

Poverty Alleviation: Biotechnical Agriculture Option to Advance Poverty Alleviation in Africa Suitable for Climate Change

Christian Tobeckukwu James Ezeogu
Business Executive Development
IntelliDigest
Edinburgh
United Kingdom.

Abstract:- The 26th United Nations Climate Change Conference of the Parties has ended. Its expectations, and steps being undertaken by IntelliDigest a major food sustainability resource centre and stakeholder in the food industry, has factored African market region to strengthen its global brand vision. To accomplish feeding the growing global population off fossil-base meant combining innovative research and advance engineering. The values of engineering with its internet variables, will effectively achieve more ethos of entrepreneurship and by implication poverty alleviation. The perception of the entrepreneurial ability of over 46 per cent Sub Saharan African population, mostly youths who are digitally connected presently amounts to change from past reality and reflects youths' ubiquitous maturing culture with new prospects presently. Therefore, limitations on both biotechnical solutions addressing agrifood challenges, internet access to enable the solutions in the past, contributed and limited the knowledge transfer to youths leading to suboptimal agribusiness yields. It, therefore, suggests that achieving proportionate digital access to online knowledge, educational information is now more feasible. Through this means, youth's insufficient access to knowledge, information and education can be solved while access to productive information and knowledge of agriculture development and entrepreneurial ventures can be enhanced as well as meeting Net Zero emission. This will ensure further advance in poverty alleviation, food waste and food loss reduction and more nutritious food access.

Keywords:- *IntelliDigest; Internet; Entrepreneurship; Africa; Agribusiness; Biotechnical.*

I. UNDERSTANDING THE PURPOSE OF INTELLIDIGEST

The organisations' aim is to contribute to global food sustainability along a three-prong vision that addresses embedded social, economic and environmental challenges (FAOUN, 2018). As a Biotechnology organisation with focus as a global brand, it intends using a circular economy to accomplish streamlining agribusiness production in communities. Such a manner of productivity impact on food waste and hunger reduction in communities thereby enabling more people access to nutritious food and employment,

equally reducing poverty in an environment less hazardous for the future generation.

II. WHAT DO THE WORLD NEED?

The world concern is reduction of both greenhouse (GHG) emission and its impact on climate change while feeding the growing population (COP26, 2050). Green house emission (GHG) is at varied degrees at global level. GHG emission from agrifood production is 26% tonnes, so also are livestock and fishery at same tonnes each. Crop production impact is 27% tonnes, while land use rate contributes 24%, the supply chain impact accounts for 18% tonnes. IntelliDigest as a stakeholder, envisages change in social behaviour from total dependence on fossil-base resources to renewable alternatives. Poised for change therefore, the organisation embarked on interdisciplinary research and collaboration along biotechnologies, agtech, foodtech and social sciences. An innovative outcome from advanced engineering and combined research by the organisation results to a sustainable solution to enhance food system sustainability. Further research outcomes may amount to adapting new policies, business methods and technologies as suitable along regional markets to achieve less (GHG) emission impact from global food waste and loss at different communities. As a sustainable-food-system resource centre, IntelliDigest is positioned for partnership from vast spectrum of industry players in advancing public access to social, environmental and economic competent solutions to scale-down (GHG) emission, hunger, food waste and poverty at global level. Foundational techniques to problem solving by IntelliDigest aligns with product jurisdiction of the global digital community (IntelliDigest 2021, Abubakar, 2019).

III. SOCIAL SUSTAINABILITY

Postmodern values of the internet such as marketing video-upload across various social media platforms, email or scanning of business quote, invoice, text messaging of delivery details. Other activities too such as the use of online payment tokens, transactional phone-calls and online activities supported by other market information systems (MIS) measures-up to ethos of entrepreneurship as basis for local focus for a global move. Small and medium enterprise (SME) models like AgriFood Techpreneur project of IntelliDigest suggests good approach of translating strategy into action to penetrate local, regional and global market

communities given rightful resources and partnerships. With limited biotechnical solutions addressing agrifood challenges, internet access to enable the solutions, contributed and has limited the knowledge transfer to youths leading to suboptimal agribusiness yields in the past. These lacking essentials include insufficient crop application and prioritisation across the seasons, inefficient use of water, crop protection, fertilizers, time/labour and fuel which are scarce resources. Consequently, it resulted to poor yield, lack of return on investment, invariably low youth per cent rural participation in agriculture across different countries such as Nigeria (FAOUN, 2014). On the other hand, over 46% Sub Saharan African population, mostly youths are digitally connected (GSMA, 2021). This is a change from past reality but reflecting youths' ubiquitous maturing culture presently. It therefore, suggests that achieving proportionate digital access to online knowledge, educational information is feasible. Through this means, youth's insufficient access to knowledge, information and education can be solved while access to productive information and knowledge of agriculture development and entrepreneurial ventures will be enhanced.

Current social and digital realities have equipped youths with valuable skills at different developmental stages awaiting enhancement through productive ventures. Therefore, AgriFood Techpreneur project of IntelliDigest, will scale these skills to improved levels through tech/data and entrepreneurial knowledge transfer and capacity building to revolutionize agribusiness to become more youth attractive (Acs & Llyod, 2017).

Another beckoning social factor according to FAOUN (2014), is limited youth access to land. As mentioned earlier, inappropriate use of such scarce resources tantamount to intangible economic and social rewarding impact which naturally prompts debarring of their access. Cultural challenge of land transfer especially to women can be ameliorated given that these resources become their means to achieving alleviation of poverty and positive impact to the society. The finances generated from abundant crop revenue while circumventing suboptimal resource appropriation, is thereby used to solve high economic cost in land procurement for farming. Though laws on use of land across developing countries need be reviewed, as such will equally improve on ease to land lease for agribusiness development. IntelliDigest partnership with Telecom giants for informative message on food and agribusiness education and opportunities on their smartphones can tremendously drive awareness on food sustainability. It can expand knowledge on what food are accessible from local suppliers and possible options on future offer at increased production opportunities.

IV. ECONOMIC SUSTAINABILITY

Smart investment on perceived opportunities can turn an organisation to a global company. Deliberate investment on agribusiness entrepreneurs especially youths who are easier adopters of new technology to achieve human essentials such as food is strategic. Given the 7.9 billion current global population and the projected 30% increase by 2050 United Nations, (2022), demands digital disruptive measures for solutions to meet the future need of the society. Increasing internet and mobile penetration among Sub - Saharan African youths, perceptibly reflects creative effort and additive integration disposition towards technical procedures, (Nakata & Huang, 2002). Therefore, African development bank (ADB) financing on precision farming might be a long-awaited panacea. It suggests that youths understanding of the fine-grid data gathering platform to cultivate 37.7% of 77.7% total arable farming land in Nigeria is comprehensible. ADB in their sense of leadership using the key performance indicators is able to direct youth entrepreneurial energies as a benchmark institution. In other words, through these measurement process can explore the transactional prospect on youth farms social-selling skills through numerous social media platform. This is considering increase in internet and mobile penetration to sustain viable food distribution chain to achieve credit refund, ROI and boost on youth agribusiness enterprise. Therefore, non-credit provision, financial literacy trainings and other denied necessities to youths for agribusiness development in the past due to inability of collateral and uncertainty to credit refund is addressed from a new positive mindset. Such that Agrifood Techpreneur culturally, assume a more competitive career-edge over youth search for green jobs. Strengthening of youth's shareholding in agribusiness becomes feasible through precision farming that offers intelligent decision-making platforms for fine-grid data collection and easy installation of sensors in the farm land for improved crop yield. Affordable hardware on fine grid measurements, on air temperature, air humidity, soil temperature, soil moisture, wireless operation for easy operation. Also, provision on intelligent farming assistance process will enable analysis on field climate, soil condition, product yield and nutrient, warnings and advice, disease pressure and third-party integration feasibility. Equally, financing on power of high-density sensor network to determine insight from every field, higher data density, better data quality, no blind spots, no guess work for assured return on investment aligns with IntelliDigest streamlining production initiatives. Sustainable finance of agribusiness with crop consultants solves the third and fourth principal challenge identified by food and agriculture organisation of the United Nation FAOUN, (2014), as factors debilitating youths in rural areas from participating in agribusiness sector. ADB sponsoring of these resources in sustainable finance through IntelliDigest AgriFood Techpreneur scheme can achieve Agro-industry department of ADB specific agenda. These agenda are to eradicate extreme poverty in Africa by 2025, achieve net food exportation, reduce extreme hunger and malnutrition and reposit Africa on the global food chain with comparative advantage. Such will achieve projections on changing diets towards milk and meat products, sustainably.

The rising circumstance and its demand for growing more food on less land, use of less water, less energy, fertilizer and pesticides than are currently being utilised consequent upon limited access of these resources becomes economically viable. Jump-starting alleviation programs post coronavirus disease pandemic (COVID-19) in Africa could have failed through non-feasible political economic policies. Yet what is lost could become feasible through digital disruptive intervention of Agrifood Techpreneur scheme enabled by sustainable finance. The Chief executive officer (CEO) of IntelliDigest Dr. Ifeyinwa Kanu, is a tech expert and food sustainability leader that has assembled a team of an effective expert panel on food sustainability solutions across all market segment and is disposed for strategic partnership.

V. ENVIRONMENTAL SUSTAINABILITY

Global food waste reported by United Nation (UNFAO) and United Nation Environmental Programme, (UNEP) is about 1.3 billion tonnes, then worth over £1 trillion and emits about 3.3 Gtonnes of greenhouse (GHG) into the environment. While Topping, (2021), submission on the 26th UN Climate Change Conference of the parties, (COP26) focuses on Net Zero metrics sustainability measure, Kanu (2021), the IntelliDigest CEO opined that net zero cannot be achieved in isolation and any attempt to isolate net zero (planet) without the six pillars of sustainability -Purpose, People, Peace, Partnership, Planet and Profitability will be neglecting the interaction between them as well as impact on the society may lead to hitting on a brick wall. Also, IntelliDigest invention of plan to save scheme meets with local authorities and suppliers remedy for food in climate change. This product is a compendium of circular elements that epitomizes inclusivity variables. This product contains the variable of global food loss and waste tracker. Where edible food loss and waste is eliminated as demand and supply is balanced by consumers driving food production from their local producers while inedible food loss and waste is up-cycled to bio-nutrient for local food production. Furthermore, increasing internet and mobile penetration rate among Sub-Saharan African youths enhance access from local, regional and global arena on agribusiness education, information, productivity and dealership opportunities with PlanToSave as a ready platform even for African youths. Exploring the partnership opportunities, improves food security, employment and poverty reduction, (Yami et al., 2019). Therefore, improved savvy for social-selling as a value attributable to this scheme can meet the global impute along regional needs such as advocacy for youths-oriented progressive policies on agribusiness success. This solution, resolves the FAOUN, (2014) fifth and sixth major challenges identified as why youths from rural communities do not participate in agribusiness sector. Positioning by different organizations for the huge market share to serve over 800 million people facing hunger is worth the investment, (Intelligent, 2021). The market segment of child hunger is at varying ratios along different market regions, where over 144 million children under ages of five years are stunted. Furthermore, there is the market segment comprising over 1.9 billion people who are overweight and suffers complications due to poor diet. The scenario demand for collaborative

intervention along regional lines to meet global nutritious food demand, (Intelligent, 2021).

VI. CONCLUSION

IntelliDigest is a multinational organisation that focus on food sustainability based on combined innovative research with advanced engineering in addressing global food sustainability challenges. The organisation solution especially the Plantosave invention and Agrifood Techpreneur project positions it in a commanding lead in the industry. In application, PlanToSave scheme is a compendium of circular elements supportive to achieve Net Zero target by 2030. It is delivered through the global food loss and waste tracker platform which is designed with the ability to measure, track and prevent edible food loss and waste while converting inedible food loss and waste to bio-nutrients for improved local production. A key advantage of the Global Food Loss and Waste tracker Platform is that it helps stakeholders in the food system account for scope 1, 2 and 3 emissions as they work with their supply chain to enhance sustainability via the platform. The organisations' Agrifood Techpreneur scheme is designed to penetrate regional markets through the communities to deliver basic needs for youth empowerment. IntelliDigest is pleased to be partnering with various local and international organisations to deliver-biotechnical breakthroughs with net zero impact while solving global hunger challenge with nutritious food.

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