

How Africa Is Promoting Agricultural Innovations and Technologies amidst the COVID-19 Pandemic

The COVID-19 pandemic has left an indelible mark on Africa's Agribusiness sector. Millions of households whose livelihoods depend on farming are facing a huge food crisis. To mitigate these effects, the African Agricultural Technology Foundation (AATF) gathered a panel of renowned agricultural experts through an interactive webinar themed "Promotion of Agricultural Technologies and Innovations for Agri-Business Resilience in Africa in the Wake of COVID-19", the first in a series of several interactive seminars to be held virtually until the end of December 2020. These seminars will focus on several topics specific to agricultural transformation, which revolve around smallholder farmers in Sub-Saharan Africa (SSA) and aim to help them come out of the cataclysmic effect of COVID-19 and recover their business and livelihoods.

AATF is dedicated to enhancing the wealth and health of Africa's smallholder farmers. Through its work, the organization has demonstrated how progress is possible when different partners, including governments, researchers, and farmers, work together to unleash technology that targets specific production challenges and opportunities. The optimistic vision of transforming Africa's agriculture sector was predicted to reach US\$1 trillion by 2030 ([The World Bank Africa-agribusiness report](#)). Agriculture is one of the key sectors that make up to 25% of the continent's GDP, where nearly 70% of the population in SSA derive their livelihoods from agriculture, according to data from the African Development Bank (AfDB). Africa's rich natural resources and high labor force employed in the agribusiness sector could play a critical role in global food markets.

However, Agribusiness in Africa remains vulnerable to different threats such as climate change, pests, and diseases, and now COVID-19. The measures taken to control this pandemic, such as closed borders, lockdowns, and labor shortages, disrupt the food supply and food production massively. The governments, scientists, international agencies, and policy experts need to take urgent, coordinated actions to implement effective policies to ensure increased food supply and protect the vulnerable population who are already deficient in resources and nutrition.

Africa's Food Security Crisis Response (AFCRE) is the AfDB's framework for food security amidst the COVID-19 pandemic, which is achieved through collaborative projects with multilateral partners and programs targeting the nutrition and food security aspects of the COVID-19 crisis.

STEWARDSHIP IS THE KEY

AfDB responded to the COVID-19 pandemic with a 10 million dollar facility to bridge the gap between innovative technologies and mil-

lions of farmers to build a demand-driven approach for development, and to support African countries not only with food but also with the necessary medical facilities to combat COVID-19 rapidly. In this scenario, AfDB plans to take measures through three actions: immediate (0–3 months), short-term (4–12 months), and medium-term (13–24 months) responses.

The immediate response includes (1) creating green channels that allow free flow of foods, certified seeds, fertilizers, pesticides without any restrictions between borders by providing safe storage facilities to store food products and provisions to emergency food relief to the most vulnerable population in the rural and urban areas, (2) ensuring safe labor practices, increased access to personal protective equipment and the use of digital solutions to map farmers and other value chain actors for delivering information, (3) coordinating access to mechanization services, (4) monitoring production and food reserves, and (5) disseminating production to the markets.

The short-term response includes restructuring and realignment of ongoing Feed Africa portfolios and scale-up provision of improved varieties and fertilizers to increase production; the use of grants, soft loans to give cooperatives and small- and medium-sized enterprises access to improve production inputs (such as animal feeds, veterinary products and vaccines, livestock equipment, brood stocks for aquaculture).

The medium-term response includes fast-track processing of lending programs such as trade credit guarantees and lines of credit to wholesalers, hub agro-dealers to facilitate the movement of inputs downstream, and guarantee output markets for crops, and developing policies on the rapid scale-up of food production technologies such as early-maturing, high-yielding, drought-tolerant, pest- and disease-resistant staple crops, livestock, and fish.

Furthermore, through the Technologies for African Agricultural Transformation (TAAT) project, AfDB aims to increase the uptake and use of proven high-yielding climate-smart maize technologies by smallholder farmers in SSA, institutional and financial innovation for high gross margin production of maize, soybean, and other staple crops, livestock, aquaculture value chain in an integrated manner.



Figure 1. A Farmer Is Harvesting Improved Maize Variety from the Field.

Maize is one of the staple food for millions of people in Sub-Saharan Africa. Photo Courtesy: AATF.

AGRIBUSINESS STRATEGIES FOR ENHANCED RESILIENCE IN THE WAKE OF COVID-19

Some of the shocks brought about by COVID-19 are reduced food supply and disruption of trade of agricultural products and supply-chain issues. To combat these problems, AATF engages in public-private partnerships to develop innovative platforms and transform Africa's agriculture sector.

During the forum, some of the innovative agri-input subsidies are highlighted that could cushion smallholder farmers and agribusinesses against the negative effects of the COVID-19 pandemic without distorting market dynamics. For example, the use of the e-voucher system in Malawi resulted in a surplus maize production; this successful model is also being implemented in other countries in Africa.

Implementing policy support for effective regulation of input and output markets is achieved through "green corridors" for uninterrupted in-country and cross-border movement of goods and supplies throughout the continent.

Lastly, there are several digital agriculture projects on the ground to help smallholder farmers (Figure 1). For example, e-Soko is a digital Ghanaian start-up that provides overall farm management support; Nigeria-based FarmCrowdy, an online platform, offers extension advice for farmers. Many smartphone-based apps are also available to track pests and diseases and provide recommendations and management for detected problems such as Tumaini, Nuru. This digital era offers many innovations and breakthroughs every year that will allow Africa to unlock the full potential of its agribusiness sector.

WOMEN EMPOWERMENT AND YOUTH IN AGRICULTURE

AATF and AfDB are closely working with women entrepreneurs and youth to advance their inclusion in the insurance and financial

sectors. Women are more strongly affected by the harsh reality of the COVID-19 pandemic. Many women occupy the most vulnerable positions in formal and informal areas and are a significant part of the workforce in agriculture.

The lockdown requires everyone to stay at home. The women who are at the forefront of resolving the food crisis had to sacrifice themselves and ration food to help their children and family. Women and young girls lack information during the crisis. Therefore, significant efforts are taken by the government to create awareness programs with nutrition specialists to ensure healthy diets that could boost immunity. For example, the "one million kitchen garden plan" by the Kenyan government targets households to set up kitchen gardens across the country to combat the food crisis caused by the pandemic.

The large youth population in Africa offers enormous growth opportunities in the agribusiness sector. However, there will never be back to normal after the pandemic, but the silver lining for the African continent is that youth and women understand the "soil is Africa wealth." Many youth have started marketing the traditional foods.

Attained through these strategies, converging with the vision that became Agenda 2063, Africa will have inclusive growth through proper education, job creation through increased agricultural production and better nutrition, investments in science and technology, innovative research, gender equality, and youth empowerment.

The ideas presented in this article were developed from the webinar dialog discussion by the following panel of experts:

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