

# agr<sup>o</sup>riches

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## GHANA TODAY

Kenya, Ghana Secure \$1.5 Billion for Soil Quality Enhancement

## ARTICLE

Why is Value Addition Essential for Economic Growth?

## NOTRE CHRONIQUE

COP 28 : En réponse aux accusations de négationnisme climatique, le président de la COP



# THE RISE OF AGTECH

DECEMBER 2023





TIAST Group, originating from China has been in existence for over 30 years and has extended its services to West Africa with the sole purpose of adding value to the agriculture value chain and promoting the worth of the agricultural industry in Ghana. Through localization and standardization, we are devoted to adding value to the agricultural chain and boosting the agriculture industry's worth in all African countries. Our business scope includes designing, manufacturing, installation and maintenance of agricultural processing machinery. These machines are designed to process a variety of agricultural goods, including tubers like cassava and sweet potato, etc. rubber processing, fibre extraction and processing from sisal and pineapple leaf, and agricultural machinery for planting, harvesting, and other tasks. We also provide financial leasing for our agricultural processing factories through our partnership with Banks which supports up to 70-80% of the total cost of the entire project. This lease is spread out in a 5-year term of payment which is convenient after the project starts running.

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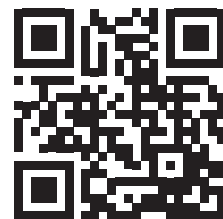
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# AGRICULTURE IN THE GRIP OF CLIMATE CHANGE

By Prince Opoku Dogbey

**C**limate change poses a significant threat to global agriculture, impacting crop yields, water availability, and overall food security. The rising temperatures, changing precipitation patterns, and increased frequency of extreme weather events directly affect agricultural productivity. Shifts in temperature and precipitation can disrupt traditional growing seasons and lead to altered pest and disease patterns, challenging farmers to adapt to new and unpredictable conditions.

One major concern is the alteration of growing zones for various crops. As temperatures rise, the optimal regions for cultivation may shift, requiring farmers to reconsider crop choices and adopt resilient varieties. Moreover, the increased frequency of extreme weather events, such as droughts, floods, and storms, can result in crop

failures and financial losses for farmers. The warming climate also influences water resources, as changes in precipitation patterns impact the availability and distribution of water. This creates challenges for irrigation, a crucial component of modern agriculture. In regions where water scarcity is already a concern, climate change exacerbates the stress on water supplies, further threatening crop production.

Adapting to the impacts of climate change in agriculture requires a multi-faceted approach. This involves developing and implementing sustainable farming practices, investing in crop research for climate-resilient varieties, and promoting water conservation strategies. Additionally, farmers need access to accurate climate information and support systems to help them make informed decisions about planting times, irrigation, and other critical factors.



# Jaboticaba

By Nana Ama Oforiwaa Antwi

Jaboticaba, native to Brazil, is an extraordinary fruit that captures attention not just for its sweet taste but also for its distinctive growth habit. Unlike most fruits that blossom on branches, jaboticaba appears to sprout directly from the trunk of the tree, creating an enchanting sight resembling a cluster of grapes clinging to the bark.

## Description

This small, round fruit typically ranges from 1 to 4 centimeters in diameter, boasting a smooth, purplish-black skin when fully ripe. Its translucent flesh encases a few seeds, and its flavor can be described as a harmonious blend of sweet and tart notes, making it a delectable treat for those lucky enough to encounter it.

## Origin of the Name

The name "jaboticaba" is believed to have indigenous roots, derived from the Tupi-Guarani language spoken by native Brazilian tribes. Some suggest that it could be a combination of "jaboti," meaning tortoise, and "caba," meaning place, possibly referring to the fruit's shell-like appearance and its attachment to the tree trunk.

## Health Benefits

### Rich in Antioxidants:

Jaboticaba is a powerhouse of antioxidants, including anthocyanins, which help combat oxidative stress in the body. These antioxidants contribute to overall health by neutralizing free radicals and supporting cellular well-being.

### Vitamin C Boost:

This fruit is an excellent source of vitamin C, an essential nutrient known for its immune-boosting properties. Vitamin C also plays a crucial role in collagen synthesis, promoting healthy skin and tissue repair.

### Heart Health

It also contains compounds that may contribute to cardiovascular health. Studies suggest that regular consumption may help lower blood pressure and improve overall heart function, reducing the risk of cardiovascular diseases.

While Jaboticaba might be considered rare outside of Brazil, its remarkable taste and potential health benefits make it a sought-after and unique addition to the world of exotic fruits.





## Kenya and Ghana Secure \$1.5 Billion from the U.S. for Soil Quality Enhancement

By Prince Opoku Dogbey

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**Kenya and Ghana have recently secured a substantial financial boost of Ksh1.5 billion from the United States Department of State to enhance soil quality in a bid to promote climate-smart agriculture and adaptation measures.**

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This funding injection follows closely on the heels of a Ksh38.8 billion acquisition from India, which is strategically aimed at bolstering Kenya's agricultural sector and modernizing its health sector.

In an official statement, the Food and Agriculture Organization of the United Nations (FAO) expressed its appreciation for this financial support, specifying that the funds allocated to both countries will be utilized for mapping soil fertility.

The projects funded by the United States Department of State aim to facilitate climate-resilient agriculture, promote the cultivation of resilient crops, enhance fertilizer use efficiency, and improve overall soil health.

Maria Helena Semedo, the Deputy Director-General of FAO, emphasized the significant impact this financial support is expected to have on local farmers and communities.

She stated, "Not only will the additional funding from the United States bring the benefits of this project to small-holder farmers and their communities in two more countries, but it also underlines the vital role that healthy and fertile soils play in building resilience to the impacts of climate change and in transforming our agrifood systems."

The collaboration between the United States and the two African nations underscores a shared commitment to sustainable agricultural practices, climate resilience, and the overall improvement of soil health. This financial injection is poised to contribute significantly to the advancement of agricultural initiatives and the well-being of local communities in Kenya and Ghana.

# BATNF Ignites Agribusiness Transformation at Biennial Dialogue Session in Lagos

By Prince Opoku Dogbey

In a resolute step towards fostering sustainable agricultural practices, the British American Tobacco Nigeria Foundation (BATNF) recently hosted its biennial Agribusiness Dialogue Session.

The event, held in Lagos, aimed to confront the challenges encountered by Agripreneurs and devise sustainable pathways for the agricultural sector.

Themed "Turning Challenges into Opportunities: Establishing Sustainable Strategies and Pathways for Smallholder Farmers in the Agrifood System," the dialogue underscored BATNF's commitment to supporting agribusiness and cultivating sustainable agriculture in Nigeria.

During the session, Ololade Johnson-Agiri, the Executive Director of BATNF, highlighted the Foundation's steadfast dedication to sustainable agriculture development and the betterment of smallholder farmers, their families, and communities. Since its establishment in 2002, BATNF has implemented various programs and initiatives to empower smallholder farmers, recognizing their pivotal role in unlocking Nigeria's agricultural potential and ensuring future food security.

Professor Olusola Kehinde, Vice-Chancellor of the Federal University of Agriculture, Abeokuta (FUNAAB), delivered a keynote address, commending BATNF for its focus on assisting smallholder farmers in Nigeria. He acknowledged the challenges that need addressing to achieve sustainable agriculture and emphasized the importance of such initiatives in supporting farmers' success.

Nneka Okekearu, Director of the Enterprise Development Centre at Pan-Atlantic University, conveyed a goodwill message during the event. She urged stakeholders to purposefully advance sustainable agriculture, emphasizing the critical role it plays in supporting the well-being of farmers and rural communities.



The Agribusiness Dialogue Session stands as a testament to BATNF's ongoing commitment to driving positive change in Nigeria's agricultural landscape, fostering dialogue, and catalyzing sustainable practices for the benefit of smallholder farmers and the broader agrifood system.

# World Leaders Embrace 'Emirates Declaration' for Climate-Smart Agriculture

By Prince Opoku Dogbey



In a landmark moment during the second day of COP28 in Dubai, more than 130 world leaders threw their weight behind the "Emirates Declaration on Sustainable Agriculture and Food Systems".

This declaration, a product of a year-long negotiation led by the COP28 Presidency, alongside strong advocacy from farmer groups and civil society organizations (CSOs) in Africa, signifies a monumental stride towards global sustainable food systems.

The declaration places a spotlight on the urgent need to transform and adapt our food and agriculture systems to counter the impacts of climate change. Notably, it underscores the crucial role of healthy and fertile soils in building resilience against climate change impacts and reshaping agrifood systems.

However, amidst commendations, concerns have been raised about notable omissions in the declaration. Amy G Thorp, Senior Climate Adaptation and Resilience Policy Advisor at Power Shift Africa, highlighted the imperative inclusion of aspects such as smallholder land rights, particularly for female farmers, the phase-out of toxic inputs, and the vital just transition to agroecology and food sovereignty.

This endorsement follows a recent financial injection of Ksh1.5 billion from the United States Department of State to Kenya and Ghana to enhance soil quality, specifically for

mapping soil fertility and promoting climate-smart agriculture, resilient crops, efficient fertilizer use, and overall soil health.

The declaration gains significance as it aligns with the recent call from African Civil Society Organizations (CSOs) for ambitious commitments to enhance climate resilience. These organizations stressed the need for resilient and just food and agriculture systems, advocating for farmer-led, rights-based models that promote gender equity, agroecology, and the protection of Indigenous Peoples' rights.

In the context of climate change's adverse impacts on agriculture and food systems, the declaration becomes a crucial step towards addressing the challenges and fostering sustainability. The commitment to incorporating food and land use into Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs) by 2025 further underscores the leaders' dedication to driving positive change in global food systems.

The declaration outlines specific actions, including scaling up adaptation and resilience activities, promoting food security and nutrition, supporting workers in agriculture, strengthening water management, and maximizing climate and environmental benefits associated with agriculture and food systems.



# THE UNSUNG HEROES

By Nana Ama Oforiwaa Antwi

**F**armers' Day, provides a meaningful moment to acknowledge the indispensable role played by farmers in the nation's progress. Despite the fact that we depend on farmers for our survival, not much is done to appreciate them for their efforts and hard work in ensuring that our bellies are filled daily. In a country where farming is not merely an occupation but an integral part of life, this day serves as a poignant reminder of the dedication and hard work invested in sustaining the nation and propelling economic development.

Ghana's farmers are the unsung heroes, diligently working day in and day out to ensure a plentiful harvest that nourishes millions. Their commitment and resilience warrant our gratitude not only on Farmers' Day but every day. A notable aspect of Ghanaian agriculture is its rich diversity, from the fertile lands of the Ashanti Region to the coastal plains of the Central Region. Farmers throughout the country engage in a diverse range of practices, significantly contributing to both food security and economic stability.

Cocoa, often referred to as Ghana's "golden crop," holds a special place in the hearts of farmers and the nation. It symbolizes Ghana's agricultural excellence globally, with farmers overcoming challenges to produce some of the finest cocoa beans worldwide. Ghana currently holds the record for the second largest exporter of Cocoa in the world after Cote d'Ivoire.



Farmers are not just providers of food; they are custodians of the land. The agricultural sector is deeply intertwined with the nation's cultural heritage, preserving traditions and fostering a sense of community. Ghanaian farmers are increasingly adopting modern techniques, embracing technology, and participating in training programs to enhance productivity. As the world has migrated into a technological era, adopting machinery, precision farming and climate-smart farming practices has currently been the focus of Ghana's agricultural sector.

This forward-thinking approach not only benefits the farmers themselves but also contributes to the nation's overall agricultural development. Despite facing challenges such as lack of infrastructure, post-harvest losses, machinery lack of funds, and the impacts of climate change, Ghanaian farmers continue to demonstrate remarkable strength and resilience. As we commend their hard work on Farmers' Day, it is imperative for the government, private sector, and society to collaborate in addressing these challenges. By providing support, and education, promoting industrialization, investing in infrastructure, and promoting sustainable farming practices, we can create an environment where farmers thrive, solidifying their role as the backbone of the nation.

# THE AGTECH REVOLUTION POWERED BY CLOUD COMPUTING

By Nana Ama Oforiwaa Antwi

As technology continues to evolve every single day with the promise of making work faster and more efficient, cloud computing has emerged as a revolutionary force, reshaping the way businesses and individuals store, access, and process data.

Imagine a vast, interconnected network of servers floating in the digital sky, offering an array of services that transcend the limitations of traditional computing. Got that? that is what cloud computing is all about.

At its core, cloud computing is a paradigm that enables the delivery of computing services over the internet. This means, rather than relying on a local server or a personal computer to handle data storage and processing, cloud computing harnesses the power of remote servers hosted in data centers worldwide. These servers, collectively known as the "cloud," provide a scalable and flexible infrastructure for businesses and users alike.

One of the key advantages of cloud computing is its ability to offer on-demand access to a pool of computing resources, such as storage, processing power, and applications. This flexibility may allow agricultural businesses to utilize cloud systems to take care of things while they focus on other essential parts of the business which may require more attention.

This is also where precision agriculture comes in. Incorporating cloud computing into your agribusiness, is practicing precision agriculture which has recently been gaining a lot of grounds in the agriculture space and it is being highly recommended. Precision agriculture uses technology to keep track of and get the most out of everything, from tools and fertilizer to water and soil while cloud computing is often used to gather, analyze, and store data about agriculture. Cloud-connected wireless sensors collect data from the field, which is then analyzed by machine learning algorithms in real-time to give farmers a better idea of how their crops are doing. Sensors can

keep an eye on the moisture, pH, protein content, nutrients, and temperature of the soil.

The algorithms, on the other hand, can figure out how changes, like adding or taking away herbicides, will affect crop production. By comparing current measurements to the best growing conditions, farmers can figure out exactly how much water and fertilizer are needed. This saves resources, cuts down on waste, and keeps the environment from being affected in ways that aren't necessary.

However, reputable cloud service providers employ robust security measures, including encryption and authentication protocols, to safeguard data. In many cases, these measures surpass the security capabilities of individual organizations, making the cloud a reliable and secure option for data storage.



# What's Climate-Smart Approaches in Agriculture

By Prince Opoku Dogbey

To address the challenges posed by climate change, the concept of "climate-smart agriculture" has gained prominence. Climate-smart approaches aim to enhance the resilience of agricultural systems, mitigate greenhouse gas emissions, and sustainably increase productivity. These approaches encompass a range of strategies and technologies that help farmers adapt to changing climatic conditions while minimizing environmental impact.



One key element of climate-smart agriculture is the adoption of precision farming techniques. This involves using technology such as sensors, drones, and data analytics to optimize resource use, including water, fertilizers, and pesticides. Precision farming not only improves efficiency but also reduces the environmental footprint of agriculture.

Agroforestry is another climate-smart practice that integrates trees and shrubs into farming systems. This approach enhances biodiversity, improves soil health, and provides additional sources of income for farmers. The presence of trees helps sequester carbon from the atmosphere, contributing to climate change mitigation.

Furthermore, the promotion of climate-resilient crop varieties and diversification of crops can enhance the adaptability of agricultural systems. Integrated water management practices, such as rainwater harvesting and efficient irrigation techniques, play a crucial role in ensuring water availability for crops in the face of changing climate patterns.

In conclusion, climate-smart agriculture represents a holistic and sustainable approach to address the challenges posed by climate change in the agricultural sector. By combining technological innovations, sustainable practices, and community engagement, we can build a resilient and adaptive agricultural system for the future.

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 TIAST More Value For Agriculture

# Aon Partners with ADB and Amini to Boost Crop Insurance and Resilience for Smallholder Farmers in Africa

By Nana Ama Oforiwaa Antwi

**A**on has recently announced a strategic partnership with the African Development Bank (AfDB) and Amini, an African environmental data collection and intelligence infrastructure company, to enhance crop insurance capabilities across Africa. The collaboration aims to bolster resilience among smallholder farmers and promote the adoption of climate-friendly practices. Additionally, the partnership seeks to reduce supply chain risks in the food and beverage sector and explore opportunities to expand global agricultural value chains.

The joint effort plans to leverage farm-level data generated by Amini to support Aon's initiatives for the AfDB's Africa Climate Risk Insurance Facility for Adaptation. The objective is to develop effective strategies for risk reduction, evaluate evolving threats across Africa, and empower farmers to make informed decisions using the data. This collaborative ap-

proach aims to enhance resilience and improve yields for farmers. Eric Andersen, President of Aon, highlighted the importance of transformative innovation in addressing interconnected climate risks.

He emphasized the need for insurance stakeholders to innovate rapidly to meet the changing global needs. The collaboration is seen as a holistic approach to risk management. Africa is noted for having 65% of the world's untapped arable land, yet it contributes only 3% to the global GDP, according to the OECD. The lack of environmental data has hindered the growth of agricultural crop insurance, affecting the potential of the agri-food sector and hindering climate adaptation through regenerative farming methods. Smallholder farmers in Africa, facing high vulnerability to extreme weather conditions, have limited access to adequate crop insurance.

Regenerative agricultural practices are recognized as a viable solution, enhancing resilience to floods and droughts, improving crop health

and yields, and reducing supply chain volatility. Beth Dunford, Vice-President of the African Development Bank, highlighted the significance of strategic collaborations in advancing climate risk management and agricultural sustainability. Aon's global expertise in risk management, combined with Amini's technological innovation, is seen as a strong alliance supporting the vision for a resilient agricultural sector in the face of climate change challenges.

Kate Kallot, founder and CEO of Amini, expressed confidence that the collaboration with Aon would strengthen and accelerate their platform deployment with leading companies committed to improving sustainability practices and reinforcing the resilience of extensive supply chains. Together, they envision initiating positive feedback loops that will transform global food systems and contribute to the regeneration of natural capital on a large scale.



## No-till farming

*No-till farming is a conservation-oriented approach where farmers avoid plowing or disturbing the soil between planting seasons.*



## Soy foods

*Soy foods may play a role in preventing cancer, and reduce the risk of chronic diseases, such as heart disease and osteoporosis*

# AgTech's Global Rise

By Nana Ama Oforiwaa Antwi

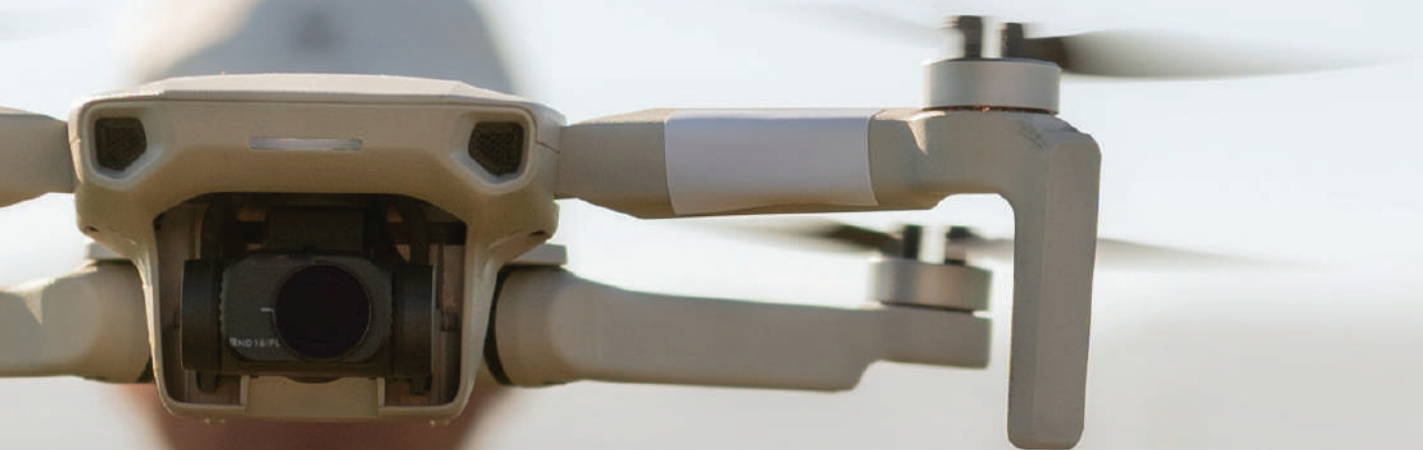
**T**he interplay between technological advancements and the challenges faced by developing countries is increasingly evident and the agricultural sector is not spared from this issue. Let's delve into how developing countries are bridging the gap in technology to understand how technology is shaping farming practices, enhancing productivity, and fostering sustainable development in regions with limited resources.

Agriculture is the backbone of many developing economies, like Ghana, providing livelihoods for a substantial portion of the population. However, these regions often grapple with constraints such as limited access to modern farming technologies, outdated practices, and insufficient infrastructure, resulting in lower agricultural productivity, food insecurity, and challenges in meeting the demands of a growing population.

In recent years, there has been a notable shift towards introducing innovative solutions tailored to the specific needs of developing countries. Mobile technology, for instance, has emerged as a game-changer, providing farmers with real-time information on weather patterns, market prices, and best agricultural practices.

This accessibility empowers farmers to make informed decisions, optimize their resources, and enhance overall efficiency. In Ghana, an organization called Farmer line, provide agricultural advocacy and education on farming practices, weather patterns to all farmers. Okuafo foundation created by Mustapha Diyaol on the other hand, has an application which is able to scan crops and detect pest infestation.

Precision farming techniques, involving the use of satellite imagery, sensors, and data analytics, are being adapted to suit the context of developing countries. These technologies enable farmers to optimize the use of water, fertilizers, and pesticides, resulting in higher yields and reduced environmental impact. The adoption of cost-effective precision farming practices is proving to be a transformative force in regions where resource availability is a constant concern. 3farmate Robotics, an agricultural technology company, promote climate-smart farming with the use of robots that are able to map farmlands and determine the amount of fertilizer each crop needs just by scanning it.



One of the key challenges in integrating agricultural technology in developing countries is ensuring that farmers have the necessary skills and knowledge. Initiatives focused on capacity building and knowledge transfer are emerging to address this gap. Most farmers in Ghana do not have the skills in operating the technological tools and as a result, are not highly encouraged to employ technology in their work. Training programs, partnerships with educational institutions, and community-driven initiatives are equipping farmers with the expertise needed to leverage technological advancements effectively.

Governments and non-governmental organizations (NGOs) play a pivotal role in driving agricultural innovation in developing countries. Collaborative efforts aim to provide financial support, policy frameworks, and infrastructure development to create an enabling environment for the adoption of modern farming technologies.

The Planting for Food and Jobs initiative will be rolling out its second phase very soon. This initiative is geared towards increasing employment in the agricultural sector, promoting and encouraging farmers to go in for quality inputs, agricultural advocacy and mechanization promotion in the sector.

While strides have been made, challenges persist. Issues such as limited financial resources, inadequate infrastructure, and resistance to change require comprehensive and sustained efforts. However, the ongoing progress in agricultural innovations offers a promising outlook for the future, where technology serves as a catalyst for inclusive and sustainable development.

# Jabu Syrup

By Nana Ama Oforiwaa Antwi

Jabu? Yes, those were my exact words the first time I heard of the fruit, and don't worry if you've never seen one either because it is even rare in Brazil, where it actually originates from.

Jaboticaba, or jaboticaba, is often used in making jams and jellies, but today I'll be giving you a recipe for a sweet syrup I have named "Jabu-syrup. I promise you that should you follow this recipe through to the latter, you'll have yourself a sweet syrup with an incredible taste that all your guests will forever remember.

## Ingredients

- 4 cups jaboticaba fruit, sliced in half
- 1 cup water
- 1 cup sugar
- 2 teaspoons lemon juice
- a few slices ginger (optional)

## Instructions

Combine fruit, water, sugar, and ginger in a saucepan. Bring to a boil, then reduce to a simmer for about 15 minutes. Once the fruit is soft, use a potato masher to crush the fruit. Add the lemon and allow it to simmer for 5 more minutes, then turn off the heat.

Pour the juice through a fine-mesh strainer and refrigerate until ready to use.

Drizzle this Jabu-syrup over desserts, fresh fruit, French toast or pancakes and enjoy!





# Transforming Agriculture and Its Relevance in the Modern World

By Prince Opoku Dogbey

In the heart of the 21st century, agriculture is undergoing a transformative revolution propelled by cutting-edge technologies collectively known as AgTech. The relevance of AgTech transcends traditional farming methods, offering innovative solutions to address the challenges of an evolving world.

Precision agriculture, a cornerstone of AgTech, optimizes farming practices by utilizing data-driven insights. From satellite imagery to sensors collecting real-time data, farmers can make informed decisions regarding crop management, irrigation, and resource allocation. This not only enhances efficiency but also reduces environmental impact, promoting sustainable agricultural practices.

Drones take to the skies, revolutionizing crop monitoring and management. These unmanned aerial vehicles provide a bird's-eye view of fields, identifying issues such as pest infestations or nutrient deficiencies. This swift and targeted response improves yields and reduces the reliance on chemical inputs, aligning with the growing demand for eco-friendly farming practices.

The integration of artificial intelligence (AI) further amplifies AgTech's impact. AI algorithms analyze vast datasets to predict crop yields, optimize planting schedules, and even identify genetic traits for breeding programs. This data-driven approach not only streamlines operations but also contributes to the development of resilient crops capable of withstanding environmental challenges.

AgTech's relevance extends beyond the farm gates, influencing supply chains and food systems. From blockchain technology ensuring traceability to smart logistics optimizing transportation, AgTech enhances the overall efficiency of the agri-food sector.

In conclusion, the AgTech revolution is not merely a technological upgrade; it is a fundamental shift in the way we approach agriculture, promising increased productivity, sustainability, and resilience in the face of a changing world.



## A Memory's Melody

Oh how I miss the happy times  
when the trees gave gifts in kind and kind  
when oxens and horses all were mine  
oh how I miss the happy times

When the hay swayed to and fro  
When the wind always blew my fro  
And the horsemen called me bro  
The Happy times

When Mama harvested wheat for fresh bread  
And made wool with from our sheep friend  
When Mama made a dress with her needle and thread  
The happy times

These times were filled with joy and laughter  
With sounds so loud that I can recall years' after  
Sitting in my chair rocking back and forth

Reminiscing the old times  
Moments I would never trade for a dime  
Oh how I miss the happy times.

— Poem by Nana Ama Oforiwaa Antwi

# The Economic Importance of Agriculture

By Prince Opoku Dogbey

**A**griculture stands as the backbone of economies worldwide, its economic importance extending far beyond the fields. At its core, agriculture provides sustenance for burgeoning populations, forming the bedrock of food security. This, in turn, is intricately tied to economic stability, as a well-fed population contributes to a more productive and robust workforce.

Beyond meeting basic needs, agriculture is a key driver of economic growth. It serves as a source of income for millions globally, supporting livelihoods from smallholder farmers to agribusiness entrepreneurs. The agri-food sector, encompassing cultivation, processing, and distribution, fosters employment and entrepreneurial opportunities, playing a vital role in poverty reduction and rural development.

On a global scale, agriculture contributes significantly to international trade. The export of agricultural products is a cornerstone of many economies, generating revenue and fostering economic interdependence. Countries with strong agricultural sectors often find themselves better positioned in the global marketplace, influencing trade balances and contributing to overall economic resilience.

Moreover, the economic importance of agriculture extends into industries beyond food production. Biomass and bioenergy, derived from agricultural products, contribute to the renewable energy sector, diversifying economies and promoting sustainability. The by-products of agriculture, from textiles to pharmaceuticals, underscore its far-reaching economic influence.

In essence, the economic importance of agriculture is not confined to the cultivation of crops; it is a dynamic force shaping the foundation of societies, driving economic progress, and offering a pathway to prosperity.



# Top Tips for Effective Fertilizer Application on the Farm

By Kwabena Baiden

## Soil Testing is Key

1. Before applying fertilizers, conduct soil tests to determine nutrient levels. This helps tailor fertilizer choices and quantities to your specific soil needs, avoiding overuse or deficiencies.

## 2. Timing Matters:

Apply fertilizers at the right time in the plant's growth cycle. This ensures that nutrients are available when the plants need them most, promoting optimal development and yield.

## 3. Follow Recommended Rates

Adhere to recommended application rates on fertilizer labels. Over-application can lead to nutrient runoff, negatively impacting the environment, while under-application may hinder crop growth.

## 4. Consider Split Applications

Instead of applying all fertilizer at once, consider split applications during different growth stages. This helps match nutrient availability with the plant's changing requirements, improving overall nutrient uptake.

## 5. Incorporate Fertilizers Properly

Ensure even distribution of fertilizers across the field. Use appropriate equipment and techniques, such as broadcasting or precision application, to achieve uniform coverage and prevent uneven crop growth.

## 6. Be Mindful of Environmental Factors

Consider weather conditions when applying fertilizers. Avoid

application before heavy rain to prevent runoff, and be cautious of windy conditions that may lead to drift. This helps maximize fertilizer absorption by the crops.

## 7. Choose the Right Fertilizer Type

Select fertilizers based on the specific nutrient needs of your crops. Different crops and soils require different nutrient compositions, so choose fertilizers that align with these requirements.

## 8. Monitor and Adjust

Regularly monitor crop development and assess nutrient needs. If deficiencies or excesses are observed, adjust fertilizer applications accordingly to address the changing requirements of the plants.



# Why is Value Addition Essential for Economic Growth?

By Prince Opoku Dogbey



**A**griculture is the backbone of economies worldwide, providing sustenance, employment, and raw materials for numerous industries. In an era of burgeoning populations and shifting environmental challenges, the need for value addition in crop production has never been more critical. Value addition refers to the process of enhancing the value of agricultural products by transforming them into higher-value goods. Here are some compelling reasons why value addition of crops is essential for modern agriculture:

- 1. Enhanced Economic Returns:**  
One of the most compelling arguments for crop value addition is its potential to significantly boost farmers' incomes. Raw agricultural products often command lower prices compared to processed or value-added products. By investing in value addition, farmers can tap into higher-value markets, increasing their revenue and overall profitability.
- 2. Reduction of Post-Harvest Losses:**  
Post-harvest losses are a persistent challenge in agriculture, leading to food waste and financial losses for farmers. Value addition techniques, such as drying, canning, and processing, extend the shelf life of crops, reducing losses caused by spoilage and transportation issues.
- 3. Market Diversification:**  
Value-added products open up diverse market opportunities. Processed foods, for instance, can find their way into local and international markets. By diversifying their product offerings, farmers are less reliant on a single commodity's market fluctu-

ations, providing financial stability.

- 4. Increased Food Security:**  
Value-added crops often come in convenient, ready-to-use forms, making them more accessible to consumers. This can contribute to improved food security by ensuring that nutritious food products are available and less prone to spoilage.
- 5. Export Potential:**  
Value-added agricultural products often meet international quality standards and consumer preferences more effectively. This opens doors to export markets, which can be lucrative for both individual farmers and the country's economy as a whole.

In conclusion, the need for value addition of crops is clear. It not only benefits farmers by increasing their income and reducing losses but also plays a crucial role in ensuring food security, creating jobs, and contributing to economic growth.



# Agriculture : Les récoltes de dattes semblent prometteuses en Tunisie, malgré la sécheresse persistante.

Par Yosua Domedjui



Le gouvernement fixe les prix à l'exportation à environ 5-6 dinars, soit environ 2 euros par kilogramme. Ce prix est attrayant, mais la concurrence est féroce sur le marché mondial.

Selon le ministère de l'agriculture, la saison des dattes semble prometteuse, avec une récolte attendue de 390 000 tonnes en Tunisie, contre 340 000 tonnes l'année précédente. Mais comme les dattes restent un fruit qui nécessite beaucoup d'eau, les agriculteurs de Tozeur, dans les palmeraies et les oasis vieilles de 4 000 ans du sud du pays, accusent également les problèmes liés à la sécheresse.

Chokri, 24 ans, est perché à près de dix mètres du sol, taillant d'une main experte les branches des palmiers dattiers. En chaussettes et sans gants, il escalade habilement les troncs des palmiers pour récupérer les dattes : "Nous grimpons dans les palmeraies depuis notre enfance, c'est donc naturel pour moi. C'est ma passion et mon travail. Tous les jeunes de la région pratiquent la même activité à l'automne.

"Nous nous occupons des palmeraies le reste de l'année, notamment de l'entretien et de l'irrigation", poursuit-il. Comme elle fait partie intégrante de la culture de Tozeur et qu'elle est le moteur économique de la ville, je considère que c'est un travail très important. 10 000 hectares constituent la base de cette économie. La qualité des dattes est cependant affectée par la pén-



urie d'eau. Hedi Abassi et d'autres ouvriers récoltent la célèbre variété dans une autre palmeraie destinée à l'exportation, mais le manque de pluie de cette année a affecté le rendement.

Selon Hedi Abassi, la saison a été inégale car, malgré la disponibilité des dattes, celles-ci semblent plutôt sèches en raison du manque d'eau. La couleur du fruit en témoigne. Lorsqu'il pleut, la datte brille généralement car l'humidité la débarrasse de sa poussière. Elles sont plus chères parce qu'elles sont plus belles, plus brillantes et plus délicates, mais ce n'est pas le cas cette année.

L'Etat fixe les prix à l'exportation à environ 5 à 6 dinars le kilogramme, soit environ 2 euros. Comme l'explique Lamine Touati, responsable du triage des dattes et des départs des camions vers les sociétés d'exportation, "les prix varient beaucoup en fonction de la concurrence sur le marché international", malgré le prix attractif et la concurrence féroce sur le marché mondial.

Nous suivons de près cet aspect car nous sommes toujours obligés de nous tenir au courant du marché extérieur. Le manque d'eau cette année a rendu les dattes plus sèches, ce qui diminue leur poids en vrac et entraîne des pertes plus importantes et des effets économiques négatifs."



# COP 28 : En réponse aux accusations de négationnisme climatique, le président de la COP

Par Yosua Domedjui



**D**es ONG, des scientifiques et des hommes politiques ont critiqué la décision d'organiser la COP 28 à Dubaï. Sultan Al Jaber, président de l'événement, a répondu lundi aux accusations de "dénier du climat".

Le principal sujet de discussion de la COP28 à Dubaï est la fin des combustibles fossiles. Sultan Al Jaber, le président de la conférence, a répondu lundi à ceux qui l'accusaient de nier le changement climatique et de vouloir reporter l'utilisation des combustibles fossiles : "Ma vie a été guidée par la science.

C'est vrai. Selon la science, nous devons atteindre zéro émission nette d'ici 2050 et réduire les émissions de 43 % d'ici 2030 - c'est-à-dire en réduisant les 22 tonnes que je viens de mentionner - afin de maintenir 1,5 de la fourchette."

De nombreux politiciens, scientifiques et ONG ont exprimé leurs critiques à l'égard de la COP28. L'ancien vice-président des États-Unis, Al Gore, a notamment déclaré que "l'industrie pétrolière et gazière a commis une erreur en allant trop loin et en nommant le PDG de l'une des compagnies pétrolières les plus importantes et les plus polluantes, à bien des égards, au monde, à la présidence de la COP".

La délégation ukrainienne est venue présenter ses initiatives en matière de transition énergétique, notamment celle de D-TEK, qui construit à Mykolaïv le plus grand parc éolien du pays.

Le PDG de l'entreprise, Maxim Timchenko, explique que les travaux se déroulent au plus près des combats : "Les ouvriers voient des missiles voler au-dessus de leur tête et portent des gilets pare-balles. Nous sommes fiers de cette réalisation car c'est dans ces conditions que nous construisons la première phase".

Quelques dizaines de personnes se sont rassemblées devant l'entrée de l'événement pour exiger que les plus grands pollueurs du monde aident les nations les plus menacées par le changement climatique.

## Market Analysis of Cassava Starch In Thailand

The market prices of cassava starch have reduced slightly over the last month. The price ranges from 500-550 US dollars/ton (3,627.80 yuan /ton). This week, the market price of cassava starch in Thailand's tapioca starch quotation is FOB (Bangkok) 495 US dollars/ton (3,788.46 yuan/ton). The starch prices in the domestic cassava starch market are stable. In Thailand, the raw material supply of fresh cassava is stable. The average starch leavening of cassava starch is between 24-28 percent. Thailand is relatively stable, the open factories remain high, and the starch output continues to increase. The speed of cassava starch clearance is still low, and the quotations of traders are slightly confused.



## Price Factors

**Quality of cassava root:** Factory owners demand cassava with high starch content for production. Higher starch content would receive a higher price than the lower one. The price offered by the collector is dependent on the quality of the cassava root, specifically, the starch content.

**Cost of Labour:** Total labour cost including farm labour for the cultivation and harvesting of cassava. The cost of labour during the harvesting period is high as compared to cultivation therefore the cost of harvesting directly affects pricing.

**Harvest Yield:** There is a high correlation between harvest yield and the price of cassava. The price of cassava is lower when there is a low yield. The lowest prices in June and July can be explained in a similar way but the opposite end. It is noted that the abundance of cassava roots drives the prices down.

**Handling and Logistics:** The storage and shipping costs from producing areas to importing countries are great determinants of cassava prices. When the shipping and transportation cost of cassava to consumers and industries are high, it affects the retail price of cassava. Cassava farmers bring their harvest to the collectors, where they are responsible for absorbing the cost of transportation from farm to collecting fields.

**Harvesting time:** The harvesting period is a great determinant for the price of cassava. The abundance and scarcity of cassava affect the price. The prices of fresh cassava roots often rise in November and December of every year as cassava is easily harvested during the rainy season. During the harvesting season, the prices are relatively high due to the limited supply.





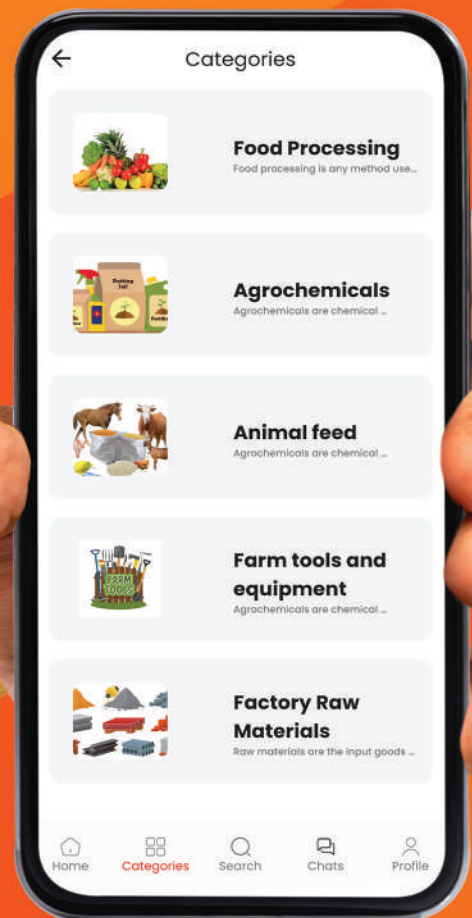
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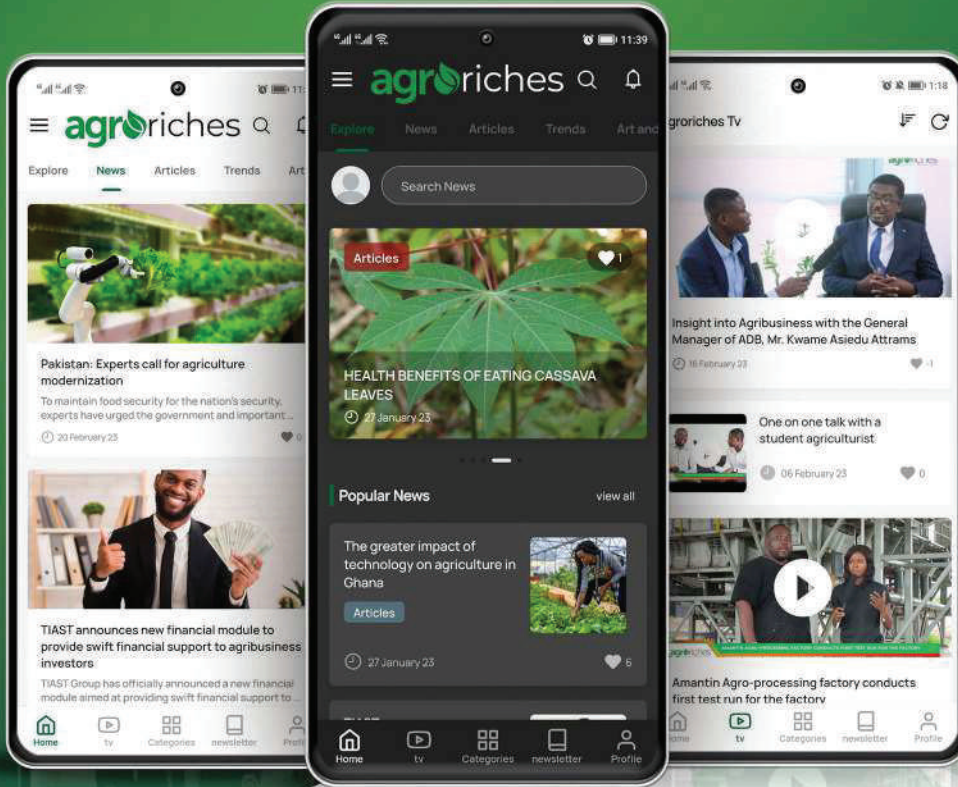
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