Agrikore Risk Review

Smart Farming: A Solution To Prevailing Hunger In Africa

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EDITOR’S REVIEW

In 1993, Kevin Carter, one of the brave photographers who chronicled apartheid-era South Africa, was in Sudan covering the famine afflicting the country. During a walk in the open bush, Carter stumbled on an emaciated toddler, whose whimpering had attracted him. The child had collapsed on the way to a feeding center and as Carter took his picture, a plump vulture landed nearby. Barred to touch victims, Carter had to scare the persistent vulture, after waiting for 20 minutes in the hope it would fly away. The picture first appeared on The New York Times and eventually became very popular, having generated enormous debates and criticisms. Of course, readers were eager to find out what happened to the child even as they criticized Carter for not coming to his subject’s aid. Carter’s can scarcely be the most heart-wrenching photograph out of a troubled African jurisdiction- they abound, and some strike the human heart with unfathomable trepidation. Disturbing as Carter’s image and the others are, the devastating impact of COVID-19 in an unresponsive Africa may result in more grievous imageries.

In Cellulant, we believe scaling agriculture through Agri-technology is the only option available for Africa, and Nigeria in particular, to stand on its feet during and post COVID-19. The Agrikore Risk Review, one of our initiatives for stimulating solutions that work, could not have been launched at a more auspicious time. This edition is a first of a chain of quarterly that put pragmatic and well researched information before critical Agri-tech stakeholders. The articles are topical, span across various connected issues and tail into a coherent theme. Whether you are reading: The Impact of COVID-19 Pandemic in the Agri- Business Supply Chain: A Looming Food Crisis; Sports and Agriculture as Tools for Youth Empowerment in Nigeria; or Smart Farming: A Solution to Prevailing Hunger in Africa, food security and employment for our teeming youth stick out. In the same vein, stakeholders in search of scalable models which have already proved effective right here in Africa are not left behind. Fixing an Unbroken Agricultural Policy: The Curious Case of the GESS; From the CEO’s Desk: COVID-19, the Days Ahead and How Agrikore is Making a Difference; and Interview with MD/CEO of Wema Bank Plc share successful principles and practices from some of Cellulant’s high impact partnerships. Not leaving any stone unturned, we extensively addressed the elephant in the room with The Potential Risk in the Agri- Value Chain and its Mitigants.

Kevin Carter’s protective effort, that afternoon of 1993, spared the child’s life for another 14 years. The greatest threats of COVID-19 target the most vulnerable in our society- and there are tens of millions of them. This edition of the Agrikore Risk Review is a rallying call. Every article is intended to stir conversations, which we will be reaching out to various stakeholders to deepen. Our goal is to jointly create unique Africa- led solutions with other stakeholders. Carter won a Pulitzer for his photo, working together, we can win a better life, food security and employment opportunities for our Youth.

Solomon Abiakalam
Chief Risk & Compliance Officer
Cellulant Corporation
FROM THE CEO’S DESK: COVID-19, THE DAYS AHEAD & HOW AGRIKORE IS MAKING A DIFFERENCE

If ‘potentials’ were edible, Africa would have the best-fed people on earth. The continent has 60% of the world’s uncultivated arable land, mostly uncultivated. Incidentally, land cultivation is typically by small farmers, produces sub-optimally and may worsen due to the novel COVID-19. The pandemic is hitting Africa increasingly and vulnerable African economies could be strangled by it. According to an African Union report, we may lose up to 20 million jobs and experience social unrests. Globally, businesses and markets are shutting down and key sectors of the African economy are already experiencing a slowdown. Sectors such as Transportation (especially air transport), Tourism, Oil & Gas, and Agriculture are visibly impacted. Worse still, additional impacts of COVID-19, which may not be manifest at this time, are expected in 2020.

The FAO estimates that some 820 million people around the world experience chronic hunger, with 113 million of them relying on external assistance to survive. These people can ill-afford the additional disruptions that COVID-19 may inflict on their livelihoods. Among this vulnerable group are small-scale farmers, who might be hindered from working their farmland, caring for their livestock or accessing markets. Farm laborers will be hard hit by job losses, as harvesting and processing activities dwindle. Heightened uncertainty, precautionary behavior and containment efforts may negatively impact the Agri market. Millions of Africa’s children, with no formal access to social protection or health insurance, also fall within the vulnerable group. Most of these children, already missing out on the much-needed school meals, are now exposed to severe hunger and malnutrition.

Agrikore is utilizing technology to solve some of the above problems by connecting the food chain, from raw farm produce to processed food. We are gradually revolutionizing agriculture in Africa because we understand that people must eat, and food must be available for them to do so. Agrikore is a Digital Marketplace. The participants in this marketplace are actors from the food processing, supply chain, quality control, logistics, financial services, marketing and agricultural production segments of the economy. In Nigeria today, Agrikore is being utilized as the go-to Agri-Technology platform for food availability and security. I am happy to announce that we are winning the war against food scarcity in Nigeria. In 2019 alone, Cellulant provide over 600 million meals from 100,000 metric tons of food bought, transported and processed via Agrikore. This amounted to feeding the entire nation for one day and the numbers will grow in the coming years. We are on a mission to feed Nigeria for 3 days in 2020, and for 7 days by 2025. These sum up to NGN2trillion worth of economic opportunity for Nigerians. Agrikore, a dependable Agri commercial blockchain platform, can house over 200 million farmers, in various African markets and drive food productivity, sustainability and economic value.

Even under the COVID-19 led lock-downs, we continue to support our communities by keeping the Agrikore Marketplace in full swing operations. In the face of obvious threats, our staff have been heroic in ensuring the value chain does not suffer dislocations. We believe these times call for a paradigm shift in Africa’s economic planning. Africa can and should turn the current COVID-19 pandemic into an opportunity to return to the Green Oil’ of Africa-Agriculture. Certainly, the world must feed, and Africa’s arable landmass, large population and power of Agrikore can combine to feed for the world. This is how to create economic financial inclusion and sustainable jobs for millions of our youth.

Let’s feed and transform Nigeria together, one youth at a time.

Bolaji Akinboro
Co-founder/Co-CEO, Cellulant Corporation
THE IMPACT OF THE COVID-19 PANDEMIC ON THE AGRICULTURE SUPPLY CHAIN: A LOOMING FOOD CRISIS?

Disruption in agricultural supply chains has severe impacts on the economy and the world as a whole. If past pandemics are anything to go by, the potential impacts of the COVID-19 outbreak on food supply are far reaching. Urgent steps can and must be taken to mitigate what could otherwise become a full-blown food crisis.

The Novel Coronavirus Disease 2019 or “COVID-19” outbreak began in Wuhan, China late in 2019 and spread exponentially across the world, with no discrimination as to country, race, age, gender, ethnicity or social status. COVID-19 is a highly infectious disease which causes respiratory illness (similar to the flu) with symptoms such as a cough, fever, and in more severe cases, difficulty breathing. On March 11, the World Health Organization (W.H.O) officially declared the COVID-19 outbreak a global pandemic. In a bid to curtail its spread, many countries have been constrained to virtually shut down their economies; enforcing sweeping restrictions on commercial and social activity that could engender the spread of the virus. A good percentage of the world’s population are now subject to stay at home orders, closed borders, and other closures. The immediate and foreseeable casualties are closed businesses, widespread unemployment, and plummeting stock markets. Additional concerns are looming as to how long the agricultural sector can sit above these devastating impacts.

One thing that can never be subject to restriction is the need for daily sustenance. What is the game plan to guarantee that food remains on tables around the world, and we are still able to meet the food insecurity challenges faced by the most vulnerable amongst us? While COVID-19 has presented the world with an existential challenge not seen in a lifetime, there are still lessons that can be drawn from the actions and failures during previous outbreaks. Disease outbreaks like Severe Acute Respiratory Syndrome (SARS), Bird Flu and Ebola while challenging, had relatively modest impacts on food security in much of Africa and particularly Nigeria. During the Ebola outbreak for instance, the Nigerian government was able to reduce and contain the spread of the disease. A country like Liberia however that was ravaged by Ebola, felt a huge impact on its economy and particularly agricultural production, marketing and trade. Due to road blockages, farmers had limited access to inputs such as seeds, fertilizers and insecticides which led to acute production shortages. Availability of labour was also similarly impacted. This resulted in more than 40% of the agricultural land laying fallow. Much of the available food produced could not be transported to local and urban markets through regular supply chains.

COVID-19 & Food Prices
The 2008 food crisis was reported to be caused by factors such as drought, increase in oil prices, rising use of food grains for biofuel production and trade policy failures. The food price crisis was not an epidemic, but it prompted many countries to impose export policies to restrict the export of food products. In the past where there has been disease, a loss of purchasing power caused by the disease changed people’s eating patterns, resulting in poorer nutrition. This is just as relevant today, exacerbated by panic purchasing of food by those with economic means as is being witnessed in countries around the world. These unpredictable trends have more potential to harm the supply chain and cause localized price hikes. Malnutrition increases the vulnerability to being infected by the virus as a compromised immune system is virtually defenseless against the virus¹. The Chief Economist of the World Food Programme puts it this way: “the extent to which the COVID-19 will affect food markets and prices is conditional upon countries staying even in the face of supply chain hiccups and ensuring to not resorting to protective beggar-thy-neighbour policies². A smooth flow of global trade will help secure food supply³. Spikes in prices are not expected in major staples where there is steady supply. Stocks and production is more capital intensive, but more likely for high value commodities, especially meat in the very short term and some other highly perishable commodities.
So, is there a food crisis on the horizon?

Obviously potential labour shortages, shortage of fertilizers, veterinary medicines and other input could limit agricultural production during this uncertain time. Border closures and restricted movement is also wreaking havoc on logistics and transportation of produce between borders. Perhaps even more compelling is that according to the United Nations Food and Agriculture Organization, more than 820 million people across the globe are already suffering from hunger. There is currently a locust outbreak affecting East Africa which, according to the UN Humanitarian Office, is destroying enough food for 35,000 people in a single day.

Epidemics/pandemics have generally had negative impacts on existing food and nutrition security challenges particularly for vulnerable populations including children, women, the elderly and the poor. When the Ebola epidemic hit Guinea, Liberia and Sierra Leone in 2014, rice prices in those countries increased by more than 30% and the price of cassava, a staple in Liberia, skyrocketed by. This naturally had a disproportionate impact on those 150%, who were already food insecure. There is therefore a strong likelihood that with current supply chain disruptions, restricted access to diverse and nutritious food options will be exacerbated especially in countries that have already been previously affected by high levels of food insecurity.

It is clear that the agricultural industry requires specific prevention and protection protocols to be put in place to prevent a loss of confidence of farmers and companies, and ensure that there are willing hands to till the soil. Smallholder farmers are the primary food crop producers in Nigeria. These farmers tend to be older population as the youth tend to be less interested in agriculture and more likely to migrate to urban areas. An older farming population could be more vulnerable to the coronavirus disease. If adequate precautions are not taken to protect this population, a depletion of available manpower from this segment could result in a drastic reduction of food. For Agro-Tech Companies, the pandemic will ultimately halt their ability to access food crops produced by the rural farmers. Even with the inclusion of the movement of food items as essential services, there is no guarantee that such a policy in itself will be enough incentive for rural farmers to continue the cultivation of crops if it poses a risk to their health. That is unless strident protection protocols are in place.

Risks to mitigate

The food supply chain is a complex web that involves producers, agricultural inputs, transportation, processing plants, shipping etc. As the virus spreads and governments put measures in place to curb its spread, there are countless ways the global food system will be tested and strained in the coming weeks and months. COVID related disruptions to date have been fairly minimal and food supply has been reasonably adequate4. Global cereal stocks are at comfortable levels and the outlook for wheat and other major staple crops for 2020 is positive. Although reduced food production of high value commodities (i.e. fruits and vegetables) is already likely, the impacts of these are yet to be felt due to the lockdowns and other disruptions in the value chain. The Food and Agriculture Organization of the United Nations has however reported logistical challenges in terms of moving food between international borders. Blockages to transport routes are particularly obstructive for fresh food supply chains and may result in increased levels of food loss and waste. The pandemic is also impacting the livestock sector due to reduced access to animal feed and diminished capacity of slaughterhouses – on account of logistical constraints and labour shortages. If these trends are not reversed or mitigated, possible disruptions in the food supply chains are expected as early as April/May of 2020.

If fears around the nature of the virus continue to proliferate, there may be other unintended consequences. For instance, the possibility of a disproportionately larger decline in meat consumption (as a result of unscientific claims that animals might be hosts of the virus) and other higher-value products like fruits and vegetables. This is likely to cause price slumps. Food demand in poorer countries is more linked to income, and, here, loss of income-earning opportunities could impact on consumption. There is also concern around contractual arrangements between Agro-Tech companies and their suppliers (Aggregators) within the value chain.
Most of the Aggregator contracts may be terminated by invoking force majeure. Although force majeure clauses are typically qualified to allow parties to carry out their obligations on a “quantum-meruit” basis until the cessation of the force majeure event, the duration of the current pandemic is currently not determinable. Thus, either party may simply terminate the contract. This bodes badly for food security.

**Mitigating a potential food crisis.**

Without doubt, the government is in the driver’s seat when it comes to potential COVID-19 responses that can protect the agricultural supply chain. It is however necessary that it acts in partnership with private sector stakeholders:

a) By instigating welfare policies to meet the immediate food needs of the more vulnerable populations. This can be implemented by Governors of each state with the help of the Federal Government and in partnership with well-meaning corporate citizens as is being seen around the world. Government can inject funds both by revising existing social protection programmes and allowing VAT exemptions on basic food items especially for workers in the health industry and for children.

b) By supporting delivery of fresh food from local farmers, using digital tools (geo-referenced applications) to improve communication on access points for food deliveries, distribution times, and measures to reduce the risk of COVID-19.

c) By boosting livelihoods to ensure steady demand for agricultural products. The government may consider providing a range of grants and benefit payments. Special grants can be offered to local farmers through the Nigerian Incentive Based Risk Sharing System for Agricultural Lending (NIRSAI), helping them to produce more plant-based food to assist with proper nutrition and aid in building the immune system. Subsidies can be introduced to ensure the produce is sold at a reduced price. Grants and benefit payments can also be provided to support agri- micro, small & medium enterprises, casual laborers, and salaried staff that cannot work to stay afloat, temporarily, while commercial activity is in limbo.

d) By reducing trade-related costs thus ensuring controlled mobility of commodities; review trade and policy options and their likely impacts. Overall, avoiding any trade restrictions would be beneficial to keep food and feed supplies, as well as those of agricultural inputs, steady and somewhat immune from the strain occasioned by economic closure in response to COVID-19.

e) By staying in front of developments and devising an effective communications plan to keep citizens apprised of the facts about the pandemic and its impacts, thus preventing fear mongering.

In the long term, it is important that government and the private sector devise a joint strategic approach to building lasting infrastructure to support sustainable food supply beyond COVID-19. Foreign countries are increasingly partnering with private sector stakeholders to synergize and devise ways to mitigate the pandemic’s impacts. In western nations, the private sector has mobilized by coming up with new inventions, converting production lines and entire factories to the manufacturing of Personal Protective Equipment (PPE) for medical workers and more. The private sector generally tends to be more innovative in approach and would benefit from government patronage to boost this inventiveness. This can complement initiatives to meet immediate food needs, boost social protection programmes and keep food supply chains flowing. The decision of the Federal Government to include food processing companies as essential services is a laudable step in ensuring food security. Clearly more must be done. It is also expedient for Agro-Tech companies to renegotiate the terms of their agreements with Aggregators in order to reflect the current global reality.

**Endnotes:**

3. Ibid n. (5).
4. Ibid n (3).
6. Ibid n. (4)
SMART FARMING: A SOLUTION TO PREVAILING HUNGER IN AFRICA.

According to a report of the United Nations Food and Agriculture Organization (UN FAO)\(^1\), global food demand is expected to rise by 50% by the year 2050. While the African continent will be one of the main drivers of this demand, its strategies to ensure adequate supply, are far from keeping pace. The UN Sustainable Development Goal (SDG) of “Zero Hunger” around the world by 2030 is therefore in its true sense not only a humanitarian objective, but an entrepreneurial call to action. With an unenviable track record at current levels of technological infrastructure, the scaling of food production on the African continent is only attainable by harnessing food production to leading edge technology.

The agricultural sector in Nigeria has received a lot of attention in recent years following various initiatives to diversify the economy away from oil production. Yet in 2019, Nigeria was the world’s second largest importer of converted rice; despite being the biggest producer of crops like cassava, sorghum and rice\(^2\). The agricultural sector is characterised by inefficient farming models which lead to wastage and low output, absence of mechanization, lack of quality inputs, inefficient market linkages, poor human capital development and lack of information. Insufficient domestic production, coupled with inadequate quality controls, also limits export potential.

While the provision of certain basic infrastructure will require government intervention, the concept of smart farming seems to offer a solution to one of the main inhibitors of agricultural production; inefficient farming models.

The internet age has welcomed smart agricultural models, deploying such technological advancements as IoT (Internet of Things), Geo-positioning systems, Big Data, UAVs (Unmanned Aerial Vehicles, drones), remote sensing and robotics\(^3\). The practical application and leveraging of these technologies in agricultural production is referred to as “smart farming”. Smart farming is the extensive use of integrated Information Communication Technologies (ICT) for agricultural endeavours and purposes\(^4\). Smart farming can enable weather prediction to better manage harvesting of produce, while soil sensors can help to monitor and manage crop growth in real time. The use of data is also critical to the smart farming infrastructure as it helps to predict crop yield.

Some African nations have already begun to embrace smart farming and are reaping the benefits. With Ghana’s over 37million acres of agricultural land, monitoring and managing soil and crop conditions without the help of technology had proven next to impossible, leading to mass use of pesticides. This in turn rendered crops like maize and cassava potentially hazardous to Ghanaians and unsellable in foreign markets\(^5\). This problem was solved by the innovation of Acquahmeyer, a company that uses UAVs to provide intelligent insights to farmers that allows them to reduce pesticide use, increase crop yield, and boost profits.

In South Africa, Aerobotics is an agri-tech start-up that has developed an early warning smart scouting platform that aims to help farmers identify potential pest and disease issues in tree crops. With over 500 farmers already signed up on the platform across 11 countries, they have built an end-to-end farm monitoring solution.\(^6\)
In Kenya, there is a device called UjuziKilimo (meaning “wealth for knowledge” in Swahili). This device helps to read data regarding the soil’s PH, water levels, and disease and pests found in it. In about two minutes after use, the data is sent to the farmer. With the world population set to rise by 10 billion people over the next 30 years, it is no surprise that innovators are focusing on disruptions to boost the agricultural sector. This sector could be a potential goldmine for investors and the economy alike. In India agriculture generates around 18% of GDP and provides employment for 65% of the workforce. Some 2.5 billion people worldwide live in households that depend primarily on an agri-based economy. The South and East Asia region is the world’s largest producer of agricultural products, and in the period 2013-15 produced about 40 percent of world cereals and meat and almost 60% of vegetable oils; mostly palm.

Increased agricultural productivity is also a primary driver of food security, income generation, and development in rural areas. Countries like India have also begun to embrace ICT in agriculture to bolster and catalyse investment in the sector. A company known as Digital Green is leveraging ICT to reach underserved smallholders in rural areas. The company has coupled easily available video recording equipment with small-sized projectors to disseminate agricultural best practices. Digital Green has reached 68,000 farmers and produced more than 2000 videos. Trained community members record videos of the experiences of other farmers and extension staff.

Moves to develop services that provide predictive weather analytic services to clients have been employed in some parts of India to help small and marginal smallholders deal with the challenges of climate change. One of such projects is the e-Arik (e-Agriculture). E-Arik was initiated in 2007 in areas inhabited by the Atri people of northeast India. At the time more than half of the households in the area did not have access to electricity. The e-Arik project aimed to implement and popularise climate smart agriculture practices, which implied lowering inputs and using organic technologies as a means of increasing productivity and improving food security.

Also in India, the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) launched a customised low-cost combination phone and tablet computer called GreenPHABLET powered by the GreenSIM. The GreenPHABLET allows information to be precisely targeted to individual smallholder farmers. This helps farmers purchase inputs at lower price, get a better price for their produce, and link them to markets, thus putting them on the path to profitability. The device also delivers free messages about the weather and potential or current pest problems. This device has proven invaluable to farmers in various cities across India.

The ideas and practices highlighted here are laudable and should be adopted in a country like Nigeria. The challenges to this are self-evident; lack of proper infrastructure, financing, ICT knowledge deficit, to mention a few. That is where companies like Cellulant come in.

In adopting smart farming techniques in Nigeria, concerted efforts must be made towards addressing the digitalization of the Nigerian economy. Digital connectivity remains a burning issue in Nigeria as broadband penetration is low, not least in rural areas where many smallholder farmers operate. The Digitalisation of Africa report states that despite mobile penetration in Nigeria, the vast majority of farmers are either disconnected or only have access to unstable 2G connections. Cellulant has acted with a view towards unlocking the huge potentials in the agricultural sector. By contributing to the digitalisation of the ecosystem, using its Agrikore and Tingg platforms, Cellulant has helped farmers and other agricultural value chain participants pay for goods and services, access finance in a seamless manner and improve market linkages within the ecosystem using its blockchain enabled marketplace platform.

The subsequent National Broadband plan has set a target of 71% for broadband penetration by 2021\textsuperscript{13} while the current broadband penetration is, according to statistics released by the Nigerian Communications Commission, at 38%. With the dearth of statistics on broadband penetration in rural areas, it could be argued that the achievement in broadband penetration of 38%; coming from a paltry figure of 3% in 2013, is largely based on figures from urban areas. To make a meaningful impact, any strides in broadband penetration must achieve digital inclusion. Statistics show that more than 72% of Nigeria’s smallholders live below the poverty line of $1.9 a day\textsuperscript{4} and agriculture accounts for about 70% of the rural dwellers in Nigeria. While businesses like Cellulant may continue to innovate, it is incumbent on the Nigerian Government to continue to unlock new pathways that will engender participation of the private sector in addressing fundamental infrastructure challenges like broadband penetration, which have the potential to cause a trickle-down effect in the use of smart technology in agriculture. For one, the many challenges faced by investors with the issue of exorbitant Right of Way (RoW) charges issued by various State Governments will certainly need to be critically addressed.

Technology can play a catalysing role in combating hunger and food insecurity. Effective government policy and political will must however create the enabling environment for private sector efforts to thrive. Investment in smart farming technologies can be capital intensive, and to drive innovation into the sector, the government will need to provide some regulatory flexibility to incentivise both start-ups and established businesses, to begin to drive innovation and birth the next generation of disruptive technologies in the Nigerian agricultural sector.

To make a meaningful impact, any strides in broadband penetration must achieve digital inclusion.

Effective government policy & political will must however create the enabling environment...

Endnotes:
3. Arthur Ume, Usman DahiruHaruna, “Smart Agriculture in Nigeria With IoT: A Reality”
4. ibid.
9. ibid
10. ibid
Recently, the Wema-Cellulant Bridge financing arrangement on Agrikore was launched. Several industry commentators applauded the event. What influenced Wema Bank’s decision to work with Cellulant on this initiative? Wema Bank has always been inclined to use digital technology to reach the unbanked and the underbanked population with value added financial services. This informed the launch of the first fully digital bank in Nigeria (Alat) in 2017. Therefore, Wema Bank’s understanding of the enabling power of digital technology to scale up business transactions, influenced our decision to partner with Cellulant on the Agrikore digital marketplace. And we believe that this will further deepen digital banking footprints in the largely unbanked rural areas where a lot of the peasant farmers exist.

We understand this initiative was a first of its kind and Wema was the first bank to jump in. It will be interesting to know what about Cellulant encouraged Wema Bank to navigate such an uncharted territory? For us, a number of factors led to us jumping into this arrangement. One, the passion of the two key promoters, which is very encouraging. In addition, as a digital bank, we understand some of the digital play. Moreover, the business model was very clear, we could see end to end, in terms of the transaction flow. Lastly, we could see that the platform runs on a blockchain, which would ensure the integrity of transactions that are done on the platform. These were all the things that gave us the comfort to jump on the trail.

Some industry commentators portray fintechs as competing with banks, while others believe the relationship is ultimately going to be one of collaboration that creates value. So far, what has been Wema’s experience in this relationship with Cellulant?

For us we believe that trying to build a digital ecosystem will involve a number of players who are going to be operating in different verticals. As a bank, we provide banking services, we are not deep in the Agric space. So, if a Fintech has come up, we believe that collaboration is the best way to go. In any ecosystem, you need to have collaboration in order to build and deepen the ecosystem. I do not believe in competition but believe in ‘coopetition’. Also, considering that all the players have different regulatory licenses, the limitation of one party can easily be surmounted if they work together with another party who has the required license they may not have. So, we believe that it is more of collaboration rather than competition.

Our readers will want to know more about Bridge Financing and the other financing products with which Wema supports the agricultural value chain? Thank you. Wema Bank/Cellulant aggregator finance scheme is aimed at providing funding for the individual player on the Agrikore platform i.e. the Community Aggregators, without whom Cellulant may find it onerous to deliver contracts to the Corporate Commercial Buyers. So, we are providing finance to the aggregators who deal with the last man (the farmer) in the value chain. The overreaching objective of the financing arrangement is to ensure that each Community Aggregator on the Agrikore platform has access to funds to deliver a minimum of one truck load of any agricultural commodity contracted to them. At that time it was N5million only. However, any aggregator with requisite capacity, who meets such requirement, can access up to N100million under the scheme.

Mr. Ademola Adebise, Managing Director and Chief Executive Officer, Wema Bank Plc.
In order to take advantage of the benefits of bridge financing, what specific requirements would a value chain participant meet? The very first thing is that the borrower must be an individual Commodity Aggregator, or a business name/company registered on the Agrikore platform. They must be participants on that platform, that is the starting point. Then we believe that Cellulant would introduce them to Wema Bank and Wema Bank would carry out all the necessary KYC on that aggregator and will go through the account opening process. We also believe that the borrower must be able to provide at least 20% of the loan as security deposit with the bank. The borrower must have physical presence at the village or the point of sourcing for the stock in trade. The borrower must have appropriate and adequate storage facility to hold commodities being sourced and the borrower must also own or have access to a reliable means of transporting the Agric commodity. We are not saying they must own a truck, but they must have access. So, we believe that there would be another set of providers on the platform the transporters. This must also be in place. We believe that they must be able to access the Corporate Commodity Buyer’s aggregation point because the stock would have to be transported from the farm to the aggregator’s warehouse and from the aggregator’s warehouse to the Corporate Commodity Buyer. Thank you.

Risk is always the elephant in the room when financing is discussed. In your experience, what are some of the risks involved in bridge financing within the Agric value chain? And what do you consider to be their mitigants? Yeah. This is very key, especially for a financial institution and as you rightly said it is the big elephant in the room. The first is performance risk; this we believe will be mitigated by the fact that only aggregators introduced to us directly by Cellulant, and Cellulant is comfortable with, would be availed a loan. This will reduce the incidence of performance risk. I will believe that these aggregators are already working with Cellulant before now and migrating to the platform would not be a problem once the track record is already known. So based on that introduction, we can finance the aggregator and we believe that this will mitigate the aspect of performance risk. The other risk is counter party risk; this is partly mitigated by the fact that only the Corporate Commodity Buyers with financial capacity and track records of payment for supplies would be contracted by Cellulant-who also are partially guaranteeing the repayment. Definitely, I know there are different arrangement between the commodity buyer and Cellulant, with understanding that there will be some deposits made. So, in terms of counter party risk, that would be mitigated. The risk of damage of loss of goods in transit is also there. We mitigate this by including comprehensive insurance on goods in transit as the condition precedent to draw down of the loan facility. Another risk which we see is the risk of non-compliance with quality and quantity certifications by the contract employer. This we believe will be mitigated by the fact that Cellulant will ensure quality and quantity is met up to the standard of our client vis a vis the corporate guaranty also issued by Cellulant in favor of the bank. So, we believe there are a number of things that have been put in place by Cellulant to ensure that this is sorted out. The other risk that I also see is the risk of diversion of funds. As I said, this is an integrated platform, we have end to end; the corporate buyers are on the platform, the aggregators are on the platform, farmers are on the platform, so you can actually trace the flow of funds. So that should not be a problem and the fact that each obligor would have a wallet on the platform, which means you can settle easily on the platform. So, the aspect of diversion is limited. The other risk is fluctuation of commodity prices. We are also currently facing the problem of COVID crisis and you can see how that has affected commodity prices in the market. We believe that this risk can be mitigate by the fact that price would be fixed as stated in the contract order within the period of the contract. Thus, shielding the transaction form any negative impact of commodity pricing. We also believe that it would be an efficient market where information is not hoarded. You can see everything, it is an open and efficient platform, we believe there will be market efficiencies and prices should not fluctuate. So, the risk can easily be mitigated.
Thank you very much, that is quite an elaborate one. Are there any other initiatives of the Bank targeted at supporting tech-enabled agricultural value chain? Yes, there are a number of things we are working on. In not too distant a future we have plans to go further down the value chain, especially on the Agrikore platform with a structured credit product targeted at clusters of small older farmer groups. Today, we are starting with the aggregators and believe we can extend it to the small farmers once they have organized themselves into groups and we can have a product that is targeted. We believe that this will help increase the availability of commodity being sourced and supplied on the platform. Thus, increase the value creation and mutual benefit to Cellulant, Wema Bank and all participants on the platform.

Any other information or closing remarks and what do you see in the days to come between now and end of the year for companies and businesses in the Agric sector? Globally, businesses will go through a tough time. Things have already slowed down; activities have slowed down drastically and the Agric vertical is not exempted. In fact, we have a lot of efforts coming in from the Agric space in terms of the use of humans and now that everybody is locked up at home, it is going to have a great slow down. We have seen the impact on commodity prices because of shortage of supply. In the case of Nigeria, we have seen oil price crash because factories have shut down. So, really it is going to be a tough one. The IMF and the world bank have started adjusting their projection. Nigeria has adjusted its budget as you know. Companies are also working to adjust their budgets; it is going to be a tough time. But we need to come together to solve this problem as we survived during the SARS and Ebola crisis. However, SARS and Ebola were not felt globally as they affected some specific continents, not the world. As we can see, CBN has started introducing palliatives to cushion the effect. For example in the Agric space, intervention funds have been given by the by CBN and DFIs, the CBN has introduced an extra year of moratorium for all existing intervention funds that are currently enjoying moratorium. Interest rates for the intervention funds that largely affects the Agric sector has been reduced from 9% to 10% and I believe this is a good response to the crisis. The Central Bank has also introduced palliatives in terms of supporting key sectors like health. On the closing remarks, I believe that the business model behind Agrikore platform is a landmark for agriculture in Nigeria and Africa. It is the way to go. We, as Wema Bank, shall continue to provide the necessary support to this initiative. It is important that we have something we can call our own in Africa. I encourage other fintechs to also think of the ways to give to the society. One of the things for us in Wema Bank is that we have a corporate and sustainability vision to use digital finance to support societal impact. And that is one of the reasons why this partnership is very key to us and I believe that by the time we fully launch this, it is going to change the landscape. Thank you very much.
SPORTS & AGRICULTURE AS TOOLS FOR YOUTH EMPOWERMENT IN NIGERIA.

INTRODUCTION
“Sports has the power to change the world. Sports has the power to inspire... It speaks to the youth in a language they understand...” Nelson Mandela, former President of South Africa

“Youth constitute Nigeria’s only hope for a real future.” Chief Olusegun Obasanjo, former President of Nigeria

Youths are drawn to sports for its ability to harness their drive and energy via competitive social interaction. In turn, sports serve as a major tool of physical, mental and economic empowerment for countless youth. In this way, the sports sector is almost solely dependent on the participation of youth who are both the majority producers and the consumers in the sports industry. Nigeria has arguably more than her fair share of youth population; individuals whose ages range from 18-35 years. Many are sports fanatics, and over time this trend of fixation on sports has birthed home-grown international sporting icons, and droves of supporters of foreign clubs. Diabolically opposed to this paradigm, is that of youth involvement in agriculture. The agricultural sector is sorely lacking the same drive and energy of the youth that is needed to engender the benefits and impact realized in the sports industry. This is more so in a technological age where the youth are at a competitive advantage in creating and applying disruptive technologies. So how can sports and agriculture work together to empower youth and transform the agricultural sector?

A TALE OF SPORTS AS AN ECONOMIC MODEL
Sadio Mane is a winger for English Premier League (EPL) side, Liverpool. He is currently one of the highest paid players at Liverpool earning £100,000 per week before bonuses. When he first left his home village, Bamball, in Senegal to Dakar for a tryout, he was barely living above the poverty line. After impressing the coach at the tryout, the rest is now history. Career’s like Sadio’s and the astronomical wealth generated by the football industry in general, supports an entire value chain of service providers like lawyers, medical practitioners, talent managers and other sports related professionals. Here at home, the Sports Industry Thematic Group projected that sports contribution target to Nigeria’s Gross Domestic Product (GDP) will be between 3-5% in 5-10 years.

AGRICULTURE AS A TOOL FOR YOUTH EMPOWERMENT
Agriculture is a major contributor to GDP. It was a major revenue source for Nigeria prior to the discovery of oil. According to a 2019 report, agriculture contributed 25.16% to the GDP of the country that year. Contrary to popular opinion, “It’s not oil that is driving our GDP. Oil is just about 9%, agriculture is about 27% ...” Agriculture is a major economic industry that far exceeds sports, but lacks the visibility, and iconic success stories that could make it an attractive career path for the teeming youth population.

“Agri-business is not the future. It is the now,” Assaju; beneficiary of the International Institute for Tropical Agriculture (IITA) agriculture apprenticeship scheme. Assaju is a beneficiary of the IITA agriculture apprenticeship scheme, ENABLE (Empowering Novel Agri-Business-Led Employment). Assaju’s perception about agriculture as a viable income earner has been drastically altered as a result of her participation in the scheme. The African Development Bank working with the International Institute for Tropical Agriculture (IITA) has set up a fund solely for youth like Assaju who go into agriculture business.
These may be the future success stories and icons that are poised to attract youth in their droves to a potential economic liberator. Participants in the IITA youth agripreneurs scheme have affirmed agriculture as an economic empowerment tool. The case for agriculture is more compelling when the two industries, sports and agriculture, can be linked.

Agriculture and sports are indeed interrelated as agriculture plays a huge role in the sports industry and in the activities that go on when many sports are played. In the words of a retired American National Football League (NFL) player, Ohioan Mark Inkrott, “[a]t one point in my life, I just assumed that everyone across the country knew where food comes from but that certainly isn’t the case. After my football career, it occurred to me that sports have a powerful platform to be influential and to tell great stories about agriculture and food production”. According to Inkrott: “...the first time [he] went to an NFL game, [he] was playing in it and even then [he] recognized the agriculture component to a ballgame. As fans enjoyed a cold beer, [he] knew that there were hops and barley farmers somewhere that made that possible...” Inkrott has gone on to establish a sports marketing and consulting firm specializing in agriculture and farm produce to stadium programs.

Bringing it home, there are numerous possibilities to tie sports to agriculture to entice the youth population. A number of sports legends could consider getting their brands involved with agriculture as youths, who also happen to make up the bulk of sports lovers, would be more likely to get involved in agriculture with the participation of their heroes. This need not be limited to individuals. Companies with name recognition and social capital can also get involved with such initiatives. A partnership like that between Cellulant and Mastercard Foundation is an example of an initiative uniting two highly visible brands in the cause of youth empowerment. Like ENABLE, Mastercard Foundation and Cellulant have joined forces to target the financial empowerment of youth in various sectors. The aim of this partnership is to increase employment opportunities among youth. Cellulant’s Agrikore platform provides financial inclusion to the underserved, by connecting them to large food processes. Mastercard Foundation, in pursuance of its Young Africa Works (YAW) program, is collaborating with Cellulant to enable youth gain employment and rise above poverty. The lessons learned from this partnership can be channeled towards the development of the agricultural and sports sectors by innovative youth agri-preneurs.

The Nigerian Vision 2020 blueprint seeks to place Nigeria amongst the top 20 economies in the world by the year 2020. In order to accomplish this feat, more attention should be paid to outside the box thinking, such as youth inclusion in agriculture and sports. According to statistics given by Mrs. Nkechi Obi, an estimate of 24 million soccer balls are used every year in Nigeria and none are made in Nigeria. This is aside the balls used in other sports. Without agriculture, game day would be a very difficult experience for everyone. From the pitch where these games are played, to the instruments of play i.e. the balls, bats, rackets, gloves and jerseys; all of these are derived from agricultural products. It is safe to say that the success of sporting activities rests heavily on agriculture, and a major market for agricultural produce is also the sports industry. Are there any innovative youth that can make the connection between sports and agriculture and give birth to major positive disruption in the agricultural sector?

**Endnote:**
1. At the inaugural Laureus Lifetime Achievement Award Ceremony in Monaco in 2000 https://yali.state.gov/sportss-and-the-power-to-unite/
4. https://www.express.co.uk/sportss/football/1134991/Sadio-Mane

Image Credits : Olympics in Barcelona by Ken Geiger and William Snyder
FIXING AN UNBROKEN AGRICULTURAL POLICY: THE CURIOUS CASE OF THE GROWTH ENHANCEMENT SUPPORT SCHEME (GESS)

INTRODUCTION
Before the oil boom of the early 70’s, agriculture was at the helm of the Nigerian economy, contributing 60% to Nigeria’s Gross Domestic Product (GDP) in the 1960’s. Even after crude oil exploration refocused Nigeria’s economic priorities, agriculture has remained through the decades as a recurring focus, at least on paper, of Nigeria’s economic development blueprint.

Successive governments have implemented diverse programmes and policies hoping to boost agricultural development as a means of economic sustenance in Nigeria. The Structural Adjustment Programme, 1988 was primarily aimed at self-sufficiency in food and agricultural raw materials production. At the end of operation of the first policy cycle, the agricultural sector growth rate had reached 4.7%. Food output increased from 66.3 million tonnes in 1998 to 68.4 million tonnes in 1999 and to 90 million tonnes in 2000. Another policy worthy of mention is the National, Special Programme on Food Security (NSPFS) which was launched across the federation in January 2002. The major achievements of the programme include improved health care system, mobility status and access to portable water as well as improvement in the socio-economic status and self-worth of participants in their communities. However, the most innovative policy that has been recorded in the agricultural sector in recent years is fairly recent; the Growth Enhancement Support (GESS) Scheme. But why would one of the most economically successful agricultural policies be stultified by the same government seeking to maximize the economic potential of agricultural sector?

GESS was initiated in 2012 by former Minister of Agriculture, Dr Akinwumi Adesina. The Nigerian government launched the Agricultural Transformation Agenda (ATA) in 2011, with the aim of changing the national discourse around agriculture as a social development issue, to being a matter of core economic development. As a vital component of the ATA, GESS was designed to encourage the critical players in the sector to work together to improve productivity, household food security and enhance income of the farmers. GESS utilized technology to improve agricultural productivity especially in the rural areas which are majorly characterized by subsistence farming. It provided for the delivery of government-subsidized farm inputs directly to farmers via Global System for Mobile Communication (GSM) phones. As a technology-oriented Scheme, GESS was powered by Africa’s foremost blockchain solution-based tech-company, Cellulant.

Cellulant’s electronic distribution channel provided an efficient and transparent system for the purchase and distribution of agricultural inputs in the value chain. Cellulant played an important role in the GES Scheme by developing one of the most innovative technologies in the Nigerian Agri-tech sector- the “E-wallet” technology. The E-wallet is an electronic device that allows an individual to make and process electronic financial transactions. These include receiving money, purchasing items, buying airtime, paying bills, sending money to commercial bank accounts using a mobile phone, etc. The E-wallet allows anyone to receive and send money to anyone with a valid cell-phone number. The money is transferred instantly and can be withdrawn as cash from ATMs or used for other purposes.

The GES Scheme played a revolutionary role in that it guaranteed registered farmers E-Wallet vouchers with which they could redeem fertilizers, seeds and other agricultural inputs from agro-dealers at half the cost, with the other half being borne by the Federal and State Governments in equal proportions.
The E-wallet provides a convenient process for commercial transactions as farmers are provided with the option of choosing from different access channels like Web, USSD, SMS and a Mobile Application. Since 2012, the E-wallet technology has delivered services to about 12 million farmers under the GES Scheme. With the success of the electronic wallet system, Nigeria became the first country in Africa to reach farmers with subsidized farm inputs through their mobile phones - All thanks to Cellulant’s innovative technology!

The chain of operation of the GES Scheme is represented in the illustration below:

**Source:** Uduji, Okolo-Obasi & Asongu

**MILESTONES OF THE GES SCHEME AND AN UNTIMELY SUSPENSION**

The agricultural sector has witnessed tremendous growth and development under the GES Scheme. Momentum towards the actualization of the Scheme’s set goals continues to gain pace. The Scheme has provided an opportunity for small and medium scale farmers to directly access input supplies – a critical factor in primary production. Previously, despite ever-increasing fertilizer subsidies by the Government, no more than 11% of small and medium scale farmers received subsidized fertilizers from the Government. Under the Scheme however, these input-supply challenges have been reversed through an efficient and automated system of direct fertilizer delivery. Prior to the GES Scheme, there was an inaccurate data base of farmers in Nigeria. However, by requiring farmers to register and provide biometric data in order to access the benefits of the Scheme, the National Farmers Registration Exercise has captured data of close to 10 million farmers in the National Farmers’ database.

In the same manner, crops, livestock, and fisheries value chains have witnessed spectacular achievements in primary production, processing, and marketing. The Scheme has demonstrated that smart investment in farmers and a positive enabling environment for the private sector to invest in agriculture can yield tremendous returns in the form of increased food supply, employment, and income generation. According to an empirical report on the GES scheme, participation in the program increased maize yields and maize income by 22% and 26% respectively. Particularly, it was reported that the probability of being poor declined by 24% as a result of the GES program. This result suggests that the GES Scheme assisted farmers to improve their productivity and income from maize production, which is a case for justifying the intervention. Also, in terms of the welfare outcomes, GESS had a positive and statistically significant effect on per-capita total, food, and non-food consumption expenditures. It was further reported that GES participants increased their per-capita total consumption expenditure by 30.7%. As a result of this consumption growth, poverty headcount ratio has declined by 17.7% points among participants of the GES.

The GES Scheme has not been without its challenges largely associated with default of payments to agro dealers by the Federal Government, misuse and inability to capture data relating to real farmers.
There was also a major backlog of GES loans which caused delay in implementation. Some states like Adamawa have peculiar challenges such as problems of insurgency and poor GSM Networks in the rural areas. This effectively stifled the implementation of the Scheme in those parts. Other commonly acknowledged challenges include poor performance of the Scheme’s workers, a low level of understanding of the E-wallet initiative by the farmers, low density coverage of agro-dealers and poor telephone network. Rather than to work to ameliorate the challenges, the Federal Government suspended the Scheme in 2018 and substituted it with a new initiative tagged Agricultural Input and Mechanization Services (AIMS).

With the E-wallet initiative, Cellulant was able to seamlessly connect farmers with agro-dealers and financial institutions. The GES Scheme was lauded on all fronts for the huge successes it recorded before its period of recurrent transitions began in 2015. The innovative use of the E-wallet initiative by Cellulant to achieve the objectives of the GES Scheme is ample demonstration of the company’s use of technology to disrupt orthodox processes in agriculture. This track record in the agricultural sector is clearly an attestation of the company’s drive to create food security in Nigeria. Cellulant is also aggressively driving the inclusion of youths in the agricultural sector.

Various initiatives are driving the youth to become more involved in agriculture. Sequel to its partnership with Mastercard Foundation, Cellulant recently commenced its series of ‘Nigerian Youth Connect to Work’ program. The program is aimed at achieving greater youth inclusion in the agricultural sector by exposing the youth to the huge untapped potentials of agri-tech. As illustrated with the GES Scheme, Cellulant is set to shatter the myth that farming is for the old, uneducated and rural dwellers by onboarding and empowering the youth with its “Farm to Fork initiative”. With all of these achievements in contemplation, and despite the administrative shortcomings of the GES Scheme, it will be prudent to revisit the GES Scheme with a view to consolidating its achievements. Rather than start another scheme from scratch, it is rather preferable from a sustainability standpoint to address the specific issues that limited the optimum realization of the Scheme’s objectives. The international acclaim, and testimonies of the small and medium scale farmers who benefitted from the Scheme lend credence to this recommendation.  

The innovative use of the E-wallet initiative by Cellulant to achieve the objectives of the GES Scheme is ample demonstration of the company’s use of technology to disrupt orthodox processes in agriculture.  

Endnote:
3. The policy was designed to remain operative until 2000.
5. Ayode, Ogwale and Adewale “Impact of The National Special Programme For Food Security on Poverty Alleviation Among Women In Oyo State, Nigeria” July 2011
7. Udij, Okolo-Obasi & Asongu The impact of e-wallet on informal farm entrepreneurship development in rural Nigeria May 2019, Page 7
10. Ibid
11. Ibid
12. In 2019, it was revealed that the government had an outstanding debt of N10.3 billion owed to agro-dealers under the Growth Enhancement Support (GES) scheme. https://www.premiumtimesng.com/2019/04/16/fg-to-begin-payment-of-n10-3bn-debt-to-agro-dealers-this-week/
14. The poor performance of the scheme workers was on account of insecurity which effectively reduced the number of contact with the participating farmers.
THE POTENTIAL RISK IN AGRI-VALUE CHAIN BUSINESS AND ITS MITIGATING MEASURES

Market cycles, weather, infrastructure, biological processes, and even political uncertainty all have an impact on agri-business in most countries. Agricultural companies tend to transfer most unacceptable risks to the end of the value chain which include the farmers, logistics providers, and retail consumers. Notwithstanding these risks, agriculture is one of the largest contributors to Nigeria’s economy. As at the third quarter of 2019, Nigeria’s nominal Gross Domestic Product (GDP) was N37.81 trillion (Thirty-seven trillion, eighty-one billion Naira) with Agriculture contributing about 25.88% of nominal GDP. ¹

THE AGRI-BUSINESS VALUE CHAIN

The agricultural supply chain is primarily defined by the close linkages between each segment and the management of processes within those segments. ² The supply chain encompasses all the input supply, production, post-harvest, storage, processing, transportation, marketing and distribution, food service and consumption functions for a given product, including the external enabling environment. ³ It typically supports three major flows: physical product flows, financial flows and information flows. The importance of agricultural supply chain management is in providing the right products (quality), in the right amounts (quantity), to the right market, at the right time, and at a competitive cost. ⁴ Below is a pictorial illustration of a simple agri-value chain:

There are risks inherent in the agricultural value chain which must be managed with strategies to mitigate the risks and ensure the maximum possible return in this all-important sector. Some of these risks are identified below. Potential mitigation strategies are then provided in the section that follows.

WEATHER-RELATED RISKS

Extreme weather events like excessive or insufficient rainfall, unstable temperatures, etc. can affect the agricultural supply chain during a production cycle. Despite these uncertainties that mother nature can sometimes spring on the production cycle, farmers must decide whether or not to plant their crops and bear the accompanying risks. Weather-related risks lead to yield reductions, affect the quality of products ⁵ and invariably impact on logistics along the supply chain.

BIOLOGICAL AND ENVIRONMENTAL RISKS

Environmental and biological risks can directly affect the supply chain in growing seasons and during production cycles. Biological risk is mostly associated with yield and quality reductions due to, for example, pests and diseases that affect crop yields and encroach on market access. Impacts of these factors are felt by farmers, agricultural companies and by extension, the entire country. ⁶ Such risks might impact timeliness of the movement of goods along the supply chain because of disruptions related to testing and certification. Environmental degradation factors such as pollution can affect agricultural production. Nigeria is a major producer of crude oil. Oil exploration activities when not properly managed, release pollutants such as oil into the environment and these can have adverse effects on soil and water. Flaring of gas also has a negative effect on production, as the flaring affects the atmosphere by, for instance, causing acidic rain which can devastate the soil and stunt crop growth.

Furthermore, most farmers make use of fertilisers to maintain soil health and keep up with high demand. Excessive use of agricultural chemicals can pose an environmental threat leading to such conditions as soil salinity, heavy metal accumulation, nitrate accumulation, water eutrophication and air pollution – predominantly with nitrogen and sulphur. These not only diminish the quality and quantity of the products but in extreme cases result in harmful crops for human and animal consumption.

MARKET RELATED RISKS

Pricing is typically driven by a number of considerations: consumer preference and spending power, the strength of the general economy, supply and the price of competing products. Market risks, however, tend to have irrational effects on pricing. Market risks are generally related to unexpected volatility in price, supply, quality, and timing of availability. Price uncertainty is the most prevalent market risk, often occasioned by fluctuating demand and supply of products, and variables around the factors of production. ⁸ Price uncertainty has a direct and major impact on decision-making related to the selection of crops/enterprises for investment.
LOGISTICS AND INFRASTRUCTURAL RISKS
Risks related to logistics and infrastructure can affect the availability and timing of goods, services, and information. Logistic failures are transmitted throughout the agricultural supply chain and can impact product quality and traceability. Logistics and infrastructure in agribusiness encompass transportation, warehousing, communication, information technology etc. Access to reliable and affordable logistics systems is a crucial component for decision making regarding choice of input and output markets.  

Some of the logistics and infrastructural issues affecting the value chain in Nigeria are bad roads and road networks, inadequate vehicles, congestion at ports, high cost of transportation, size of building, poor storage facilities for perishables, etc. These factors have negative effects on the value chain of agricultural produce. For example, perishable goods may be damaged before they are delivered to the processor or consumer. Poor logistics infrastructure can hamper productivity and cause price and market volatility.

FINANCIAL RISK
The term ‘financial risk’ expresses the problem of cash flow faced by small scale farmers and other players in the agricultural value chain. This risk can be caused by uncertainty about future interest rates, the willingness of lenders to make funds available, their ability to continue to provide funds when needed (credit availability), and the ability of the farmer to generate the income necessary for loan repayment.

MITIGATING MEASURES
The risks highlighted above can be mitigated in different ways ranging from outright avoidance, risk sharing, transfer to third parties (the use of insurance companies or other financial mechanisms) or the intervention of the government. Choosing the right tool to use at the right time will not only help reduce risk but can increase profit overall. Below are some risk mitigating tools:  

Storage
Storage involves warehousing the produce to avoid destruction; this is particularly necessary for perishable goods. It would involve the availability of proper infrastructure and as such can be said to mitigate the infrastructural risk discussed above. When prices are below the level anticipated in a marketing plan, storage may be justified to mitigate risk as the owners of the goods may not be in a desperate need to sell them off due to the unavailability of options.

Role of Contracts
The use of contracts allows producers to mitigate financial, logistics, infrastructure risks as well as price risks. A fixed price contract may be beneficial to either the producers of the goods or the purchaser depending on the party desirous of protecting itself. For the producer, where there is more supply than demand and parties have agreed to a fixed price, the producer will still be entitled to the amount agreed to in the contract whether or not there is a reduction in the market value of the product. On the other hand, where the demand for goods causes an increase in the price of the goods, the availability of a fixed price contract can ‘freeze’ the price of the product to the amount stipulated in the contract, in favour of the purchaser, irrespective of the increase in market value of the product. A hedge-to-arrive contract allows the seller to set the future price level by the delivery date.

Insurance
Insurance is one of the most important risk mitigating measures in the protection of the agricultural value chain. The management of risk through the purchase of an adequate insurance cover transfers risk, from the farmers and producers, to the end user for a price known as the insurance premium—particularly Agricultural Microinsurance policies.

Microinsurance typically refers to insurance services offered primarily to clients with low-income and limited access to mainstream insurance services and other means of effectively mitigating risk. The Nigerian Insurance Regulator, National Insurance Commission (“NAICOM”) has certain guidelines for Microinsurance in Nigeria. The guidelines explain that microinsurance products are specifically for the low-income market in relation to cost, terms, coverage and delivery mechanism. It also clarifies the scope of microinsurance for the operators stating the sum insured under this policy should not be more than N2 million (two million naira).
Another Agri-insurance mechanism, the National Agricultural Insurance Scheme was introduced by the National Agricultural Insurance Corporation (NAIC). The Scheme is available to all the farmers and envisages coverage of all the food crops, oilseeds and annual horticultural/commercial crops. The Scheme’s objective is to protect the Nigerian farmer from the effects of natural hazards.

**The Role of the Government**

The Government has a huge role to play in assisting farmers and the entire Agri-value chain in mitigating risks associated with Agriculture. The Government’s intervention provides some form of guarantee for the chain. In recent years, governments have demonstrated willingness to step in to mitigate financial risks. An example is the Central Bank of Nigeria’s Anchor Borrower’s programme which is aimed at creating a link between anchor companies involved in the agricultural process and small holder farmers of key agricultural commodities. This programme is aimed at providing farm inputs in kind and cash to assist small scale farmers boost production of commodities, stabilize inputs supply to agro-processors and address the country’s negative balance of payment on food. However, anticipation of this form of intervention will have the consequence that private actors will alter private risk management behavior and underinvest in private risk-prevention activities. Another consideration is looking at commodity exchanges which typically serve as information brokers for prices of actively traded commodities, and their diffusion in developing countries will certainly help improve the overall market-risk management ability of producers.

**CONCLUSION**

There is huge potential for expansion of agricultural production that farmers in developing countries can take advantage of. The bottom line, however, is that in order to take advantage of this opportunity, myriad risks must be mapped out and managed. This is particularly true of financial risk which underpin the entire production cycle. Access to credit on favourable terms, adequate insurance, and balanced contractual relationships must be strategically deployed to ensure sustainability of any agri-business. Governments can assist by establishing appropriate regulatory systems that ensure the safety and quality of agricultural goods and services.

This issue majorly focuses on the potential risks in the agribusiness and provides a preview on measures that can be implemented to mitigate them. In subsequent issues, each risk mitigant will be discussed extensively.

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**“The Government has a huge role to play in assisting farmers & the entire Agri-value chain in mitigating risks associated with Agriculture.”**

**“...in order to take advantage of this opportunity, myriad risks must be mapped out and managed.”**

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*Endnote:*
5. Ibid n (4).
6. Ibid n (4).
7. New Agricultural Report – “What are the 5 main environmental risks associated with agricultural land uses?” 13th August 2019:
8. Ibid n (4).
9. Ibid n (4).
10. Adam M. Komarek, Alessandro De Pinto, Vincent H. Smith; A review of types of risks in agriculture: What we know and what we need to know, Agricultural Systems Journal 178 (2020) 102738
Agrikore in Pictures