment rate for age group 15-24; 22.4 per cent unemployment rate for age group 25-44) and improve youth employment (World Bank, 2014).

Research objectives:

Therefore, the paper was prepared to assess the extent to which past agricultural development policies addressed the issue of youth employment with a view to promoting e-Agriculture and establishment of active Agribusiness Incubators as vehicles for making

agriculture attractive in improving youth employment in Nigerian agriculture.

e-Agriculture Concept and Potentials for Youth Job Creation in Nigeria

The e-Agriculture concept is, relatively, new and many who have heard it do not know what it means and how it affects them either as individuals or as Agricultural professionals. The e-Agriculture Community of Practice noted that, e-Agriculture describes an emerging field focused on the enhancement of agricultural and rural development through improved information and communication processes. In specific terms, 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 (e-Agriculture, 2013). The initiative is being led by the Food and Agriculture Organization of the United Nations (FAO). FAO has been assigned the responsibility of organizing activities related to the action line under C7. ICT applications: benefits in all aspects of life – and more particularly on e-Agriculture. Millions of rural farmers have access to phones or at least each has a phone that can make and receive calls, unemployed youths can utilize ICT channels such as Bulk SMS, to create a platform for communication with these rural farmers and create time to physically see and encourage their work.

In 2006, a multi-stakeholder working group was set up, to guide these efforts and include: Association for Progressive Communications (APC); The Consultative Group on International Agricultural Research (CGIAR); Technical Centre for Agriculture and Rural Cooperation (CTA); UN Department of Economic and Social Affairs (DESA); Food and Agriculture Organization of the United Nations (FAO); Gesellschaft für Technische Zusammenarbeit (GTZ); Global Forum on Agricultural Research (GFAR); Global Knowledge Partnership (GKP); Inter-American Institute for Cooperation on Agriculture (IICA); International Association of Agricultural Information Specialists (IAALD); International Institute for Communication and Development (IICD); International Fund for Agricultural Development (IFAD); International Telecommunications Union (ITU) and World Bank. At the Youth Policy Dialogue Series held in Lagos, Nigeria, youths were encouraged to create and research more on the challenges faced by rural farmers and see how to use technology to proffer the solutions (KaluSam's blog, 2013) . "The value chain of agriculture is very large; all Youths don't need to head to the farm! We can encourage farmers and indeed improve their crop yield through e-Agriculture thereby creating employment for ourselves; together we will use e-Agriculture to solve the unemployment and food problem in the world!" noted KaluSam's blog.

Young Farmers can benefit by getting and sharing information among fellow farmers around the world. Young, unemployed Agri Professionals can key into this untapped money spinner by bridging the gap between the rural farmers and the consumers or supplying them with information on weather, cheapest prices of seeds and inputs, planting tips and places to sell their goods at a good price within their locality. This is a challenge to unemployed youths who flock the cities in search of what they call: greener pastures; in reality the greener pastures are found in rural farms, are they not? According to KaluSam's blog (2013), feeding the world population, can be done by using e-Agriculture to:

1) Reduce agricultural produce losses and wastages resulting from lack of proper storage knowledge and lack of customers to the rural farmers;
2) Share information of high yielding varieties to the farmers and where they can buy them;

3) Provide information on right planting time, spacing and other tips that will improve yield;
4) Provide the right information on the use of herbicides, pesticides and fertilizers;
5) Provide proper and efficient market information to enable profit to the farmer;
6) Especially, as the global warming and its effects are hitting hard on the farmers, they need to know the best areas to plant to prevent their crops from being washed away by flood.

rest 3.1 per cent being above 65 years (Trading Economics, 2016). The population structure and characteristics of the five FARA-UniBRAIN pilot agribusiness incubator countries compared to Nigeria and Africa with projections of impacts showed that, Agribusiness Incubators should be introduced in Nigeria and the whole of Africa, respectively for the expected positive impacts (Table 1). The median age of Nigeria compared to the other countries and the whole of Africa

Table 1: Population structure of five African countries with active agribusiness incubators

Consortium	Country	Population*	Urban share	Rural share	Median age
Creating Competitive Livestock-based Entrepreneurs in Agribusiness (CCLEAr)	Ghana	28,146,334	53.2%	46.8%	20.7 years
Sorghum Value Chain Development Consortium (SVCDC)	Kenya	47,466,754	26.0%	74.0%	19.0 years
West African Agribusiness Resource Incubator (WAARI)	Mali	18,229,431	36.9%	63.1%	16.3 years
Afr Banana Products (ABP) Limited	Uganda	40,548,911	16.6%	83.4%	16.0 years
Consortium for Enhancing University Responsiveness for Agribusiness Development Limited (CURAD)					
Agri Business Incubation Trust (AgBIT)	Zambia	16,806,475	39.2%	60.8%	17.0 years
Total (six consortia)		**151,197,905**			
Africa *(including those without)*	**Africa**	**1,221,512,972**	**39.8%**	**60.2%**	**19.5 years**
Nigeria *(no agribusiness incubator)*	Nigeria	187,844,877	48.1%	51.9%	18.0 years

****Source:*** Worldometers (2016)

Population structure and labour market dynamics in Nigeria relative to five other countries in Africa

Recent studies indicate that, Nigeria has a population of about 187 million people 40.9 percent of whom are below 15 years old, 55.9 per cent between ages group 15-64, and the

suggests that, the nation is overdue for a national policy, which should embrace the Agribusiness Incubator Model. This will, ultimately, help us to rediscover our diverse indigenous agricultural knowledge, to effectively develop our agricultural value chains according to the comparative and

competitive advantage per agro-geological zone. What an opportunity for Nigeria as a nation to boost youth employment in agriculture by promoting active and effective consortia of agribusiness incubators as pilot programmes, preferably, two in each of the six geo-political zones of Nigeria to actualize the vision of the current administration's NPower programme .

Review of agricultural policies and their contributions to youth employment

At the African regional level, one agricultural policy that has recorded huge successes is the Universities, Business and Research in Agricultural INnovation (UniBRAIN), which is an innovative programme set up to lead agribusiness incubation in Africa.

The FARA-UniBRAIN targets the agribusiness sector, which employs over 65 per cent the targeted countries for developing informal small and medium size enterprises (SMEs) into organized businesses because, SMEs absorb more labour than the larger more capital intensive industries. So far, FARA has facilitated the establishment of consortia six of which are agribusiness incubators along six specific agricultural value chains in five African countries while, five are food processing business incubation centres (funded by Government of India under the India-Africa Forum Summit II) in five countries too. Table 1 shows that as at August 2014, the six agricultural value chain-based agribusiness incubators in Ghana (1), Kenya (1), Mali (1), Uganda (2) and Zambia (1).

Table 2: Selected agribusiness incubators consortia, their specialties and achievements

Consortium	**Country (Value chain)**	**Commercialised agro-technology**	**Interns**	**Incubates**	**Jobs created (80% youth)**
Creating Competitive Livestock-based Entrepreneurs in Agribusiness (CCLEAr)	Ghana (Livestock)	4	23	54	340
Sorghum Value Chain Development Consortium (SVCDC)	Kenya (Sorghum)	4	26	35	425
West African Agribusiness Resource Incubator (WAARI)	Mali (Non-timber forestry products)	6	23	42	380
Afri Banana Products (ABP) Limited	Uganda (Banana)	6	54	31	650
Consortium for Enhancing University Responsiveness for Agribusiness Development Limited (CURAD)	Uganda (Coffee)	8	81	40	520
Agri Business Incubation Trust (AgBIT)	Zambia (Horticulture)	7	33	25	550
Total (six consortia)*		**35**	**240**	**227**	**2,865**
Africa (15 months projection)		***970***	***3,520***	***3,300***	***42,000***
Nigeria (18 months projection)		***87***	***596***	***565***	***15,000***

**Source:* FARA Newsletter (2015)

The values in Table 2 have together commercialized 35 agricultural technologies, trained 240 interns, mentored 227 incubates, and created 2,865 with over 80 per cent of them being youths. The corresponding projections values for Africa (and Nigeria) are 970 (87) commercialized agro-technologies, 3,520 (596) interns trained, 3,300 (565) incubates mentored, and about 42,000 (15,000) decent works created in 15-18 months, mostly, for youths in Africa and Nigeria, respectively. The projected job creation and positive engagement of the youth via internship and mentorship of incubates, who have high level of possibility to establish agribusiness incubators with multiplier effects. Such a programme has a very high chance of succeeding and thereby contributing to the achievement of the targets for the agriculture component of the Federal Government NPower project. But, in addition to the aforementioned six agribusiness incubators, FARA-UniBRAIN has also facilitated the establishment of five Food Processing Business Incubation Centres in partnership with the Government of India funded under the India-Africa Forum Summit-II. The five value chains for which the Food Processing Business Incubation Centres were established (and their host countries) are: Tomato (Angola); Cassava (Cameroon); Livestock (Ghana); Forestry products (Mali), and Banana and Maize (Uganda).

Currently, to consolidate the gains from the FARA-UniBRAIN led agribusiness incubators in Phase 1 and the planned Phase 2, the African Agribusiness Incubator Network (AAIN) was set up by FARA to enhance the sustainability of agribusiness in Africa. The AAIN, which was initiated by the six Agribusiness Incubators mentioned above and the five Food Processing Business Incubators above, is affiliated with the Global Agribusiness Incubator (GABI) Network, which is facilitated by the Agribusiness Incubation Programme of the International Crop Research Institute of the Semi-Arid Tropics (ICRISAT), India. The mission of AAIN is to upscale the development of agribusiness incubation and facilitate stakeholder's activities towards a sustainable agribusiness incubation system that encourages the sharing of experiences and lessons learnt across the continent. The nine core values of AAIN are: entrepreneurship; agro technology commercialization; partnership; innovation; consumer value creation; development funds mobilization and venture capital; integrity; promoting agribusiness incubation, and focus on the youths. Membership of AAIN is open to agro companies, funding agencies, development organizations, government agencies involved in promoting entrepreneurship, universities, research institutes and individual entrepreneurs (Aria and Sharma, 2015).

Drivers of youth employment in agriculture and agro-allied industry

In the developing world, as in Nigeria, smallholder (with farms less than 2 hectares) farmers represent over 475 million (that is, about 85 per cent) of the estimated 570 million farms and they together are reported to produce over 80 per cent of the total food consumed in the developing world (Fulai et al., 2016). Formulating and religiously implementing policies that will better the lot of these smallholder farmers still remains the better option for promoting inclusive and sustainable agricultural productivity that, can employ the youth and women. The Transformation Agenda, as it were, gave priority to non-oil sectors to facilitate diversification of the economy with strong emphasis on agriculture because, of its multiplier potential in terms of job creation. FARA (2013) emphasized the need to create a favourable policy environment for science to work for agricultural development through strong commitment to women and youth as

necessary for transformation at the farm level and productive science.

Low returns on investments on farm enterprises, poor linkages among agricultural value chain actors and the general poor performance of Africa's agricultural sector have been attributed to traditional research and development (ARD) approaches (Adekunle et al., 2013: 3). This realisation led FARA to introduce the Integrated Agricultural Research for Development (IAR4D) to enable agricultural research respond, effectively, a catalyst for agricultural development by embracing a broader systems of agricultural innovation to facilitate interaction and enhance the flow of knowledge (facilitated by ICT tools) among all actors in agricultural systems and value chains. The major difference between the traditional approach for ARD and the introduced approach for IAR4D being that while, the ARD tends to adopt or struggles to adapt innovations generated from outside the particular agricultural system, the IAR4D generates the innovation based on available resources (human; financial; physical; social) from within the specified agricultural system.

The result is an enhanced development impact outcome, which would be more sustainable and lead to an inclusive green economy. The approach of IAR4D, which typifies action research, is also important for the development of indigenous agricultural knowledge systems within each locally thereby sustaining the gains over the years since most cultures still have a way (usually, unwritten pattern) of knowledge transfer from one generation to another. However, the red flag in this process is that such a methods risks losing vital fabrics of the culture through the process of cultural erosion such that more and more subsequent generations know less and less about their (agri)cultural heritage with a high risk of extinction (Akaranta, 2015).

Key drivers of youth employment in agriculture would, naturally, be their desire for food, clothing, shelter, decent work and earn steady income. However, embedding e-agriculture and establishment of agribusiness incubators in selected universities where there are Faculties and Colleges of Agriculture will trigger more youth interests. This is in addition to the afore-listed drivers require the craving for self-actualisation, self-reliance, sharing economy and efficient resource use as other important drivers of youth employment in agriculture. FARA (2013) observed that, promoting field-oriented training in agriculture will attract more youth as most of them appear more comfortable having to try things out themselves due to their usual, adventurous spirit. The report further noted that, providing the needed technical support skill sets required to enable the youth locally fabricate and effectively service farm equipment, facilities and implements will make them attracted to agriculture and hence promote youth employment. Generally, youths can be involved in agriculture in three basic areas, if allowed to participate from the design through implementation, as young entrepreneurs and farm operators such as in:

1) Primary production - raw materials;
2) Secondary production - post-harvest, processing, food products, by-products, and
3) Tertiary production - provide services such as agro-waste management and utilization.

Key Constraints and Challenges to Youth Employment in Agriculture

There needs to be a closer and stronger link between the nation's science community and the political community in Nigeria to be able to, pragmatically, effect impactful youth-friendly agricultural policy reforms to support a sustainable youth employment scheme in agriculture (Fulai et al., 2015). In a public lecture on Thinking, Research and Communication (TRAC) in Development of Science and Indigenous Knowledge, Akaranta

(2015) there is a gap between research and polity and that the process of bridging the gap is deeply political as well as apparent gap between policy and the practice of its implementation. To address this challenge, action research here also described as the FARA promoted IAR4D has the potential of bringing research into the policy domain through the apparatus of social capital (trust and connectedness) and effective communication (Pretty, 2003). In other words, agricultural policies designed for poverty reduction should be inclusive enough to also think of strategies of creating decent work life for the nation's workforce of about 60.1 per cent who fall within the age group of 15-44 years (World Bank, 2014).

Lack of market access such as through various ICT-enabled mechanisms have been identified as a determinant of rural poverty and low agricultural productivity (World Bank, 2014). Other challenges identified are poor and inequitable access to agricultural resources such as land (due to skewed tenure systems) and finances (due to unrealistic demands for collaterals, usually, unaffordable by youths), which are regular experiences (FARA, 2013). For example, cultures where only the male child is entitled to possess land once delivered will hinder youth involvement in agriculture knowing that, the term youth includes both young men and women and in Nigeria where the national population figures indicate a ratio of 1:1 for males and females, we already have a situation where 50 per cent of the youth population are prevented from participating right from birth. As a result, the female youth and by implication the women continue to have to compete with their male counterparts on uneven grounds (Beintema and Stads, 2014).

Incentive Mechanisms - case study of pilot Ogoni Youth Agricultural Support Scheme (POYASS)

Some key impacts of the FARA-UniBRAIN led six agribusiness incubators from the five African countries listed in Tables 1 and 2 were 20 per cent during the period (five per cent per annum) increase in agricultural output and an average increase in income from a baseline of USD $970 per household to USD $1,047 income per household. Similar improvement in the income of participating farmers have been reported elsewhere in Nigeria (Tanko, 2013; 205). Such recorded increments in average household incomes will serve as basic incentives for youth involvement in agriculture via employment. With Focus on the Youths as one of the nine core values of AAIN, FARA works towards enabling the youth to establish and own agribusiness enterprises and to become key players in the agribusiness sector by mentoring and nurturing their businesses, and establishing long-term partnerships or relationships (Waters-Bayer et al., 2009). To introduce the FARA-UniBRAIN Agribusiness Incubator Model in Rivers State, a pilot baseline study was conducted in 2015 in selected communities of the oil-polluted Ogoni area of Rivers State, Nigeria with funding support from the Shell Petroleum Development Company Nigeria Limited (SPDC), Port Harcourt. The Pilot Ogoni Youth Agricultural Support Scheme (POYASS) was initiated in line with the recommendations of the United Nations Environment Programme (UNEP) for SPDC to help the inhabitants of the Ogoni project area to secure alternative livelihood sources, which is a key deliverable for the August 2011 UNEP Report on the Ogoni pollution.

Under the POYASS funded by the SPDC, Port Harcourt, a comprehensive and inclusive baseline survey instrument was designed, developed and administered as interactive interviews and observations to selected 60 youth farmers between July and August 2015. The 60 youth farmers were selected from Eleme, Gokana-1, Gokana-2 and Tai Global Memorandum of Understanding (GMoU) Clusters all within the Eleme, Gokana and tai local government areas (LGAs) of the 23 LGAs

in Rivers State. The purpose of the scheme was to enhance the capacity of the selected youths in three farming enterprises and value chains namely: cassava; poultry; aquaculture. They were later subjected to a one month hands-on training on either of the three farm enterprises in collaboration with the Songhai Rivers Development Initiative (SRDI), Bunu Tai, Rivers State. Data generated from the baseline survey were then, analysed using the Software Package for the Social Sciences (SPSS) based on the following focus areas: Identifying the peculiar needs and preferences for agrienterprise intervention; Knowing the major challenges faced by the selected youth farmers; Understanding their farm product marketing, storage and income sources; Studying the past efforts by the youth farmers to overcome their challenges, and Finding out what they wish to do, differently, to move to the next level farm business. Each of the trained youth farmers were later given stater packs and their accounts credited with cash sum of NGN ₦200,000.

The findings from the study indicates that, the selected farmers were in the age group of 25-45 years with 33 per cent being female-headed and 67 per cent male-headed farming families. Of the 60 youth farmers, 40 per cent (24nos) preferred cassava farming, 33 per cent (20nos) preferred broiler farming, and 27 per cent (16nos) preferring fish farming. Access to land, which is one of the challenges often encountered by youth farmers showed that, land was mostly (65 per cent) acquired by inheritance, 10 per cent through communal sharing, and the rest 25 per cent via partnership agreements or lease. Again most of the youth farmers have varying workforce with 40 per cent reporting not having any worker, 33 per cent had 1-2 workers, 24 per cent reported 3-5 workers, while just 3 per cent reported hiring above 5 workers. It was also observed that, just only 23 per cent of the youth farmers had undergone any form of capacity building training to improve their farming skills. This lack of training on the job may be, partly, responsible for their low productivity. When asked in what areas they would prefer to be trained to help sharpen their farming business skills, the youth farmers expressed interest in participating in the following areas of capacity building: Value chain development (post-harvest processing and market access); Farm record and book keeping; Farm enterprise management, and Cooperatives management.

Incentive Mechanisms Lessons from Two Agribusiness Incubators (CURAD; ABP Ltd.) in Uganda

Curious to understand the governance framework and functions of agribusiness incubators, a 10-day field visit was paid to the Consortium for Enhancing University Responsiveness for Agribusiness Development Limited (CURAD) and Afri Banana Products Limited (ABP Ltd.) both in Uganda between late October and early November 2015. The trip, which was made possible with funding by the Association of African Universities (AAU, Accra, Ghana) under the Senior Executive Attachment Programme for (Agro)Technology Uptake made it possible for two-man team from University of Port Harcourt to embark on a 10-day field visit (Dumpe and Etela, 2015). While works within the coffee value chain, ABP Ltd. works within the banana value chain. The purpose of the field trip was to learn the fundamentals for establishing agribusiness incubation centres and acquire skills on best practices for effective agro-technology uptake.

a) Consortium for Enhancing University Responsiveness to Agribusiness Development (CURAD)

The CURAD was established based on an initial proposal jointly written by the academia and industry players coordinated by academics from Makerere University, Uganda. It is a a non-profit company established to support profit-oriented agribusinesses and aims to

achieve the following objectives: (1) To support and promote commercialization of agribusiness innovations; (2) To train and mentor agribusiness graduates to become successful entrepreneurs, and (3) To share and upscale innovative outputs, experiences and practices. CURAD's clients include University undergraduate and graduate students; Farmers; Coffee bean graders, roasters, grinders, specialized coffee value added product innovators, farmer organizations and individual entrepreneurs. Since the options are enormous, some other technology product lines supported by CURAD include: Coffee liquor production; Wet processing of coffee; Nursery and coffee seed multiplication; Production of coffee tissue culture plantlets; Sorting packaging technologies; Roasting, coffee shop and Barista training technologies, and Mushroom spawn production. This facility is located on the campus of the Agricultural Research Institute of the University.

b) ABP Ltd.

Similarly, ABP Ltd. Was established based on a drive by the industry players to improve their banana business and later contacted professionals from the Kyambogo University, Uganda who again coordinated the development of the proposal. The first eye-opener in the case of ABP Ltd. was the fact that, Uganda was at the foremost place in the global banana production placing second only after India. However, the down side of the picture was that, Uganda ranked a distant 70th place in the export of banana and its derived products. Therefore, the biggest challenge, which ABP Ltd. sought to confront, was the short shelf life of banana fruits. In response to the situation where mature banana fruits ripen in two weeks and then deteriorate to waste, ABP Ltd. has developed technologies that process banana fruits and fibre materials into assorted value added products thereby creating decent jobs for the youth. Some of the derived products include banana wine, banana juice, charcoal briquettes from banana peel, banana textile/crafts from the pseudostem fibre, fresh vacuum sealed matooke (FVSM), animal feed, biodegradable bags and tissue culture banana seedlings.

Youth Training Programmes

The youth for agriculture among others must be trained on the use of ICT for agriculture (e-agriculture) and one of such platforms available to promote this is the Regional Agricultural Information and Learning Systems (RAILS) initiated by FARA. The RAILS is a platform, which uses ICT to create an open space where agricultural research institutes and other public and private players in the agriculture space can collaborate and share learning (Akinbamijo, 2015). Such capacity building programmes for the youths will elicit their interest and provide a creative and innovative way of engaging them in e-agriculture. Recently, the present administration initiated the N-Power, which is a job creation and empowerment initiative of the Federal Government designed to empower young Nigerians with life long skills and tools to make a difference in their lives and communities under the Social Investment Programme (www.npower.gov.ng). The programme, now in its first phase, will target education, agriculture, technology, creative, construction and artisanal industries with a focus on young graduates and non-graduates.

However, such training and capacity building programmes for the youth should take cognizance of local knowledge (that is, the agriculture knowledge system) in the planning and eventual policy making process to make them successful and not disastrous (Akaranta, 2015). Of the estimated 11-12 million young people entering the labour, daily, majority do not often find employment because, they lack the practical skills or the business sense to do so (Spore, 2014: 21). Hence, to achieve out targets, this teeming youth population should be trained on specific agricultural value chain such as maize, cassava, plantain, banana,

aquaculture, agro-tourism, and so on. Specifically, the youth would benefit a lot from training in the areas of: Proposal and or business plan writing; Agrienterprise development and sustainable livelihood; Critical thinking skills and good governance, and Entrepreneurial skills and value chain development.

Conclusion

Adopting a national agricultural policy, which promotes e-Agriculture and Agribusiness Incubator establishment will enhance youth employment because, it will help to prepare them for business in diverse agricultural value chains. The paper has demonstrated that, there are challenges with the extent of youth employment in agriculture due to limited inclusion and lack of favourable environment for creating a sense of ownership by the youth in the agricultural value chain. Thus, the authors have posited that, youth employability in agriculture in Nigeria will improve if only ICT will feature prominently (e-agriculture) coupled with capacity building in agribusiness to help create decent jobs and wealth. The POYASS showed that, it is important to encourage full participation of the youth farmer to promote benefit-sharing, inclusive ownership and green economy activities for inclusive growth. Leading them through the path of networking and collaboration is essential for sustainable competitive business advantages. Finally, inclusive ownership creates social capital (connectedness) among youth farmers and improved asset base for social protection. Based on the findings of this study, the following policy recommendations are hereby made:

1) Agribusiness incubators should be promoted as vital links between university and industry because, they shall also contribute to and participate in curricula review activities to promote the training of industry-ready University graduates with adequate entrepreneurship orientation.

2) The relationship and role of partner organizations in the incubator consortium should be clarified in the Articles of Association.

3) Corporate offices and technology demonstration and production facilities related to the agribusiness incubators should be set up outside the facilities of any of the consortium partners to accord it the leverage of business autonomy.

4) University-based scientists who develop viable technologies (including ICT-driven) to drive successful agribusinesses should transfer promotion of the produced technology packages to their affiliated but, autonomous and independent agribusiness incubators for technology demonstration, uptake and commercialization.

5) The corporate establishment of an agribusiness incubator should be independent of the affiliated University to prevent some complex bureaucratic bottle-necks inherent in most university governance hindering its activities.

6) Moderate fees should be charged for products and services of the agribusiness incubator organization to ensure sustainability even while in the initial phase of donor sponsorship. This way, they would be on a better footing to cope with shrinking funding from initial sponsors as they mature in the process.

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