

EDITORS' NOTE



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We are pleased to present the 23rd edition of the Sahel Quarterly focused on talent development for Nigeria's agricultural sector.

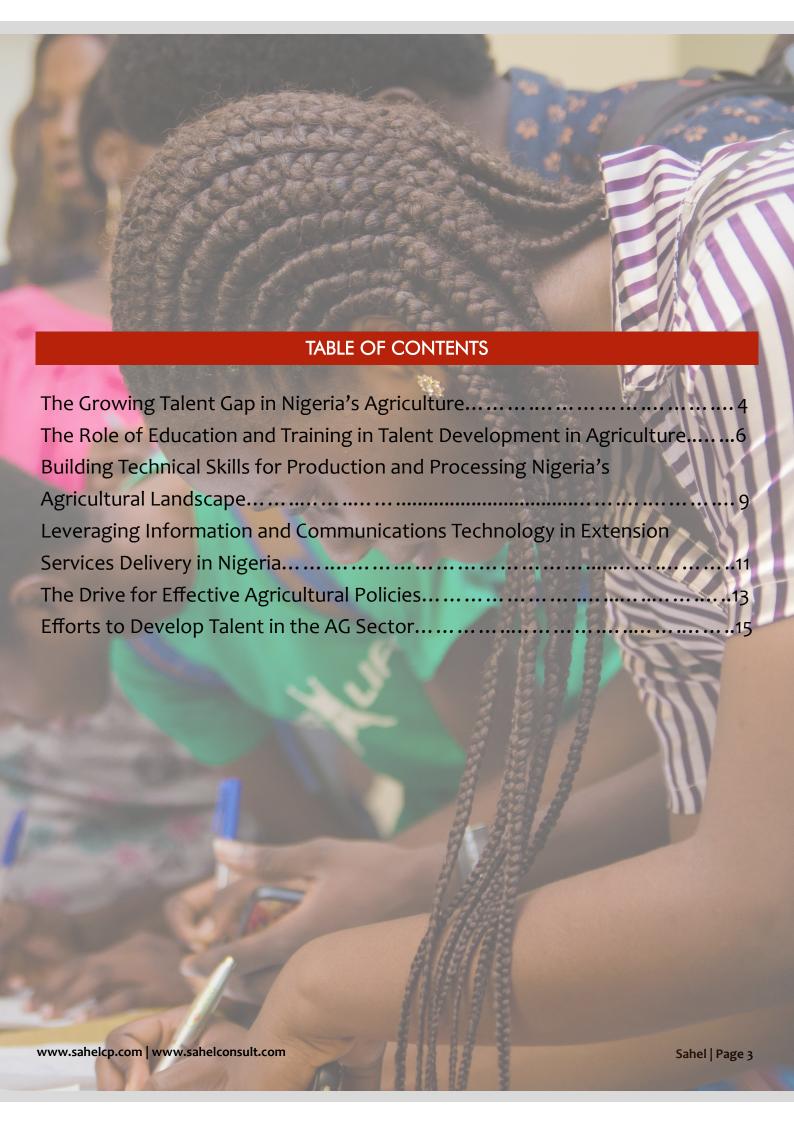
The paucity of talent in Nigeria's agricultural sector is due to the limited engagement of youth in agribusiness, the outdated curriculum being utilized by agricultural universities, limited adoption of innovation and technology in the sector, and lack of funding support for agripreneurs to build their skills. Only 4.34 percent¹ of graduates from Nigerian universities study agriculture or agri-related courses, and most of these graduates admit that this was their third or fourth choice.

The agricultural extension and information delivery system is weak, with a very low ratio of extension officers to farmers, and the farming workforce is largely under skilled and struggles to adopt cutting edge technology. This has resulted in a serious gap in technical skills by smallholder farmers, limiting their productivity and ability to scale their agricultural operations.

To address the talent gaps in the agriculture sector, the National University Commission (NUC) should partner with private sector actors to update the curricula used in agricultural universities to include recent trends, management skills, and practical work experiences in agricultural organizations. In addition, private organizations and institutions should support talent development efforts by providing internship and mentorship opportunities for undergraduates studying agriculture. The government should create national capacity-building programmes for policymakers to empower them with the knowledge and skills to design sustainable policies for talent development in the agriculture sector. It is also important for the government to encourage increased private-sector funding of polytechnics by creating fiscal incentives, strengthen intellectual property rights, boost the productivity of fabrication clusters by supplying stable power, and leverage information and communications technology in extension services delivery.

We believe this Quarterly will inspire stakeholders and decision makers in Nigeria's agriculture sector to develop and adopt creative and innovative training, education, and capacity-building systems to build a talented and employable workforce to transform the agriculture sector in Nigeria.

^{1.} Adesugba, M., Mavrotas, G. (2016). Youth employment, agricultural transformation, and rural labor dynamics in Nigeria. IFPRI Discussion Paper 1579. Washington, D.C.: International Food Policy Research Institute (IFPRI). http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/130962





What is a Talent Gap?

talent gap refers to a situation in which there is a shortage of people possessing a desired skill set, consequently constraining productivity in a sector.² That is to say that there is a mismatch between the actual skills possessed by individuals in the workforce and the skills demanded by the industry. More specifically, talent gaps in the agricultural landscape mostly manifest as deficits in processing, machinery operation, and repair skills, ineffective extension services, poor agricultural policies, and outdated curricula at various levels of education, among others.

Emerging talent gaps in the sector

Beyond the traditional talent gaps highlighted above, the growing integration of technology in the agriculture sector has resulted in an increased demand for certain technical skills which are not readily available for deployment in the sector, resulting in a technology-based skills gap. Currently, engineering, statistics, and other STEM professionals are extremely valuable in agriculture.3 This is because the demands of jobs traditionally viewed as low-skilled in the agricultural sector are quickly changing as a result of increased technology inclusion in day-to-day farm operations. For instance, a worker on a livestock farm may have to work in a strictly controlled environment where sensors are used to monitor the state of the animals or animal products. Monitoring a farm like this would generate huge amounts of data, and analysing these datasets often requires a high level of skill and proficiency. So, these farms require the services of data analysts that will interpret the data generated by the sensors, to make quick decisions that can have significant ramifications on their internal operations and even their relationships with clients.

Furthermore, soft skills such as effective management, communication, and client relationship management are also in high demand in the agricultural sector. These are especially salient for small businesses where a single individual can be responsible for coordinating with contractors, consultants,

and other workers. Despite these changes in the skills required for the agriculture sector, there is still a lingering perception that agriculture is a low-tech, low-skill sector, which makes it much more difficult to attract talent from an already limited pool. So, improving the perception of roles in the agricultural industry is a requirement for any initiatives seeking to address talent development in the sector.

Why do talent gaps exists?

Other than the direct human resource gaps in the sector, agriculture in Nigeria is constrained by several infrastructural and institutional barriers limiting the engagement of skilled labour. Industry actors including farmers, extension officers, and traders are faced with challenges including: poor access to market information; a lack of requisite technical skill; the high-cost of, and limited access to, training; the rural-urban divide; and low-scale farming, resulting in low turnover and poor remuneration of labour in the sector. These factors make talent development much more difficult as individuals struggle to access training opportunities that can make a tangible difference in their day-to-day lives. On the other hand, the demand-side of the sector is encumbered by an inefficient labour market information system that provides no channel for employers, business owners, and incubators to access talents or support the development of talents in the sector. Moreover, the high cost of training causes employers to look for and employ more experienced hires as opposed to entry-level graduates.

How can we close talent gap?

Mitigating these barriers and gaps will require a wide range of interventions. There is a need to address the nation's infrastructure shortfalls, update the educational curricula, expand access to credit to encourage entrepreneurship, strengthen the extension services network, and create an

^{2.} Todd, B. (2015, November 27). Why you should focus more on talent gaps, not funding gaps. 80,000 Hours. https://8000ohours.org/2015/11/why-you-should-focus-more-on-talent-gaps-not-funding-gaps/#what-are-talent-gaps.

^{3.} STEM: -Science, Technology, Engineering and Mathematics

enabling environment through policy. All stakeholders, including public- and private-sector actors, non-governmental organizations (NGOs), and international development organizations, have a role to play in creating solutions that can address the sector's talent development barriers and help to develop a more diverse, innovative workforce in the agricultural industry.

Instead of just trying to match talent to opportunities, the focus should ideally be on the removal of the structural barriers that restrict talent development pathways. Public-sector efforts are also vital to the creation of an enabling environment for talent development. For any such efforts to be successful, policymakers will need to be aware of the agricultural landscape to create a framework for the industry to thrive. Many policymakers are not specialists in agriculture and would greatly benefit from efforts to gain new expertise.

Another potential area for improvement is in the industries and organizations supporting talent development in the agricultural sector. It is necessary to have skilled trainers and teachers in educational organizations to properly develop and motivate a talented workforce. However, agriculture is not taught seriously as a subject until the tertiary level, and at that point, it is taught according to outdated curricula with little attention paid to innovative methods. To remedy this, universities and training institutions ought to work more closely with industry professionals to make sure that appropriate attention is given to agriculture at the primary and secondary school levels, and that curricula reflects contemporary industry knowledge and methods. Outside of the formal education system, there are few programmes that offer comprehensive agribusiness training curricula that can prepare entrepreneurs for the realities of the market. The most important issue is ensuring a sufficient number of educators and extension agents who can transfer their knowledge to create new generations of agricultural experts.

In conclusion, without targeted interventions, talent gaps in the agriculture sector will only become a more pressing challenge. Continued global technological advances ensure that the rate of change in the industry outpace the expectations and capability of even the most experienced actors.



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THE ROLE OF EDUCATION AND TRAINING IN TALENT DEVELOPMENT

BY EZEKIEL ALABI

he major barriers to talent development in Nigeria's agriculture sector are skill and knowledge gaps in agricultural practices, inadequate training content, and weak academic curricula, all of which have led to a paucity of skilled labour. This article highlights the need for a revision of the training curricula and pedagogy of Nigeria's agricultural academic institutions as well as the institutionalization of structured professional development trainings programmes for agribusiness personnel to ensure continuous professional development and provision of requisite information.

The basic structures of how higher institutions of learning disseminated knowledge and assessed students have not changed significantly despite several societal changes created by technological advancement. However, in recent years, more universities are beginning to accept that their curricula are archaic and their pedagogy obsolete. Thus, they are beginning to adopt innovative changes to these methods to produce high-quality graduates with adequate technical and soft skills required to effectively function and compete in the global labour market. For instance, universities in India are taking a new route through educational technology to incorporate innovative pedagogies, new-age disciplines, and upgraded curricula in a bid to bridge the industry-academia gap. However, Nigerian universities have been slow in embracing and adopting the needed changes. Lecture delivery methods and teaching curricula remain out of sync with current human resources development needs and border on becoming obsolete. Beyond the outdated curricula, most Nigerian universities do not have agribusiness-centric programmes and majors, rather, they only offer courses that are focused on the science of agriculture like crop production and animal science. This has resulted in a shortage of highly skilled agribusiness managers, impacting negatively on the longevity of local agribusinesses and their ability to scale, since most personnel at the helm of these agribusinesses have not been extensively trained on the mechanics of agribusiness management.

At the same time, the Nigerian university curriculum does not facilitate accelerated learning and flexibility for diverse needs

and characteristics of learners and does not provide the linkage of talents to entrepreneurial opportunities and corporate careers.

The above notwithstanding, one of the few local universities trying to develop talent in agribusiness management is Michael Okpara University of Agriculture, Umudike (MOUAU), through its Agribusiness Management programme. The Agribusiness Management Bachelor of Science degree programme in MOUAU provides a business perspective to agricultural practices by combining agribusiness knowledge with courses in financial accounting, economics, and business law. Despite the academic focus on agribusiness, MOUAU offers very limited opportunities for students to gain industry knowledge during their study. The curriculum is complemented by on-farm training, which merely exposes students to farming operations rather than business operations. An analysis of the agribusiness curriculum of an Indian university, Tamil Nadu Agricultural University (TNAU), revealed a balance between the classroom contents of its curriculum with relevant mandatory seminar sessions in agribusiness management, agribusiness project work, and agribusiness internships. Despite the richness of the classroom training contents in MOUAU and a few other Nigerian universities offering agribusiness-degree-related programmes, there is a need to include modern practical applications through internships and other work experience at agribusiness companies.



EXTRACT OF ACADEMIC CURRICULUM FOR B.SC. IN AGRIBUSINESS MANAGEMENT

Michael Okpara University of Agriculture, Umudike			Tamil Nadu Agricultural University	
Core Courses				
Code	Course	Code	Course	
ABM 111	Introduction to Business	ABM	Basic Business Economics	
ABM 324	Managerial Economics for Agribusiness	ABM	Macro Economics for Business Management	
ABM 121	Elements of Management	ABM	International agriculture	
ABM 326	Agribusiness Management Theory and Practice	ABM	Principles of Management	
ABM 311	Farm Business Management and Production Economics	ABM	Production and Operations Management	
ABM 312	Agribusiness Marketing and Cooperative	ABM	Agro food Marketing	
		ABM	Input Marketing Management	
ABM 412	Research Methods and Statistics	ABM	Business Research Methods	
ABM 400	Project Research			
		ABM	Introduction to Business Law	
ABM 211	Agribusiness Finance I	ABM	Financial and Management Accounting	
		ABM	Human Resource Management	
ABM 321	Agribusiness Organisational Behaviour	ABM	Introduction to Organizational Behaviour	
ABM 416	Export Management and International Business	ABM	International Trade and Export Management	
ABM 221	Agribusiness Finance II	ABM	Principles of Banking and Insurance	
ABM 420	Development Planning and Business System	ABM	Rural Industries and Entrepreneurship Development Programmes	
ABM 411	Entrepreneurship and Agribusiness Development	ADIVI	kurai inausiries and Enirepreneursnip Developmeni Frogrammes	
ABM 421	Agribusiness Investment and Project Analysis	ABM	Project Analysis and Business Consultancy	
ABM 325	Agribusiness Value Addition Technology: Principles and Practice	ABM	e-Business	
ABM 322	Agribusiness Study Tour	ABM	Industry and Educational Tour [2 Programmes of 14 days each]	
ABM 212	Agribusiness Communication Skill			
ABM 413	Business Policy I			
ABM 414	Analyses for Agribusiness Decision			
ABM 423	Business Policy II			
ABM 422	Agribusiness Risk and Management			
Work Experience and Seminars				
UGC 111	Farm Practice I	ABM	Seminar in Agribusiness Management	
UGC 121	Farm Practice II	ABM	Advanced Seminar in Agribusiness Management	
UGC 211	Farm Practice I	ABM	Agribusiness Internship (2 Months)	
UGC 221	Farm Practice II	ABM	Agribusiness Project Work [2 Semesters]	

Figure 1: Extract of Curriculum for B.Sc. in Agribusiness Management in Michael Okpara University of Agriculture Umudike (MOUAU), Abia State and Tamil Nadu Agricultural University (TNAU), Coimbatore, Tamil Nadu, India

Courses not found in MOUAU curriculum

These challenges have further expanded the gap in practical knowledge and skills in the agriculture workforce, resulting in a lack of qualified individuals in specialized areas of agriculture, lack of management skills which affects the ability of youth to exploit business opportunities in agriculture or scale agribusiness ventures, and low quality of available technical labour, resulting in productivity losses.

Structured professional development trainings and programmes

Nigeria lacks a universally recognized agricultural institute of professional development, which offers a structured, all-encompassing training programme specifically for agribusiness specialists. The lack of such a professional institution has robbed agribusiness professionals of the opportunity to acquire up-do-date skills to boost their productivity and efficiency. It is interesting to note that structured training and professional development programmes do exist for other sectors like banking and finance and information technology (IT) sectors.

The practice of employing graduates from diverse backgrounds and professions into banking and finance and IT

sectors have created the need for the use of proper talent management procedures, processes, and practices. Structured graduate training programmes are put in place to give sufficient background knowledge of the industries and their dynamics to these diverse individuals. Thereafter, structured mentorship programmes are also facilitated to groom graduates under the tutelage of more experienced experts over a period when they acquire competence.

In addition, these industries also have structured professional development programmes/bodies that improve the professional skills and competence of their members through membership professional examinations and regular continuing professional development (CPD) programmes. For instance, the Institute of Chartered Accountants in Nigeria (ICAN) through its Mandatory Continuing Professional Education, ensures that all professional accountants in Nigeria continue to develop and maintain professional competence in line with their professional codes of conduct.

^{4.} MOUAU (https://caerse.mouau.edu.ng/agribusiness-management/synopsis); TNAU (http://www.tnau.ac.in/bsabm.pdf)

Likewise, in the Fast-Moving Consumer Goods (FMCG) sector, there are graduate management training programmes which are structured to fast-track the careers of university graduates through extended rotations (usually between one to three years) that offer in-depth exposure to business operations. After the completion of the programme, candidates are placed in managerial roles where they are able to deploy acquired knowledge and skills while also participating in regular professional development programmes and trainings.

In agriculture, however, many graduates are often employed in public jobs or self-employed without relevant productive skills, nor organizational and management skills required to build a career or a sustainable business. Bridging the knowledge gap of agriculture graduates in Nigeria has been slow for those willing to build a career within the sector. Graduate training and mentorship programmes within the space have not been sufficient and professional development programmes are either non-existent or not recognized enough to attract participants.

To address these challenges, first, the Nigeria University Commission (NUC) must mandate that universities of agriculture in Nigeria establish a department dedicated to training students in agribusiness management and refine university curricula to include seminars and knowledge sharing sessions with industry experts. NUC must also emphasize the importance of student internships with leading agribusiness companies to gain first-hand industry knowledge before the completion of their degree

programmes. Agriculture curricula should cover technological innovations in the sector, business skills, international best farming practices, finance management, and soft skills to develop the entrepreneurial skills of undergraduates and increase their employability upon graduation.

Practical activities approved for university undergraduates should be flexible and can include business strategy development, financial modelling for agribusinesses, and technology application in the sector. The fast-paced growth of the global economy requires competitive youth with relevant work skills that match the growing economy. It further implies that the future of achievements in education and training is anchored on curricula that are progressively reinforcing change to guarantee growing opportunities for youth.

Human capital development in agriculture is a precondition for successfully revamping current agricultural practices towards social and economic progress. Extra-curricular programmes in agricultural education such as student clubs/ societies and business development groups should be emphasized to further equip students and graduates with much-needed professional exposure. Also, practices from the banking and finance, IT, and FMCG sectors could also be adopted in agriculture. Fostering private-sector-driven graduate training and mentorship programmes for graduates would help in closing the skills gap, improving productivity, and attracting the needed private sector investment to further stimulate economic activities within the sector and economic progress for the nation at large.



Sahel | Page 8

BUILDING TECHNICAL SKILLS FOR PRODUCTION AND PROCESSING IN NIGERIA'S AGRICULTURAL LANDSCAPE

BY JOSHUA UZU

he effectiveness and efficiency of food production and processing systems are dependent, to a significant extent, on the technical competence of the relevant players in the sector. Sadly, many individuals operating in Nigeria's agricultural value chain have significant technical skills gaps which in turn hampers the growth of the sector and Nigeria's food sustainability drive.



The farming operations of many local small-scale farmers, which account for the majority of Nigeria's agricultural production output across the various value chains, are far less efficient than their counterparts in developed countries. While farmers in industrialized nations continually update their farm practices and systems with new farming knowledge, most local farmers still rely on archaic techniques, contributing to yield disparity.

The application of tools, equipment, and powered machinery as inputs in the agricultural process has tremendous power to significantly scale up agricultural production levels. Sadly, many local farmers and farm workers lack the technical skills to utilize mechanized equipment in their daily operations. In addition, there is limited availability of skilled repair/maintenance personnel for farm equipment, making regular maintenance of available machinery incredibly challenging and expensive for farmers. Not only do farmers have to pay more for the repair of their farm machinery due to the limited

availability of skilled repairmen, but the long wait and turnaround time for the completion of repairs of broken farm equipment also reduces the farm productivity, which may have a negative impact on the general farm income, especially when the machinery breakdown occurs during planting and/or harvest. These capacity gaps must be tackled directly for any mechanization effort to thrive in Nigeria.

Food processing in Nigeria is hampered by the technical skills limitation of local fabricators. Many food processors that engage local fabricators for the design and construction of factory equipment complain that equipment produced by these local technicians are usually poorly finished. Food particles get stuck in the crevices of these machines, which over time increases the microbial load in the food processing equipment and ultimately results in the inability of local processors to meet international quality assurance standards.

The skills gap in food production and processing exist largely as a result of the subpar performance of local technical schools. These technical schools/polytechnics are supposed to drive technological development in agriculture and build technical skills capacities in the agri-sector in line with their mandate as outlined in the Federal Polytechnics Decree of 1979, now the Federal Polytechnics Act, Cap. F17, Laws of the Federation of Nigeria, 2004. However, many Nigerian polytechnics are unable to deliver on this commission primarily due to a lack of funding, which prevents them from hiring adequate numbers of skilled personnel and building training facilities.

There is, therefore, a need for these technical schools to diversify their funding streams to supplement the government's current funding efforts which are inadequate.

The above notwithstanding, fabricators under the aegis of the Nigerian Association of Technologists in Engineering

^{5.} Fabrication in the context of this article involves the creation of metal structures by cutting, bending and assembling processes and those who engage in this activity are called fabricators. Manufacturing on the other hand, refers to the large-scale production of goods using machinery. Manufacturers sometimes reach out to fabricators to construct appropriate machinery for their production processes.

(NATE) and research programmes of Nigeria's tertiary institutions have tried to improve the quality of their products and increasingly add value to Nigeria's food processing industry. Over the years, they have produced food processing machines such as the tomato grinding machine, coconut de-shelling machine, rice de-stoners, etc. However, epileptic power supply in the existing industrial hubs and manufacturing and fabrication clusters have hampered the ability of these local fabricators to consistently deliver high-quality products, which are time- and power-intensive.

In addition, agricultural universities and fabricators alike are plagued by unauthorized duplication and sale of their patented fabrication designs by third parties due to weak enforcement of intellectual property (IP) laws in Nigeria. This rampant infringement of IP rights discourages creativity and the application of technical skills in addressing challenges in the agricultural landscape as it prevents inventors from receiving the financial benefits of their work. Hence, these unrewarded inventors become demotivated and more reluctant to offer solutions to other challenges in the sector.

The following are suggested actions that can bridge the current technical skills gap in the sector:

Upgrade technical schools through increased privatesector funding: Technical schools will be better served by engaging with the private sector to increase financing via donations and endowments. In the United States, an estimated \$40 billion of charitable giving goes to universities and colleges—money that is central to their functioning. ⁶Subject to certain conditions, companies and individuals in the United States who make donations to universities and colleges receive tax deductions for their contributions and are allowed to carry over any excess contribution/donation for five years to reduce their tax liability. While Nigeria's tax laws allow companies to claim tax deductions for their donations to tertiary institutions, there are no clear provisions in the personal income tax act that allow individuals to claim deductions for such donations to tertiary institutions and carry-over of excess donations is prohibited.

Nigeria's tax laws should be updated with clear cut provisions that allow private individuals enjoy full tax deduction for donations made to tertiary institutions, whilst allowing the possibility of carrying over excess donations for three to five years. This reform will provide a major tax incentive to individuals and corporations alike to make contributions to tertiary institutions, which will empower them to deliver on their mandate. These

well-funded technical schools will then be able to deliver highly trained technicians in agricultural mechanization and produce a new generation of farmers with up-to-date agricultural production knowledge and highly skilled fabricators able to compete at global levels. It is worth noting, however, that these fiscal reforms and other creative ways of boosting private sector funding of colleges, polytechnics, and universities will not just happen without intentional interventions driven by the leadership of these institutions.

- Strengthen existing industrial zones and fabrication clusters: The federal government should strengthen the existing industrial zones and fabrication clusters in each state or at the very least in the six geopolitical zones by prioritizing the power supply to these zones. Due to the ongoing power deficit in Nigeria, it may be impractical to provide round-the-clock power to these fabrication clusters. However, a daily supply of uninterrupted power for a pre-agreed eight-hour window is well within reach and can transform the fabrication landscape. If fabricators can plan their schedules around the agreed time, they will be able to deliver high-quality output while reducing their overall production cost.
- Strengthen intellectual property rights in Nigeria: Local laws on the protection of intellectual property need to be updated to include strict penalties for infringement and reflect global best practices. More importantly, however, there should be improved coordination among the agencies tasked with the enforcement of IP rights in Nigeria to enhance the implementation of the IP laws, which will act as a deterrent to potential defaulters.

Without a doubt, there are major technical skills gaps in Nigeria's production and processing landscape that require urgent attention if Nigeria is to achieve her food sustainability target by 2030. Left unchecked, this absence of adequate technical skills will continue to have a negative impact on the quality and quantity of agricultural production, farmers' revenues, food prices, etc. The responsibility to build the requisite technical skills for the entire agricultural value chain does not rest with the government alone; it requires the concerted effort of all stakeholders. In addition to some of the solutions highlighted above, key players in the sector must identify technical skills that are crucial to their field and develop strategies on how to build these skills and ensure a continuous supply of skilled personnel.

^{6.} Hunt, A. (2018, January 9). Tax Overhaul to Make 2018 a Painful Year for Colleges. Bloomberg Opinion. https://www.bloomberg.com/opinion/articles/2018-01-09/tax-overhaul-to-make-2018-a-painful-year-for-colleges

LEVERAGING INFORMATION AND COMMUNICATIONS TECHNOLOGY IN EXTENSION SERVICES DELIVERY IN NIGERIA

BY ADAUGO ONYEBUCHI

he recent move by the Federal Government of Nigeria to train 50,000 agricultural extension workers over the next three years is a testament to the widespread awareness of the critical role of extension services in transforming the nation's agricultural productivity. However, there is need to ensure that the scaling of any plan to implement extension services incorporates information and communications technology (ICT) in the delivery of this critical service.

Presently, extension services are mostly carried out in-person by extension agents (EAs) with ICT playing little or no role. This approach to extension services delivery, when combined with Nigeria's low extension-officer-to-farmer ratio of 1:3,100 against the ideal ratio of 1:5008, severely limits the reach of these EAs and their overall impact on local agricultural productivity. Extension agents can amplify their reach to and from farmers by utilizing communication technologies, such as radio, television, mobile phones, internet-connected computers, to disseminate and receive critical technical information. Rather than waiting until the next visit of the extension worker to pass along complaints, farmers would be able to utilize their phones to provide farm situation reports to the extension workers, who can then also provide specialized technical information and solutions to the farmers. These extension workers can also provide links to vital information portals and videos that can be accessed, which will further boost the technical capacity of the rural farmers. By utilizing ICT, agricultural extension services can reach virtually every farmer.

The move to leverage ICT in agricultural extension services delivery is not new, as several countries have done so with remarkable results. For instance, in India, the government and the private sector have implemented several ICT initiatives which have strengthened extension services delivery in their country and expanded the reach to otherwise neglected rural farmers. Some of these initiatives include⁹:

 Query Redress Services: This initiative provides needs-based intervention to farmer communities. With a network of about 10,000 experts, queries from farmers are forwarded from the central hub to relevant experts, who then provide tailored technical information to the farmers.

- Kisan Call Centres: Leveraging the extensive telecom infrastructure in India, these call centres established across the country provide free agricultural knowledge to farmers upon request, using the local language of the farmers.
- e-Choupal: These village internet kiosks managed by farmers provide the agricultural community with ready access to information in their local dialect on scientific farm practices, the weather, and market practices, and facilitate sale of farm inputs and purchase farm produce from the farmers' doorstep.

Taking a cue from India, Nigeria could incorporate more ICT in the delivery of its extension services by establishing agricultural data centres in farming communities where relevant technical information for improving productivity can be sourced. By partnering with research institutions and agricultural agencies, the National Agricultural Extension and Research Liaison Services (NAERLS) will constantly have accurate, up-to-date agricultural information to upload on the data hub. Additionally, the government could, in conjunction with the NAERLS and telecommunication companies, set up agricultural call centres to allow a two-way interaction with farmers, who will be provided with free, tailored, technical advice upon request in their preferred language. Additionally, private-sector operators and NGOs can also support government efforts by providing internet-enabled phones to

^{7.} Faluja, J. (2020, February 5). FG to train 50,000 agricultural extension workers, document assets. The Guardian (Nigeria). https://guardian.ng/business-services/fg-to-train-50000-agricultural-extension-workers-document-assets/.

8. Mwongera, C., Mwungu, C., Läderach, P., Acosta, M., Ampaire, E., Eitzinger, A., Lamanna, C., Shikuku, K., Twyman, J., Winowiecki, L. (2017). Target the pathways to scale out climate-smart agricultural technologies to farming communities. International Center for Tropical Agriculture (CIAT). Cali.

^{9.} Singh, K. M., Shekhar, D. (2015). Modern Extension Approaches for Livelihood Improvement for Resource Poor Farmers. SSRN: https://ssrn.com/abstract=2704829 or https://dx.doi.org/10.2139/ssrn.2704829

to EAs and farmers alike to increase accessibility to information. Overall, the focus of these ICT-empowered extension services will be to provide technical knowledge and management training for small-scale farm households, which they can use to improve their farms' productivity and livelihoods in the rapidly changing global economy. The services can also provide strategies on how to deal with escalating natural resource problems, including climate change. ¹⁰

It is worth noting, however, that the high illiteracy rate among rural farmers could impede the successful implementation of ICT-enabled extension services, as farmers who lack the ability to read or write will not be able to understand the technical information on resource portals or properly articulate their situation in writing. Engaging rural farmers directly to provide basic education on reading and writing will be very expensive, will take a long time to yield the desired result, and may ultimately be impractical. To address this concern, a far cheaper, faster, and more sustainable option will be to utilize the very extensive young educated network currently available in Nigeria: the National Youth Service Corps. These corps members who are in every

nook and cranny of the Federation could be engaged to help farmers transmit information to and from extension workers. The national extension services could form an active collaboration with the NYSC to oversee the formation of a Community Development Service (CDS) group that will be focused on helping farmers utilize ICT in receiving invaluable extension services. Not only would the tech-savvy youths be able to transmit accurate information to the extension workers using the devices, they would also be able to decode and explain the information on the training portals to the farmers. In addition, the data hubs should have the option of being translated in local dialects to also enhance comprehension.

Conclusively, while extension services are critical in boosting farm productivity by providing farmers with invaluable technical knowledge, the insufficient number of available extension agents limits the reach of these services, leaving out many rural farmers. Ultimately, this limits the impact of extension services on local productivity. By incorporating ICT in the delivery of extension services, not only will more farmers benefit from the requisite technical information, the information will also be provided in a timely and sustainable



10. Singh, K. M., Shekhar, D. (2015)

THE DRIVE FOR EFFECTIVE AGRICULTURAL POLICIES

BY LAWAL ABDULKAREEM

he devastating impact of poor and inconsistent agricultural policies on the performance of Nigeria's agricultural sector is one that cannot be disputed. Nigeria's agricultural policies are supposed to serve as the guiding framework for the country's domestic and foreign agricultural activities and drive sustainable agricultural development. Sadly, many of these policies fall short of this goal due to the limited knowledge and expertise of policymakers in the day-to-day operations of the agricultural sector. There is therefore an urgent need for a conscious empowerment of local policymakers, with the requisite knowledge and resources, to ensure the development of robust and well-rounded agricultural policies.

In the past, the transient nature of military regimes and democratic governments have largely been blamed for the failure of most agricultural policies—and rightly so, as successive governments were quick to abandon the agricultural policies of past governments in favour of their own, regardless of the fact that doing so wiped out critical agricultural gains. For instance, agricultural policies such as the National Accelerated Food Production Programme (NAFPP), Operation Feed the Nation (OFN), Green Revolution Programme (GRP), Go Back to Land Programme (GBLP), etc., abandoned immediately once governments left power. In recent times, however, the government has shown a willingness to build on the successes of the agricultural policies of the previous administration. For instance, in 2011 the Federal Government of Nigeria under the administration of His Excellency, Goodluck Ebele Jonathan instituted the Agricultural Transformation Agenda (ATA) with a focus to "reintroduce the Nigerian economy to sustainable agriculture centered on business-like attitude driven by the private sector". Upon the end of Dr. Goodluck Ebele Jonathan's tenure in 2015, the new administration led by His Excellency, President Muhammadu Buhari conducted a critical analysis of the gains and gaps of the ATA. He communicated the intention of his government to build on the successes of the ATA and launched the Agriculture Promotion Policy (APP) focused on solving the core issues at the heart of limited food production and

delivery of quality standards. This continuity of beneficial agricultural policy is a welcome development and must be sustained for effective development.

On a separate note, the non-alignment of state agriculture development agendas with the overarching national agricultural policy result in disjointed agricultural efforts, with poor result. One reason for this incoherence of agricultural policies is the absence of adequate consultation by national policymakers with critical regional actors and stakeholders in the policy formulation and implementation phases. Hence, some of the policies formulated are not reflective of the current market realities of some farmers and stakeholders, and thus are deemed unimplementable by affected regions. Beyond the consultation, there is also need for a regular training of agricultural policymakers on the agriculture terrain to deepen their understanding of the critical issues facing the sector and those that require immediate attention. This will doubtlessly improve the quality of the agricultural policies developed.

Many international organizations have developed agricultural policy programmes focused on policymakers, recognizing the need to improve the capacity of policymakers to develop better agricultural policies. We have highlighted below the efforts by the Food and Agricultural Organization of the United Nations (FAO) and African Economic Research Consortium (AERC) to empower policymakers in the agricultural sector.



11. Federal Ministry of Agriculture and Rural Development (2016). The Agriculture Promotion Policy (2016-2020): Building on the Successes of the ATA, Closing Key Gaps. https://www.fepsannigeria.com/fepsan2/images/News_Letters/2016-nigeria-agric-sector-policy-roadmap_june-15-2016.pdf

Food and Agricultural Organization of the United Nations (FAO) Monitoring and Analysing Food Agricultural Policies

Since 2010 FAO has been making concerted efforts to complement and strengthen agricultural policymaking systems across Sub-Saharan Africa through its Monitoring and Analysing Food and Agricultural Policies (MAFAP) Programme. MAFAP operates in several developing countries, aiming to create sustainable policy monitoring systems and carry out a consistent check of policy across a wide range of agricultural value chains. MAFAP partners with government institutions and research organizations to establish a community of practice on policy measurement, monitoring and analysis of government policies and their effects¹².

Based on partner governments' priorities, commitments, and demand, MAFAP supports decision makers in partner countries to articulate costs and benefits of alternative policy options to promote suitable reforms. MAFAP carries out in-depth studies on selected policy issues in different areas of the food and agricultural sector, including trade and market policies, investment and competition policy, agriculture budget allocations, and regulatory frameworks. This evidence encourages policy dialogue and fosters policy changes at country level.

African Economic Research Consortium (AERC) Agricultural Policy Project

The AERC launched the Collaborative Master of Science in Agricultural and Applied Economics (CMAAE) course, to produce a cadre of African economists and agribusiness professionals with the ability to use modern analytical tools to produce fact-based assessments of agricultural policies and business options. The project trained experts in agricultural policy development processes, improved agricultural sector planning and policy analysis in 16 Agricultural Economics departments around the Eastern and Southern African regions¹³. The percentage of graduates from the AERC initiative working in universities, government and policy research institutions increased to 76 percent in 2018 against a baseline target of 60 percent in 2015¹⁴.

The way forward

Agricultural policies have the power to influence agricultural development, strengthen the economy, and thus cannot be left to chance. To ensure the consistent development of effective agricultural policies, local policymakers must be regularly trained on the agricultural landscape and effective policy design and implementation. Also, governments must

strive to be consistent in their agricultural policies and seek to build on the successes of past administrations.



^{12.} http://www.fao.org/in-action/mafap/programme-overview/en/

^{13.} More information on the Collaborative Master's Degree Program in Agricultural and Applied Economics (CMAAE) can be found on the African Capacity Building Foundation website: https://www.acbf-pact.org/what-we-do/how-we-do-it/grants/projects-regions/eastern-southern-africa/kenya/collaborative-masters.

^{14.} https://aercafrica.org/wp-content/uploads/2019/10/AERC-Annual-Report-2018-2019.pdf

EFFORTS TO DEVELOP TALENT IN THE AG SECTOR

BY RAHMAT EYINFUNJOWO

iven the talent gap, a few stakeholders have developed interventions that aim to build skills and capacity in the sector. Three programmes from different industry actors have been spotlighted for examination. Each case study takes an exploratory approach to assess the viability of the individual stakeholder effort as a possible means to bridge the talent gap in the sector in Nigeria by reviewing the programme model, evaluating the challenges, and measuring the impacts and reach of the programme.

The IITA Youth Agripreneur Programme (IYA)¹⁵



The International Institute of Tropical Agriculture (IITA) and its partners launched the IYA programme in August 2012 in IITA, Ibadan, to empower and motivate youth to take up careers in agribusiness. The programme engages youth in diverse roles including production, processing, and marketing along several agricultural value chains. The IYA operating model builds on the utilization and application of a range of proven technologies developed by IITA such as improved seed technology and processing options. The participants in the programme are called agripreneurs, derived from two words: "agriculture" and "entrepreneurs."

An attractive feature of the IYA programme is its diverse group of participants from all study backgrounds including Agriculture, History, Computer Science, Building and Quantity Surveying, Statistics, Biochemistry, Mass Media, Economics,

etc. While it is arguable that the thousands of graduates of agriculture in Nigeria are more deserving of the intervention, a strong point to consider is that this approach helps to diversify the agriculture workforce and paves the way for innovation in the sector. The programme also selects uneducated youth and thus operates a flexible curriculum adapted to the demography and needs of its participants. To bridge the technical knowledge gap between the diverse participants, IYA's first training focuses on a "reorientation" exercise that seeks to change the participants' mindset about agriculture. In a country where the youth perception of agriculture is synonymous with drudgery and poverty, the importance of this reorientation cannot be overemphasized.

After completing the IYA programme, some of the agripreneurs have established independent agribusiness enterprises, while others secured employment in the sector, including at IITA. Since its inception in 2012, the programme has trained over 1,230 agripreneurs in Nigeria in various aspects of agricultural value chains including cassava, yam, maize, soybean, vegetable, plantain and banana, poultry, aquaculture and swine production. As at January 2020, over 400 agribusinesses have been established by IYA alumni. Examples of these enterprises include Frotchery Farms Limited in the aquaculture value chain, F-Step Cassava enterprise in the cassava seed system, Gracevine Ventures in food processing, Afribroilers Limited and Chicken Chaos, both in the poultry value chain.

Upon completion of the programme, the agripreneurs are provided with "a modest, non-monetary departure package that launches their business and provides collateral for expansion." However, access to credit facilities remains a major problem for alumni of the programme, although a few members have leveraged platforms like the Tony Elumelu Foundation to secure funds.

^{15.} Insights based on interview with Evelyn Ohanwusi, ENABLE-TAAT Compact Leader, International Institute of Tropical Agriculture, Nigeria

The Agribusiness Management Programme (AgMP) – Lagos Business School¹⁶



The AgMP is a five-month, paid, intensive programme designed for agribusiness managers and players in the agriculture value chain who seek practical skills and solutions to challenges in their organizations/businesses. The specific objectives of the programme include ensuring that the participants "develop increased appreciation of trends influencing their business and its performance in both local and global markets; develop analytical tools to formulate opportunity-scoping and opportunity-seizing strategies; build entrepreneurial mind-sets to help them discover innovative solutions to current and emerging problems; and build capacities to enhance their individual and corporate performance."

To achieve these objectives, the AgMP implements a pedagogy focused on project learning where participants have the opportunity to develop strategies for targeted industry issues. This project-based learning approach prepares students for deeper learning, higher thinking skills and interpersonal skills¹⁷. The AgMP uses a structured, cross-cutting curriculum that covers food security issues in Nigeria; critical thinking; understanding the agribusiness value chain; deepening the entrepreneurial mindset; and increasing operational excellence in the agribusiness sector. Owing to this, the programme attracts participants from all sectors including graduates and experts from the university-taught agriculture science backgrounds.

Since its official launch in 2014, the programme has produced 260 alumni including notable sector actors like Eze Nwakanma, acting Head, Agric Value Chain Finance and Investment Services, NIRSAL; Opeyemi Olawale, Founder and CEO of JR Farms Limited in Nigeria, Rwanda, Zambia and USA; Collins Okwoh, the MD/CEO of Sledge Agro, a garri (cassava) and starch manufacturing company in Nigeria; Richard Ogundele, the MD/CEO JMSF Agribusiness Nigeria Limited; George Obe, the MD of GEETEE Farms Limited; and Mrs. Shola Sowemimo, the MD/CEO of Ope Farms.

A critical challenge of the AgMP is the high cost of the www.sahelcp.com | www.sahelconsult.com

programme; most agribusiness practitioners in Nigeria are unable to afford the NGN 1.2 million programme fees. This effectively restricts the average student, extension agent, agri-food entrepreneur or employee from accessing the programme. However, recent trends are beginning to show that many employers are willing to sponsor their staff for the training.

Sahel Scholars' Programme (SASP)



The Sahel Scholars' Programme (SASP) is an annual programme that was introduced by Sahel Consulting Agriculture and Nutrition Limited (SCANL) and Sahel Capital Agribusiness Managers Limited (SCAML) in 2017 under the umbrella of the company's Corporate Shared Value programmes. SASP provides eligible students in their penultimate year of study at faculties of agriculture in select institutions access to industry knowledge and solutions in the agriculture and nutrition sectors. The programme was developed to directly address the knowledge and skill gap observed in graduates from the Faculties of Agriculture across Nigerian universities. The Sahel Scholars Programme comprises two distinct components including an annual scholars conference and internship for top-performing university students.

A unique feature of the programme is the programme design and development methodology. Sahel engages its young and dynamic employees, particularly those who studied agriculture in university, to develop the programme and design its curriculum. This approach ensures that the intervention directly addresses priority skill and knowledge

^{16.} Insights based on interview with Dr. Ikeu Kelikume, the Programme Director and Mrs. Opeyemi Oteri, the Programme Officer at the AgMP, Lagos Business School

^{17.} Condliffe, R., et al (2017). Project-Based Learning A Literature Review. MDRC/Lucas Education Research Literature Review. https://www.mdrc.org/sites/default/files/Project-Based_Learning-LitRev_Final.pdf 2019.pdf

gaps based on first-hand experiences shared by the individual employees.

The internship programme is an intensive four-week experience at the Sahel offices in Lagos which combines structured training sessions, dedicated mentorship, and hands-on experience on client projects. The scholars are eligible to receive a merit-based scholarship applied towards their final year of study.



Wisdom Ezechi, a 2019 Sahel scholar, shared a story of his perception of the agriculture sector before his internship at Sahel. As a 400-level student of the Faculty of Agriculture, Michael Okpara University, Umudike, his practical application of agriculture was limited to his experience on the school farm where students used "hoes and cutlasses."

"Many students studying core agriculture in my school have no passion for the sector and this is because of the limited exposure to the opportunities available," says Wisdom. "Our counterparts in engineering, veterinary medicine, etc., have an advantage because there are regular seminars and conferences organized in the school by professional bodies and organizations. To my knowledge, Sahel is the first organization to organize a conference at MOUAU exclusively for the students of agriculture. Also, coming to intern at Sahel has changed my perspective about the sector, I feel confident to defend my profession and I certainly want to launch a career in agriculture upon my graduation."

Since its launch in 2017, the SASP has reached over 3,000 students in eight universities through its conferences and admitted ten scholars for internship at its offices in Lagos.

Scholars on the Sahel Scholars Programme have indicated that the four-week internship period is a short time to adjust to the new world of learning and opportunities that the programme provides. However, Sahel continues to support the scholars by liaising with them post-internship to ensure that the learnings are retained through a step-down training to other students in their universities.

What lessons can other stakeholders learn from these case studies?

The three case studies above reveal that stakeholder initiatives can move the needle forward towards building a skilled professional workforce for the agriculture sector in Nigeria. There are other impact stories from other efforts in the country, but these are not enough. For example, the IYA, AgMP and SASP have only collectively reached 1,310 participants in a cumulative period of seven years. These impact figures are only a minute drop in the ocean of 1.5 million youth who graduate from universities in Nigeria every year.

The story told by Wisdom Ezechi, the Sahel scholar, is not unique. Many students in the tertiary and secondary levels are unwilling to launch careers in agriculture. A 2016 study conducted among science students in senior secondary schools in Ibadan metropolis in southwest Nigeria revealed that 88.4 percent of the students were not willing to choose agriculture as a career¹⁸. Related results were found in Sokoto State in the north¹⁹. This points to a state of emergency that requires stakeholders to develop and expand initiatives that will change the mindset of youth and create awareness for the abundant opportunities in the agriculture and food sector. There is also a need for strong private-public partnerships that will enable such initiatives to reach a larger number of participants across the country.

IITA has combined incubation and on-site technical training to produce agribusiness owners and professionals through the IYA programme. The Lagos Business School employs a skills-based approach in teaching agribusiness management. Sahel is leveraging conferences, mentorships, internships, and scholarship opportunities to build students' interest and knowledge in the sector. These three programmes have built successful models for other sector players to follow. The coming decades provide many possibilities for the African agriculture sector given predictions about climate change and the recent evolution of agriculture technologies. There can be no better time than now for actors to focus on talent development towards building a formidable workforce that can drive innovation and sustainable growth in the sector.

^{18.} Obayelu, O., & Fadele, I. (2019). Choosing a career path in agriculture: A tough calling for youths in Ibadan metropolis, Nigeria, Agricultura Tropica et Subtropica, 52(1), 27-37. doi: https://doi.org/10.2478/ats-2019-0004

^{19.} Barau, Aliyu Akilu & A, Yahaya & Afrad, Md Safiul Islam. (2018). Willingness to Pursue Career in Agriculture: A Case Study of Secondary School Students in Sokoto Metropolis Nigeria. Bangladesh Journal of Extension Education. 28. 1-11.

SAHEL CONSULTING LAUNCHES THE ADVANCING LOCAL DAIRY DEVELOPMENT IN NIGERIA (ALDDN)



Sahel Consulting Agriculture and Nutrition Limited launched the Advancing Local Dairy Development in Nigeria (ALDDN) Programme on January 23 in Abuja. The ALDDN programme promotes a private sector-led and market-based approach to solve the problems inherent in the dairy sector while improving the livelihood of the women dairy farmers. Over the next five years (2020–2024), ALDDN will catalyse a vibrant local dairy sector in an inclusive way that improves the livelihoods, productivity, nutrition, and empowerment of smallholder women dairy farmers and the communities in which they live. Funded by the Bill & Melinda Gates Foundation (BMGF), ALDDN will reach 60,000 dairy farmers in 15,000 dairy households in Adamawa, Jigawa, Kaduna, Kano, and Plateau states.

ALDDN will be implemented in partnership with six private-sector dairy companies and with the support of the Federal Ministries of Agriculture and Rural Development, Health, Women Affairs & Social Development, and the Governments of Jigawa, Kaduna, Kano, and Plateau States. The dairy processor partners are Arla Global Dairy Products Limited, Integrated Dairies Limited, L&Z Integrated Farms Limited, Majestik Integrated Dairy Farm, Saj Foods Limited, and Sebore Farms Limited. TechnoServe and Agridrive Limited are implementing partners on the ALDDN programme.



Photo: Honourable Minister of Agriculture, Alhaji Mohammed Sabo Nanono, Dr. Paulin Basinga, Country Director, Bill & Melinda Gates Foundation (BMGF) and Ndidi Okonkwo Nwuneli, Managing Partner, Sahel Consulting Agriculture and Nutrition.



Dr. Audu Grema, Senior Programme Officer for Agriculture, BMGF, Dr. Paulin Basinga, Country Director, BMGF, Senator Bima Muhammad Enagi, Vice Chairman Senate Committee on Local and Foreign Debts.

SAHEL CONSULTING SPEAKS

Ajesola Solarin Majekodunmi Foundation's 10th Anniversary Event

Ndidi Nwuneli spoke on the "Changes Required to Ensure Gender Equity in Nigeria" at the 10th anniversary of the Ajesola Solarin Majekodunmi Foundation on November 7, 2019.

Africa SME Forum, South Africa

Ifeoma Umunna spoke on the "Growing your Business in Agribusiness" Master class with Thlale Maseje of Landbank (SA) and Moulay Ennhli of OCP (West Africa) on November 12–13, 2019.

Impact Africa Summit, Nairobi

Falaq Tidjani was a panelist on the "Real Talk with Impact Investors" panel held at the Impact! Africa summit, Nairobi on December 4, 2019.

Power of Parity Report Launch

Ndidi Nwuneli moderated a panel at McKinsey's launch of the "Power of Parity Report," on December 5, 2019.

House of Freedom, 2020 Economic Outlook

Ndidi Nwuneli spoke on the "2020 Economic Outlook" at a breakfast meeting organized by House of Freedom on January 18, 2020.

Lagos State Employment Trust Fund (LSETF) Employment Summit 2020

Ifeoma Umunna spoke on "Generating Employment Opportunities through Agriculture" at the LSETF employment Summit 2020 on February 5, 2020.

Capacity Building Programme for Ogun Women in Business

Falaq Tidjani spoke at the Capacity Building Programme for Ogun Women in Business organized by Nigerian bank FCMB's SheVentures programme, in collaboration with the office of the Ogun State First Lady, H.E. Mrs. Bamidele Abiodun on February 5, 2020.

SAHEL CONSULTING IN THE NEWS

Appointment to the Rockefeller Foundation's Board of Trustees

Ndidi Nwuneli was appointed a member of Rockefeller Foundation's Board of Trustees, on November 21, 2019.

100 Most Influential Africans of 2019 Award

Ndidi Nwuneli received the "100 Most Influential Africans of 2019 award" by New African, on December 5, 2019.

Sahel Consulting opens a new office in Abuja, Nigeria

Sahel Consulting opened a new office in Federal Capital Territory (FCT), Abuja, Nigeria, on January 13, 2020. The office is located at Plot 817A, Cadastral Zone B04, Ebitu Ukiwe Street, Jabi District, Abuja.

Ndidi Nwuneli published an op-ed article titled, "How Africa's entrepreneurs can innovate and invest to put African cuisine on the world stage" on Quartz Africa

Ndidi Nwuneli published an op-ed article titled, "<u>For humanitarian food interventions in Africa, engage the private sector</u>" on Devex

SAHEL CAPITAL SPEAKS

NIRSAL-LCCI Presentation Symposium on Financing Agribusiness

Kunle Iludiran joined a panel on "Making Agribusiness Bankable: Lenders and Investors Expectations" at the Presentation Symposium on Financing Agribusiness, hosted by Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL) and Lagos Chamber of Commerce and Industry (LCCI) on November 20, 2019.

National Economic Summit Group (NESG)'s National and Sub-National Agribusiness Legislative Retreat

Mezuo Nwuneli spoke on "Enhancing Agribusiness through Legislation" at NESG's National and Sub-National Agribusiness Legislative Retreat on November 28, 2019.

SAHEL CAPITAL IN THE NEWS

Entrepreneur of the Year Award

Mezuo Nwuneli received the "Entrepreneur of the Year" award by Harvard Business School (HBS) Alumni Association of Nigeria on December 8, 2019.



Mezuo Nwuneli Speaking at the National and Sub-National Agribusiness Legislative Retreat



Mezuo Nwuneli receiving the Entrepreneur of the Year Award from HBS Alumni Association

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