

agro^{riches}

VOL 3. | 34TH EDITION

GHANA TODAY

COCOBOD Injects GH¢110.8 Million into Cocoa Farms Rehabilitation.

ARTICLE

The Joy and Nourishment of Eating Well.

NOTRE CHRONIQUE

Le Maroc lance un programme de soutien à l'importation de blé pour compenser la sécheresse

AGRI-INDUSTRIAL GIANTS

DRIVING GROWTH TOGETHER

FEBRUARY 2024



PARTNER WITH US TODAY, AND OWN A FULLY-AUTOMATED AGROPROCESSING FACTORY.



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 agricultural 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.

TIAST Group ensures offtake services of all processed goods to the international market at competitive international market prices. This solves the problem of the unavailability of a ready market and promotes ready sales at the best rate. We have also secured a huge international market demand for most of the products that will be processed for ready export. These products will command competitive prices on the world market and will subsequently gain considerable market traction. TIAST facilitates the training of local employees and personnel on how to operate and maintain these machines through its localization scheme. We have technical staff on hand who are willing to train locals to operate these processing units. We are justifiably proud to be the market leaders in the agricultural industrialization space in Ghana and the sub-region. We are also proud of our footprint in Ghana and the impact we are making in the agricultural space. This life-changing opportunity is provided by TIAST Group for everyone interested in boosting agricultural value and promoting the value chain.

Executive Publisher

Mr. David Tai

Asst. Marketing Manager

Mavis Essaba Mensah

Creative Designer

Bismark Kwabena Baiden

Content Developers

Prince Opoku Dogbey

Yosua Domedjui

Senior Editorial Supervisor

Prince Opoku Dogbey

Information Technology

Prince Kudowor

Growth and Strategy Team

Leo Chan

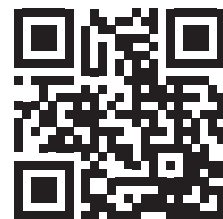
Mavis Essaba Mensah

Nana Ama Oforiwaa Antwi

**No. 26 GIFFARD ROAD, PALM WINE JUNCTION, LA-ACCRA****EMAIL:** INFO@TIASGROUP.COM**PHONE:** +233204758888**EDITORIAL:** EDITORIAL@TIASGROUP.COM

OUR AGRICULTURAL INDUSTRIALIZATION AGENDA IS AIMED AT PARTNERING WITH FARMERS AND INTERESTED PARTIES TO ADD VALUE TO THE AGRICULTURAL VALUE CHAIN.

KINDLY SCAN THE QR CODE TO READ MORE ON OUR WEBSITE.



CONTENTS



04



06



23



10



07



12

EDITORIAL 04

Ghana must invest more into cocoa production

CROP PROFILE 05

Tamarillo

GHANA TODAY 06

COCOBOD Injects GH¢110.8 Million into Cocoa Farms Rehabilitation

CONTINENTAL DIGEST 07

AAG aims to tackle Food Insecurity with Innovative Alfalfa Production

WORLD NEWS 08

China Prioritizes Food Security with New Agriculture Policy

ARTICLE 09

Understanding the Soil Microbiome's Role in Crop Health

TECHNOLOGICAL TRENDS 10

Weather Tracking in Agriculture

INSIGHT AFRICA 12

Ghana's Path to Sustainable Development with Renewable Energy

CENTRE SPREAD 14

Agri-Industrial Giants, Driving Growth Together

THE PLATTER 16

Tamarillo Curd

ARTICLE 17

Addressing the Urgency to Increase Food Production in Ghana

ARTICLE 21

Embarking on a Cocoa Farming Venture: 5 Key Considerations

NOTRE CHRONIQUE 22

Augmentation record des importations de blé en Algérie

NOTRE CHRONIQUE 23

Le Maroc lance un programme de soutien à l'importation de blé pour



Ghana must invest more into cocoa production

By Prince Opoku Dogbey

Ghana, renowned for its cocoa production, stands at a pivotal juncture where increased investment in this vital sector can reap substantial benefits for the nation's economy and its people.

As one of the largest cocoa producers globally, Ghana's cocoa industry forms the backbone of its agricultural sector, providing livelihoods for millions and contributing significantly to the country's export revenue. However, to sustain and enhance its position in the global cocoa market, Ghana must prioritize and amplify its investments in cocoa production.

Investing more in cocoa production holds the potential to bolster Ghana's economy in multifaceted ways. Firstly, increased investment can lead to enhanced productivity and efficiency within the cocoa sector. By modernizing farming techniques, providing farmers with better tools and resources, and implementing innovative agricultural practices, Ghana can elevate its cocoa output, meeting the rising global demand for cocoa products.

Moreover, investing in cocoa production can uplift the livelihoods of Ghanaian farmers, who often face challenges such as aging trees, pests, and diseases. With adequate investment, farmers can receive the necessary support to rejuvenate their cocoa farms, leading to higher yields and improved incomes. Additionally, investments can facilitate training programs and educational initiatives aimed at equipping

farmers with the knowledge and skills needed to optimize cocoa cultivation. Furthermore, increased investment in cocoa production can foster sustainable agricultural practices, promoting environmental conservation and resilience to climate change. By embracing sustainable farming methods and investing in eco-friendly technologies, Ghana can mitigate the adverse environmental impacts associated with cocoa production while ensuring the longevity of its cocoa industry for future generations.

In conclusion, investing more in cocoa production is imperative for Ghana's economic prosperity and agricultural sustainability. By allocating resources and implementing strategic initiatives to enhance cocoa cultivation, Ghana can solidify its position as a leading cocoa producer, uplift the livelihoods of its farmers, and contribute to global cocoa supply chains in a meaningful and sustainable manner.

Tamarillo

By Nana Ama Oforiwaa Antwi

Origin

The tamarillo, also known as the tree tomato or *Solanum betaceum*, is a tropical fruit native to the Andes region of South America, particularly Peru, Ecuador, Colombia, and Bolivia. Belonging to the Solanaceae family, which includes tomatoes, potatoes, and eggplants.

Description

The tamarillo is characterized by its egg-shaped or oval fruits, typically 5 to 10 centimeters in length. The fruit's skin can vary in color from red, orange, and yellow, to purple, depending on the cultivar, and its flesh ranges from yellow-orange to deep red, encapsulating a central cavity filled with small edible seeds. Tamarillos are known for their unique flavor profile, which combines tartness with sweetness, often likened to a cross between tomatoes and passion fruit.

Health Benefits

1. Rich Source of Antioxidants

Tamarillos are packed with antioxidants, including vitamins A, C, and E, as well as flavonoids and phenolic compounds. These antioxidants help neutralize harmful free radicals in the body, reducing oxidative stress and inflammation, and contributing to overall health and well-being. Regular consumption of tamarillos may help lower the risk of chronic diseases such as heart disease, cancer, and diabetes.

2. Supports Immune Function

With its high vitamin C content, tamarillo fruit can boost immune function and enhance the body's ability to fight off infections and illnesses. Vitamin C is essential for producing white blood cells, which are the body's primary defense against pathogens. Incorporating tamarillos into your diet during cold and flu season may help strengthen your immune system and reduce the duration and severity of illnesses.

3. Promotes Healthy Skin

The vitamin A content in tamarillos plays a crucial role in maintaining healthy skin, vision, and mucous membranes. Vitamin A is a powerful antioxidant that supports skin regeneration, collagen production, and protection against UV damage. Consuming tamarillos regularly can contribute to radiant, youthful-looking skin and may help prevent skin disorders such as acne, eczema, and premature aging.



COCOBOD Injects GH¢110.8 Million into Cocoa Farms Rehabilitation

By Prince Opoku Dogbey

In a resolute effort to revitalize Ghana's cocoa industry, the Ghana Cocoa Board (COCOBOD) has injected a staggering GH¢110.8 million into the rehabilitation of cocoa farms.

This substantial investment marks a pivotal moment in the nation's cocoa sector, signaling a renewed commitment to enhance productivity, combat disease, and secure the livelihoods of cocoa farmers.

The allocation of GH¢110.8 million underscores COCOBOD's proactive approach to address the multifaceted challenges confronting cocoa cultivation, including the devastating Cocoa Swollen Shoot Virus Disease (CSSVD) and aging tree stock. With a focus on

rehabilitation, the funds are earmarked for compensation payments, tree cutting, replanting, and maintenance—a comprehensive strategy aimed at rejuvenating Ghana's cocoa farms.

The breakdown of the investment reveals a meticulous approach towards supporting cocoa farmers across various regions. Notably, GH¢43.3 million has been disbursed as compensation to affected

farmers and landowners, acknowledging the sacrifices made in the face of adversity. Additionally, GH¢67.5 million has been allocated to essential activities such as tree cutting and the provision of plantain suckers, essential for farm rehabilitation.

The impact of this investment extends far beyond monetary value. Over 54,000 hectares of cocoa farms affected by CSSVD have been rehabilitated, offering a glimmer of hope for Ghana's cocoa industry. By shouldering the entire cost of farm rehabilitation for two years, COCOBOD demonstrates its unwavering commitment to supporting farmers through challenging transitions.

Furthermore, the injection of funds into cocoa farm rehabilitation resonates with broader efforts to mitigate the adverse effects of climate change, disease outbreaks, and labor shortages plaguing the cocoa sector. It reflects a strategic investment in sustainable agriculture, promoting long-term resilience and prosperity for cocoa-dependent communities.

In light of these developments, COCOBOD's investment in cocoa farm rehabilitation serves as a beacon of hope for Ghana's cocoa industry.



“The funds are earmarked for compensation payments, tree cutting, replanting, and maintenance—a comprehensive strategy aimed at rejuvenating Ghana's cocoa farms”

Recognizing the urgent need for sustainable solutions, African Agriculture, Inc. (AAGR) is pioneering efforts to transform the beef and dairy industries in the Sahel through innovative approaches to animal feed production, particularly focusing on alfalfa. With its high nutritional value and robust yields, alfalfa presents a promising avenue for enhancing food security and economic resilience in the region.

Alan Kessler, CEO of AAGR, emphasizes the company's commitment to providing access to quality feedstock, dairy, and animal protein to address food insecurity in the Sahel. Leveraging extensive farmland in Senegal, totaling 25,000 hectares, AAGR is already making strides in alfalfa production, utilizing approximately 750 acres and aiming to scale up to 2,500 tons per month by 2025.

The recent Nasdaq listing of AAGR marks a significant milestone in its quest for growth and impact. While the initial capital raised fell short of expectations, the listing opens doors to institutional investors and global markets, crucial for scaling operations and expanding into new territories such as Mauritania and Niger.

Central to AAGR's strategy is sustainable water management, particularly vital in arid regions like Senegal. Extensive feasibility studies have been conducted to ensure responsible utilization of water resources, considering the needs of local communities and ecosystems.

Despite challenges such as land disputes and regulatory uncertainties, AAGR remains steadfast in its mission to drive positive change in the Sahel. Through strategic partnerships, technological innovation, and community en-

AAGR aims to tackle Food Insecurity with Innovative Alfalfa Production in the Sahel Region

By Nana Ama Oforiwaa Antwi

Food insecurity remains a persistent challenge in the Sahel region of West Africa, exacerbated by climate change, armed conflict, and economic instability. The region, characterized by extreme temperatures and erratic rainfall patterns, faces mounting pressure on its agricultural systems, threatening the livelihoods of millions.

agement, the company aims to not only enhance agricultural productivity but also empower local communities and foster inclusive growth.

As AAGR continues to pioneer commercial alfalfa farming in Senegal, its impact is already evident in the increased productivity and economic empowerment of dairy farmers. With a focus on creating value for shareholders while advancing social and environmental objectives, AAGR is poised to lead the way in sustainable agriculture and food security in the Sahel region and beyond.





CHINA PRIORITIZES FOOD SECURITY WITH NEW AGRICULTURE POLICY

By Prince Opoku Dogbey

In a pivotal move towards ensuring food security and bolstering agricultural productivity, the Chinese government has unveiled a key agriculture policy decree.

Prioritizing the production of vital agricultural goods and emphasizing food security, China aligns its policies with the United Nations' Sustainable Development Goals, particularly SDG 2: Zero Hunger and SDG 12: Responsible Consumption and Production.

The decree underscores China's commitment to providing safe, nutritious, and ample food supplies for its populace while fostering sustainable agricultural practices. Emphasizing research and development, the government aims to boost crop yields and quality, aided by advanced technol-

ogies like precision agriculture and smart farming.

Moreover, the policy advocates for strengthening agricultural infrastructure, enhancing market access, and providing financial incentives for farmers to adopt sustainable methods. By aligning with SDGs, China endeavors to eradicate hunger, improve agricultural efficiency, and promote responsible consumption and production patterns.

The announcement highlights China's proactive approach to addressing global challenges, emphasizing the pivotal role of agriculture in fostering economic prosperity and societal well-being.

As the nation charts its course towards sustainable development, the agriculture policy decree stands as a beacon of progress and commitment to achieving Zero Hunger and responsible production practices.





UNDERSTANDING THE SOIL MICROBIOME'S ROLE IN CROP HEALTH

By Nana Ama Oforiwaa Antwi

When you dig deeper and deeper into the earth's surface, what do you see?

The soil? Correct, but what if I told you today that there is more to that, there is more to the soil than just sand. Beneath the earth's surface lies a complex community known as the soil microbiome. Comprised of bacteria, fungi, archaea, and other microorganisms, this ecosystem plays a vital role in sustaining crop health and ecosystem balance. In this article, we explore the soil microbiome's significance for agriculture.

The soil microbiome is a diverse community shaped by factors like soil type, moisture, and pH. Bacteria and fungi are dominant members, facilitating nutrient cycling, disease suppression, and soil structure formation. Archaea also contribute to nutrient cycling, enriching the soil ecosystem.

Efficient nutrient cycling is crucial for agricultural productivity. Soil microbes decompose organic matter, releasing nutrients essential for plant growth. Symbiotic relationships, like those between mycorrhizal fungi and plant roots, enhance nutrient uptake, bolstering crop resilience.

The soil microbiome also acts as a natural defense against crop diseases and pests. Certain microbes inhibit pathogen growth through competition or by producing antimicrobial compounds. Beneficial



Exporting from the local market to the international market!
Fast, reliable and secured

Contact Us
+233 20 475 8888

 **TIAST GROUP**
TIAST More Value For Agriculture

microbes can also induce plant resistance, reducing the need for chemical interventions.

Soil structure is key for water management. Microbial communities facilitate soil aggregation, improving water infiltration, retention, and drainage. This enhances drought resilience and mitigates flood risks in agriculture.

Despite its importance, the soil microbiome faces threats from intensive farming practices. Tillage, chemical fertilizers, and monocropping disrupt microbial communities, impacting soil health. Sustainable practices like cover cropping and composting offer solutions to nurture the soil microbiome.

Understanding and nurturing the soil microbiome is essential for sustainable agriculture. By fostering healthy soils rich in microbial life, farmers can enhance crop health, productivity, and resilience to environmental challenges. It's time to prioritize the soil microbiome as a cornerstone of agricultural sustainability.

Weather Tracking in Agriculture

By Prince Opoku Dogbey



Weather tracking plays a crucial role in modern agriculture, serving as a vital tool for farmers to make informed decisions and optimize crop management practices. In an industry heavily dependent on environmental conditions, accurate weather information can mean the difference between a bountiful harvest and significant losses.

One of the primary uses of weather tracking in agriculture is for crop planning and management. By monitoring temperature, precipitation, humidity, and wind patterns, farmers can determine the optimal times for planting, irrigating, and harvesting crops. Understanding weather forecasts allows farmers to mitigate risks associated with adverse weather events, such as droughts, floods, and extreme temperatures, by adjusting their farming practices accordingly.

Weather tracking also aids in pest and disease management. Certain weather conditions can create favorable environments for pests and pathogens to thrive,

posing significant threats to crop health and yield. By staying informed about weather patterns, farmers can anticipate potential outbreaks and implement preventive measures, such as timely application of pesticides or adjusting planting schedules to minimize risk.

Moreover, weather tracking supports efficient water management in agriculture. By monitoring rainfall and soil moisture levels, farmers can optimize irrigation schedules to ensure crops receive adequate water without wasting valuable resources. This not only promotes water conservation

but also helps reduce irrigation costs and improve overall crop health and productivity.

In conclusion, weather tracking is an indispensable tool for modern agriculture, empowering farmers to make data-driven decisions and adapt to changing environmental conditions. By leveraging accurate weather information, farmers can enhance crop yields, mitigate risks, and foster sustainable agricultural practices for a more resilient and productive future.



Let's discover some top fruits rich in Vitamin C

By Prince Opoku Dogbey

Vitamin C, an essential nutrient renowned for its immune-boosting properties, is abundant in various fruits, making them an integral part of a healthy diet. As we prioritize our health and well-being, exploring the array of fruits rich in vitamin C can empower us to fortify our immune systems and foster overall vitality.

Oranges, a staple in many households, stand out as a top source of vitamin C, providing approximately 70 milligrams per medium-sized fruit. Beyond their vibrant citrus flavor, oranges offer a refreshing burst of hydration and nutrients, making them an ideal snack or addition to any meal.

Grapefruit, another citrus powerhouse, is celebrated for its tangy flavor and impressive vitamin C content, offering around 60 milligrams per medium-sized fruit. Incorporating grapefruit into your diet can invigorate your taste buds while nourishing your body with essential nutrients.

Strawberries, beloved for their sweet taste and vibrant hue, are not only a delicious treat but also a potent source of vitamin C, offering approximately 85 milligrams per cup. Whether enjoyed on their own, blended into smoothies, or tossed into salads, strawberries elevate the nutritional profile of any dish.

Kiwi, with its fuzzy brown exterior and bright green flesh, emerges as a tropical treasure brimming with vitamin C, boasting approximately 64 milligrams per medium-sized fruit. Adding kiwi to your diet introduces a delightful combination of sweetness and tanginess, while also providing a significant nutrient boost.

Pineapple, with its succulent golden flesh and tropical aroma, rounds out the list of vitamin C-rich fruits, offering around 78 milligrams per cup of fresh chunks. Incorporating pineapple into your culinary repertoire infuses dishes with a tropical flair and provides a refreshing burst of vitamin C.

By embracing these vitamin C-rich fruits as part of a balanced diet, we can nourish our bodies, strengthen our immune systems, and embark on a journey toward optimal health and vitality. Whether enjoyed fresh, juiced, or incorporated into various culinary creations, these fruits offer a delicious and nutritious pathway to well-being.



GHANA'S PATH TO SUSTAINABLE DEVELOPMENT WITH RENEWABLE ENERGY

By Nana Ama Oforiwaa Antwi



Agriculture serves as a cornerstone of the economy and livelihoods for millions in Ghana. aside from contributing about 60% to the economy in the past, several individuals work as smallholder farmers in the country. As the country strives to enhance food security, promote rural prosperity, and mitigate climate change impacts, the intersection of agriculture and renewable energy emerges as a potential pathway toward achieving these objectives.

According to the United Nations, Renewable energy is energy derived from natural resources that are replenished at a higher rate than they are consumed. Sunlight and wind, for example, are such sources that are constantly being replenished.

One of the key areas where renewable energy technologies can make a transformative impact is in providing reliable and affordable access to irrigation for farmers, particularly during dry seasons. In Ghana, farmers rely heavily on the rains with other areas balancing that with irrigation schemes, however, with climate change causing rainfall patterns to change, and irrigate schemes being inadequate, Solar-powered irrigation systems offer a sustainable solution to overcome these challenges. By harnessing the abundant solar energy available in Ghana, farmers can enhance crop productivity, increase yields, and improve food security while reducing dependence on fossil fuels.

Furthermore, Ghana possesses significant agricultural biomass resources, including crop residues, wood waste, and animal manure, which can be utilized for bioenergy production. Biofuels such as biogas, biodiesel, and ethanol offer renewable alternatives for cooking, transportation, and electricity generation, thereby reducing reliance on imported fossil fuels and mitigating greenhouse gas emissions. By valorizing agricultural waste through bioenergy production, Ghana can simultaneously address energy poverty, promote rural development, and contribute to climate change mitigation efforts.

In addition to decentralized energy solutions, off-grid renewable energy technologies such as solar home systems and mini-grids have the potential to electrify rural communities, unlocking opportunities for economic growth and social development.

Agroforestry systems, such as cocoa-shade systems and alley cropping, provide multiple benefits to farmers, including increased crop yields, diversified income streams, and participation in carbon offset programs.

The intersection of agriculture and renewable energy represents a compelling opportunity for Ghana to achieve sustainable development, enhance rural livelihoods, and build climate resilience.

Are you aware some farms utilize underground spaces for growing crops? These subterranean farms offer controlled environments, protection from weather extremes, and efficient use of space.



Cloves boast anti-inflammatory and antioxidant properties, aiding liver health, digestion, and relieving constipation. They enhance immunity and act as natural pain relievers.



Agri-Industrial Giants, Driving Growth Together

Partner with us today, and own a fully-automated agroprocessing factory.

For over three decades, TIAST Group, established in China, has been a catalyst for agricultural transformation in West Africa. Our focus which is to elevate the agricultural sector through agroprocessing-industrialization, focusing on cassava and rubber processing is leading the drive to industrialization. Our expansion into West Africa, particularly Ghana, has been nothing short of enlightening as we engage investors and stakeholders in the vision of building a robust economy through the establishment of agroprocessing factories across the region.

A Vision of Value Addition

At the core of TIAST's services lies the commitment to providing top-notch machinery and comprehensive support for agroprocessing ventures. Through our Technical and Technological Support arm, we design, manufacture, and install cutting-edge processing machinery for cassava starch and rubber. Our expert engineers ensure efficiency and optimal output, bridging technological gaps and driving the industrialization agenda to minimize post-harvest losses.

Empowering Investment: Financial Support

Investors eyeing agroprocessing ventures receive a significant boost from TIAST's Financial Support module. We provide 80% financial support of the total factory cost, requiring only a 20% investment from the investor. This financial backing not only reduces financial burdens but also paves the way for accelerated project implementation and economic growth.

Assured Market Access: Offtake Support

Securing market access for processed commodities is critical for sustainability. TIAST Group guarantees a market for cassava starch on the international stage, opening doors to diverse industries such as pharmaceuticals, textiles, and confectionery. Our weekly exports of high-quality cassava starch ensure consistent revenue streams for investors and contribute to the region's economic resilience.

Driving Growth, Together

As we look ahead, the potential for agricultural transformation in West Africa is immense. With estimates pointing to substantial reductions in post-harvest losses and increased export earnings, the impact of agroprocessing-industrialization cannot be overstated. TIAST Group remains steadfast in its commitment to driving this transformation, empowering investors, and building a prosperous future for the region.





Join us in reshaping West Africa's agricultural landscape. Together, we cultivate prosperity and harvest sustainable growth.

Tamarillo Curd

By Nana Ama Oforiwaa Antwi

Ingredients

- 6 tamarillos (approx 1 cup of pulp)
- 1/2 cup sugar
- 100 butter, melted
- 4 egg yolks (keep the whites for the mousse)

Ingredients for White Chocolate Mousse

- 200g white chocolate
- 4 eggs whites
- 20g castor sugar
- 100ml whipping cream

Instructions

Method for Tamarillo Curd

1. Spoon out the inner part of the tamarillos leaving the skins and blend until smooth.
2. Pour ingredients into a pan and cook on a very low heat, stirring constantly, until curd thickens.
3. Transfer into a bowl or jar, cover, and allow to cool in the fridge

Method for White Chocolate Mousse

1. Whisk egg whites until fluffy.
 2. Add one spoon of sugar at a time to egg whites and whisk each time to form a stiff meringue consistency.
 3. Beat meringue mix until it is thick and elastic.
 4. Melt the chocolate gradually in the microwave and whisk cream to form soft peaks.
- Fold half of the meringue mixture into the chocolate with a metal spoon or spatula and do same with whipping cream into the meringue & chocolate mix.
- Fill a piping bag with tamarillo curd and another piping bag with the white mousse.
- Pipe alternate layers of curd and mousse into a glass and allow to set in the fridge for several hours.



The future of post-harvest innovation

By Nana Ama Oforiwaa Antwi

Innovations in post-harvest handling and storage technologies are revolutionizing the way we preserve and distribute agricultural products, offering solutions to reduce food waste, improve food safety, and enhance market access for farmers worldwide.

One of the most significant advancements in post-harvest technology is the development of controlled atmosphere storage (CAS) systems. These systems manipulate temperature, humidity, and gas composition within storage facilities to create optimal conditions for preserving freshness and extending shelf life. By reducing oxygen levels and controlling ethylene concentrations, CAS systems can slow down the ripening and deterioration of fruits and vegetables, allowing farmers to store their produce for longer periods without compromising quality.

Another innovation gaining traction is the use of smart sensors and Internet of Things (IoT) technology to monitor and manage post-harvest conditions in real-time. These sensors, often inte-

grated into storage facilities or packaging materials, provide valuable data on temperature, humidity, gas levels, and product quality, allowing farmers and distributors to make informed decisions and intervene promptly to prevent spoilage or degradation. IoT-enabled systems can also automate tasks such as ventilation, irrigation, and pest control, optimizing resource use and reducing labor costs.

Furthermore, advancements in packaging materials and techniques are enhancing the preservation and transportation of perishable goods. Vacuum packaging, modified atmosphere packaging (MAP), and edible coatings are examples of innovative approaches that create a protective barrier around products, preventing moisture loss, microbial growth, and physical damage during transit. Additionally, bio-based and biodegradable packaging materials are gaining popularity as sustainable alternatives to conventional plastics, reducing environmental impact and addressing consumer demand for eco-friendly solutions.

Cold chain logistics, encompassing refrigerated transport, warehousing, and distribution networks, are



also undergoing significant improvements to ensure the integrity and safety of perishable goods throughout the supply chain. From refrigerated trucks equipped with GPS tracking and temperature monitoring systems to centralized cold storage facilities with automated inventory management, these innovations help maintain product quality and compliance with food safety regulations from farm to fork.

Innovations in post-harvest handling and storage technologies are driving efficiency, sustainability, and resilience in the agricultural sector. By leveraging cutting-edge solutions such as controlled atmosphere storage, smart sensors, advanced packaging, and cold chain logistics, stakeholders across the value chain can minimize losses, maximize profits, and meet the growing demand for fresh, safe, and nutritious food products in an increasingly interconnected and competitive global market.



Pineapple Paradise

*In fields of gold, where sunbeams dance,
Sweet pineapples in graceful stance.*

*Their crowns of green, a regal sight,
In fertile soil, they take their flight.*

*Beneath the sky, so vast and blue,
Pineapples thrive, their colors true.
With every ray of sunlight's kiss,
They grow, they ripen, nature's bliss.*

*From tender shoots to fruits so sweet,
Agriculture's dance, a rhythmic beat.
In earth's embrace, they find their home,
In lush green fields, they freely roam.*

*Oh, pineapple fair, your taste divine,
A treasure of the tropical vine.
In every slice, a story told,
Of farmers' hands, of soil and gold.*

*So let us sing, in fields so bright,
Of pineapple dreams, in morning light.
For in agriculture's gentle sway,
Sweet pineapples thrive, day by day.*

— Poem By Prince Opoku Dogbey

Embarking on a Cocoa Farming Venture: 5 Key Considerations

By Nana Ama Oforiwaa Antwi



Starting a cocoa farm is not merely about planting seeds; it's a journey that demands careful planning, dedication, and strategic decision-making. As you set out on this endeavor, here are five critical factors to assess for a successful cocoa farming venture:

1. Location Selection

Choosing the right location is paramount for cocoa cultivation. Cocoa thrives in regions with specific climate conditions, including consistent temperatures between 21°C to 32°C (70°F to 90°F), well-distributed rainfall averaging 1250-2500 mm annually, and moderate humidity. Additionally, fertile, well-drained soils with a pH range of 5.0 to 7.0 are ideal for cocoa trees to flourish.

2. Soil Quality and Preparation

Before planting cocoa trees, assess soil quality and ensure it meets the requirements for optimal growth. Conduct soil tests to determine nu-

trient levels and pH balance. Cocoa trees thrive in well-drained, loamy soils rich in organic matter. Implement proper soil preparation techniques such as land clearing, plowing, and incorporating organic matter to enhance soil fertility.

3. Variety Selection

Cocoa farming offers various cocoa bean varieties, each with unique characteristics and adaptability to different environmental conditions. Consider factors such as disease resistance, yield potential, and flavor profile when selecting cocoa varieties for your farm. Consult with local agricultural extension services or cocoa experts to identify suitable cocoa cultivars that align with your farming objectives and environmental conditions.

4. Pest and Disease Management

Cocoa trees are susceptible to various pests and diseases that can

significantly impact yield and farm profitability. Implement integrated pest and disease management strategies to mitigate risks effectively. Regular monitoring, timely application of pest control measures, proper sanitation practices, and promoting biodiversity within the farm ecosystem are essential components of effective pest and disease management in cocoa farming.

5. Farm Management Practices

Successful cocoa farming requires diligent farm management practices throughout the crop cycle. This includes proper planting techniques, irrigation management, weed control, pruning, and fertilization. Develop a comprehensive farm management plan outlining tasks, schedules, and resources required for efficient farm operations.

Grafting a Bud

By Jessica Meledi

Budding, a common propagation technique in crop farming, involves grafting a bud from a desired plant onto a compatible rootstock. To execute budding effectively, follow these key steps:

Firstly, select healthy and disease-free scion wood, which carries the bud to be grafted, and a vigorous rootstock plant of compatible species. Ensure both scion and rootstock are in active growth and of similar diameters.

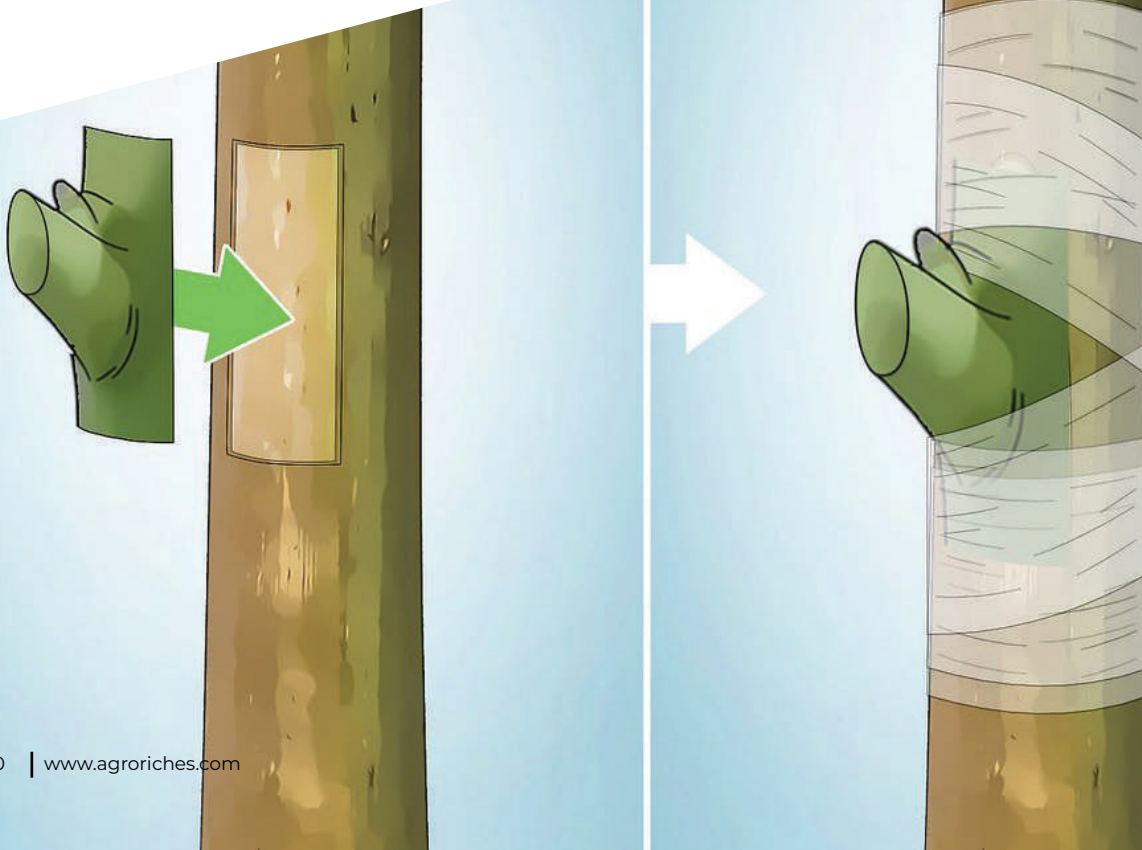
Secondly, make precise cuts on both the scion and rootstock. Create a T-shaped incision on the rootstock and gently lift the bark to insert the bud. Trim the scion to match the shape of the rootstock incision, ensuring proper alignment.

Next, secure the bud in place using budding tape or rubber bands, ensuring it remains snug against the rootstock. This

promotes successful union between the two plant tissues.

After budding, protect the graft union from desiccation and mechanical damage by covering it with grafting wax or parafilm. Monitor the graft regularly for signs of growth and remove any competing shoots or buds from the rootstock.

Lastly, provide appropriate care and maintenance to the grafted plant, including adequate watering, fertilization, and protection from pests and diseases. With proper technique and care, budding can be a highly effective method for propagating desired traits in crop farming, leading to improved yield and quality.



The Joy and Nourishment of Eating Well

By Nana Ama Oforiwaa Antwi

In the hustle and bustle of modern life, amidst packed schedules and digital distractions, the simple act of sitting down to a meal together as a family can often be overlooked. Yet, the essence of eating well transcends mere sustenance; it serves as a cornerstone for nurturing relationships, fostering communication, and promoting overall well-being within the family unit.

Cultivating Connection Through Shared Meals

Gathering around the dinner table provides a precious opportunity for family members to connect on a deeper level. It offers a designated time to share stories, experiences, and laughter, creating cherished memories that bind generations together.

Promoting Healthy Habits and Balanced Nutrition

Beyond the emotional benefits, eating well as a family lays the foundation for healthy habits and balanced nutrition. By preparing wholesome meals together, parents can instill a lifelong appreciation for nutritious foods in their children. Through hands-on involvement in meal planning and preparation, youngsters develop essential culinary skills while learning the importance of making mindful food choices.

Fostering Cultural Heritage and Traditions

The family table serves as a rich tapestry where cultural heritage and traditions come to life through food. Whether it's passing down treasured recipes from one generation to the next or exploring diverse cuisines from around the world, shared meals offer a glimpse into the unique identity and heritage of each family. Through the exploration of different culinary traditions, family members gain a deeper understanding and appreciation for cultural diversity.

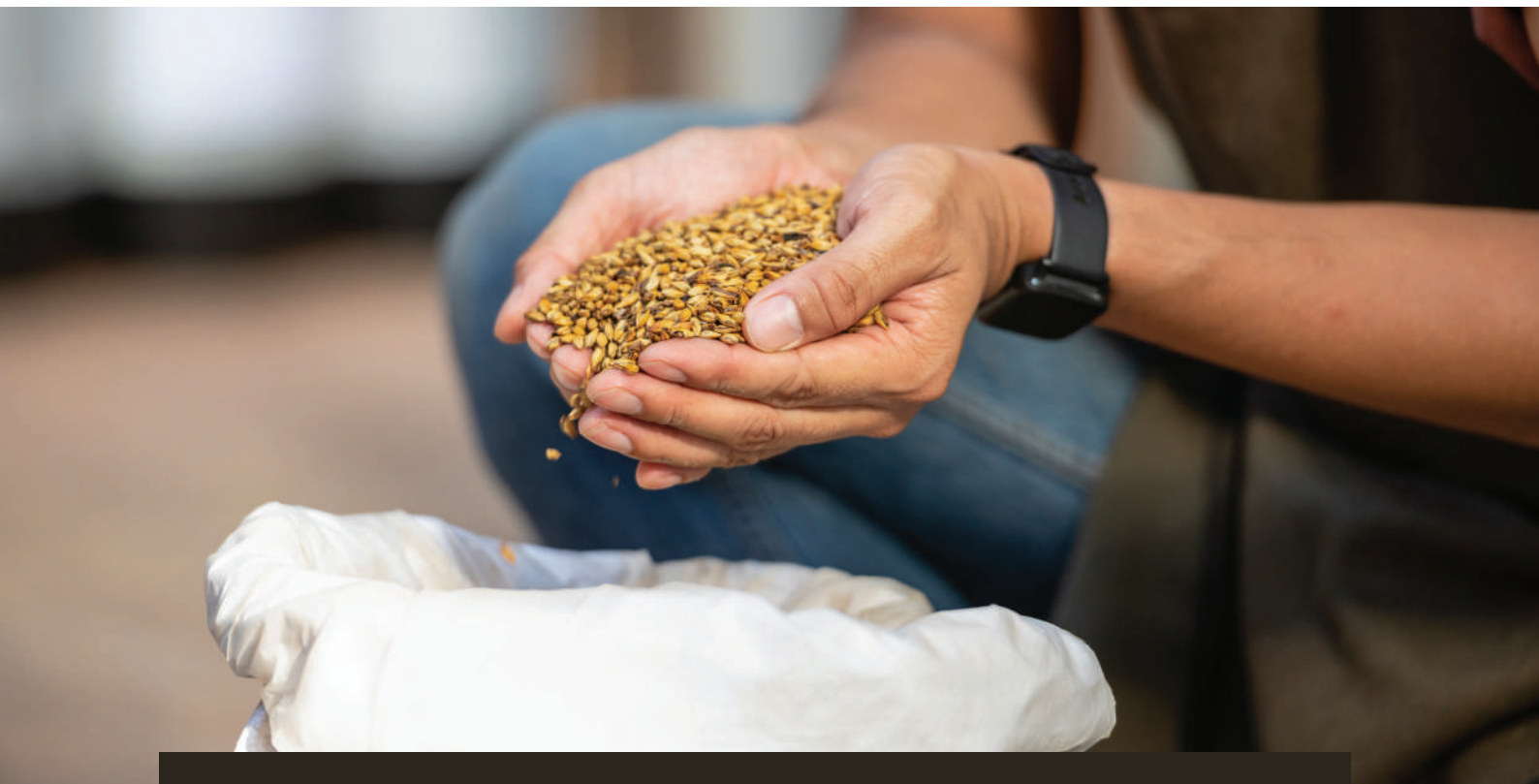
In today's fast-paced world, the ritual of shared meals provides a sanctuary of comfort and stability for family members. It offers a respite from the stresses of daily life, allowing individuals to unwind, recharge, and reconnect with loved ones. Research suggests that regular family



meals are associated with lower rates of substance abuse, improved academic performance in children, and enhanced emotional resilience.

Building Stronger Bonds Beyond the Plate

Ultimately, the essence of eating well as a family extends far beyond the plate. It serves as a powerful catalyst for building stronger bonds, fostering healthy habits, and nurturing emotional well-being within the family unit. As we embrace the timeless tradition of gathering around the table, let us savor not only the delicious flavors of the meal but also the precious moments of joy, laughter, and love shared among family members.



Augmentation record des importations de blé en Algérie

Par Yosua Domedjui

Après l'Égypte, l'Algérie est le deuxième consommateur de blé en Afrique. Des conditions climatiques défavorables ont entravé la production locale, mais le pays dépend de plus en plus des importations pour répondre à ses besoins de consommation.

En 2023-2024, l'Algérie devrait importer 8,7 millions de tonnes de blé, soit une augmentation de 7,4 % par rapport aux 8,1 millions de tonnes de l'année précédente. Selon le ministère américain de l'agriculture (USDA), il s'agit du rapport céréalier le plus récent du pays d'Afrique du Nord. Si cette prévision se réalise, la

quantité de blé achetée par le pays sera la plus élevée depuis huit ans, dépassant les 8,4 millions de tonnes de stock de blé enregistrées au cours de la saison 2016-17.

L'USDA affirme que l'affaiblissement de la production locale en raison de conditions météorologiques défavorables - la sécheresse en l'occurrence - peut expliquer la dépendance accrue à l'égard des importations. La campagne 2023-2024 devrait connaître une baisse de 27 % de la production de blé, soit 1 million de tonnes de moins que la campagne précédente (3,7 millions de tonnes).

En général, les précipitations sont insuffisantes dans les principales régions de culture. Un déficit hydrique de 90 % a été signalé dans la majorité des provinces septentrionales du pays, affectant environ 1,2 million d'hectares de cultures céréalières, soit environ 40 % de la superficie totale plantée en céréales, en raison de la sécheresse, indique le document.

La quantité consommée devrait augmenter de 50 000 tonnes pour atteindre 11,2 millions de tonnes à la même période. L'Algérie dépend principalement des expéditions de l'Union européenne (UE), de l'Ukraine et de la Russie pour ses approvisionnements en blé sur le marché mondial.



Le Maroc lance un programme de soutien à l'importation de blé pour compenser la sécheresse

Par Yosua Domedjui

Le Maroc est le troisième marché du blé en Afrique du Nord, après l'Algérie et l'Égypte. En raison de la sécheresse qui a sévi au cours des cinq dernières années, le pays cherche à accroître ses importations en provenance des marchés étrangers.

L'Office national interprofessionnel des céréales et des légumineuses (ONICL) du Maroc a annoncé, dans une circulaire publiée le 31 janvier, un mécanisme de soutien aux importateurs pour la constitution d'un stock de blé tendre entre le 1er février et le 30 avril.

Plus précisément, le gouvernement prévoit d'accorder une prime de stockage de 25 dirhams (2,5 dollars) pour chaque tonne de blé produite toutes les deux semaines. Les négociants en céréales qui importent jusqu'à 10 millions de quintaux (un million de tonnes) de blé et les conservent dans leurs entrepôts pendant au moins trois mois en bénéficieront.

"Les 10 millions de quintaux seront attribués par l'ONICL aux importateurs sur la base de leurs déclarations d'importation et selon le principe du premier arrivé, premier servi, avec un plafond de 3 millions de quintaux par mois pour février et mars 2024, et de 4 millions de quintaux pour avril 2024", précise l'organisme gouvernemental.

Le gouvernement marocain a reconstitué ses réserves de blé, qui ont été affectées par des années de sécheresse qui ont diminué la production céréalière, avec cette dernière annonce. Le gouvernement avait déjà annoncé fin novembre qu'il subventionnerait l'importation de 2,5 millions de tonnes de blé de janvier à avril 2024.

Rappelons qu'en juin de l'année prochaine, le pays devrait avoir acheté 6,5 millions de tonnes de blé au total, contre 5,7 millions de tonnes l'année précédente, selon les données de l'USDA.

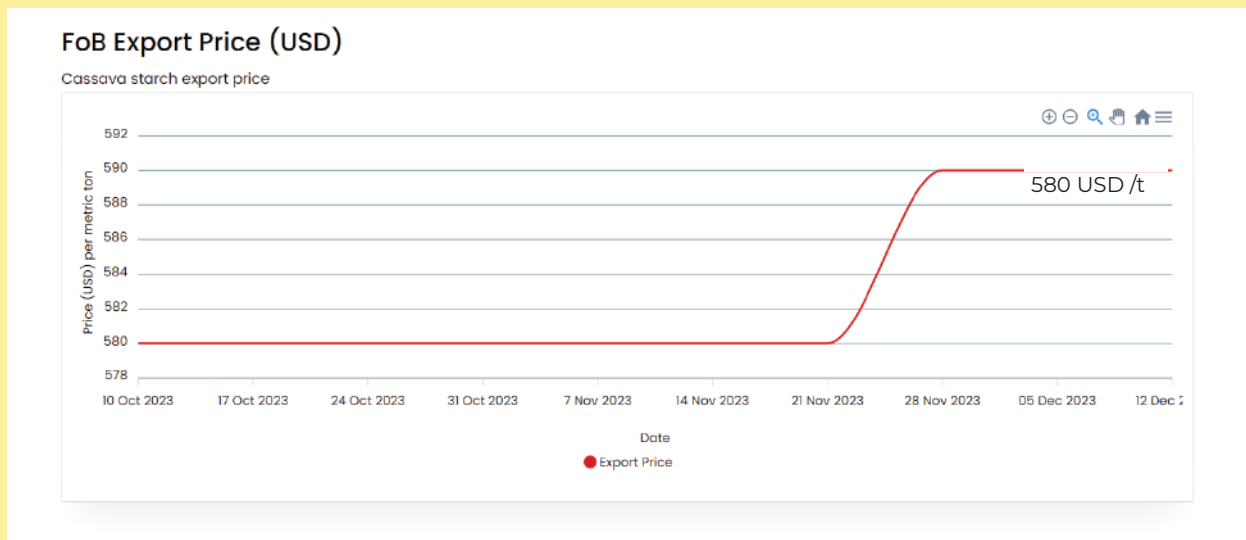


Price Trends

Market Analysis of Cassava Starch In Thailand

The market prices of cassava starch have reduced slightly over the last month. The price ranges from 570-580 US dollars/ton (4,112.78 yuan /ton). This week, the market price of cassava starch in Thailand's tapioca starch quotation is FOB (Bangkok) 580 US dollars/ton (4,112.78 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.

● Thailand Cassava Starch price



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.



CAISTT.COM

China-Africa Industrialize
Socialize Traders Terrace

GLOBAL MARKETPLACE

for all your-agro products

SEEDLINGS • AGRO-CHEMICALS • RAW MATERIALS • FARM TOOLS
PROCESSING MACHINE • ANIMAL FEEDS • MANY OTHERS



WWW.CAISTT.COM

+233 25 796 3383

info@caistt.com



DOWNLOAD ON APPSTORE OR
GOOGLE PLAYSTORE TODAY

GET UP TO **80%**

financing to own an
agroprocessing factory of
diverse capacities now.

With our newly-launched financial module,
an investor needs only 20% investment to
become a factory owner.

Other Service Includes:



TECHNICAL & TECHNOLOGICAL SUPPORT



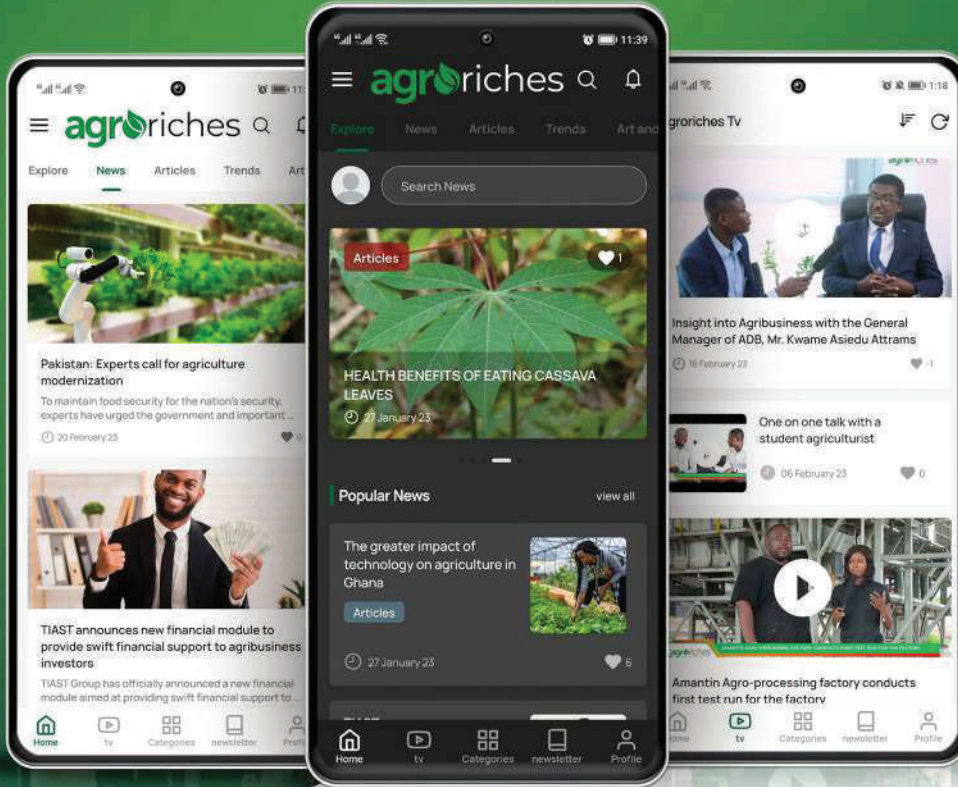
WEEKLY OFFTAKE SERVICE



+ 233 20 475 8888
www.tiastgroup.com
f i t y i n Tiastr Group

 **No. 25 Giffard Road,**
GL-034-5603
LA Trade Fair, Accra

 Download Now



Agriculture in your hands.

agr^oriches

AGRICULTURAL SCIENCE | INDUSTRIALIZATION | TECHNOLOGY



www.agroriches.com

     agroriches



EXPERTS IN BUILDING AGROPROCESSING FACTORIES

TIAST GROUP HAS THE RIGHT ENGINEERS WHO DESIGN,
MANUFACTURE AND INSTALL ALL TYPES OF MACHINERY
YOU NEED FOR YOUR FACTORY.




CALL US

0204758888

Agroriches is a weekly issued that seeks to inform our cherished readers about the latest information in the agricultural industry.

Kindly Scan the QR Code to access the digital copy of this edition and previous editions.

 info@agroriches.com

 www.agroriches.com

     [agroriches](https://www.linkedin.com/company/agroriches)

