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ARTICLE

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NOTRE CHRONIQUE

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SAVING THE PLANET
WITH GREEN

FEBRUARY 2024





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Revolutionizing Agriculture: The Path of Agritech Innovation

By Prince Opoku Dogbey

Innovation has always been the cornerstone of progress, and nowhere is this more evident than in the realm of agriculture. As the global population burgeons and resources become scarcer, the need for sustainable and efficient agricultural practices has never been more urgent. In this context, agritech innovation emerges as the beacon guiding the transformation of traditional farming methods into smart, data-driven systems poised to address the challenges of the 21st century.

At its core, agritech innovation encompasses a diverse array of technologies designed to optimize every facet of the agricultural process. From precision farming and data analytics to drone technology and biotechnology, agritech solutions offer farmers unprecedented insights and control over their operations.

One of the most revolutionary aspects of agritech is its ability to enhance resource efficiency. Through the use of IoT sensors and data analytics, farmers can monitor soil moisture levels, nutrient content, and crop health in real-time. This granular level of insight enables precise irrigation and fertilization strategies, minimizing waste and maximizing yields. Furthermore, predictive analytics empower farmers to anticipate potential challenges such as pest infestations or adverse weather conditions, allowing for proactive mitigation measures.

Agritech also holds the promise of sustainability by reducing the environmental footprint of agriculture. Through the adoption of techniques like vertical farming and hydroponics, farmers can cultivate crops using fewer resources and minimal space. Additionally, advancements in genetic engineering enable the development of



drought-resistant, pest-resistant, and high-yielding crop varieties, ensuring food security in the face of changing climatic conditions.

Furthermore, agritech innovation fosters connectivity and collaboration within the agricultural ecosystem. Platforms and apps facilitate knowledge sharing among farmers, agronomists, and researchers, empowering stakeholders to make informed decisions and leverage collective expertise.

However, realizing the full potential of agritech requires more than just technological advancement. It demands investment in infrastructure, digital literacy, and regulatory frameworks that foster innovation while safeguarding ethical and environmental concerns.

In conclusion, agritech innovation represents the best way forward for agriculture in the 21st century. By harnessing the power of technology, we can cultivate a more resilient, sustainable, and equitable food system capable of nourishing a growing global population while preserving the planet for future generations.

Marula

By Nana Ama Oforiwaa Antwi

Description

The marula fruit, also known as *Sclerocarya birrea*, is a small, round fruit native to the southern regions of Africa. This fruit is about the size of a plum and has a yellowish skin when ripe. The flesh is juicy and contains a large, hard seed in the center. It has a sweet, tart flavor with hints of citrus and pineapple, making it a popular choice for both culinary and medicinal purposes.

Origin

The marula tree, from which the marula fruit is harvested, has a rich history in African folklore and culture. It is native to countries such as South Africa, Namibia, Botswana, Zimbabwe, and Mozambique, where it thrives in the warm, subtropical climates of the savannah and woodland regions. Traditionally, the marula tree holds significant cultural and economic importance to many indigenous communities, who use various parts of the tree for food, medicine, and craftwork.

Health Benefits

1. Rich in Nutrients

Marula fruit is packed with essential vitamins and minerals, including vitamin C, vitamin E, potassium, and magnesium. These nutrients help support overall health and well-being, boost immunity, and promote healthy skin and hair.

2. Antioxidant Properties

Marula fruit contains powerful antioxidants, such as flavonoids and phenolic compounds, which help protect the body against oxidative stress and inflammation. Regular consumption of marula fruit may help reduce the risk of chronic diseases, such as heart disease and cancer.

3. Supports Digestive Health

The high fiber content in marula fruit promotes healthy digestion and regulates bowel movements. Fiber helps

prevent constipation, bloating, and other digestive issues by promoting regularity and supporting gut health.

4. Hydrating and Refreshing

Cucumbers are often used in skincare due to their hydrating and cooling properties. Applying cucumber slices or cucumber-based masks can help soothe sunburns, reduce puffiness and dark circles around the eyes, and improve overall skin texture and complexion.

5. Potential Anti-inflammatory Effects

Some studies suggest that compounds found in marula fruit may possess anti-inflammatory properties, which could help alleviate symptoms of inflammatory conditions, such as arthritis and joint pain.





Bono Regional Minister Urges Development Partners to Enhance Cashew Value Chains

By Prince Opoku Dogbey

In a bid to boost job creation and alleviate poverty in Ghana's Bono Region, Justina Owusu-Bandehene, the Regional Minister, has urged development partners to invest in enhancing cashew fruit and nut value chains.

During a meeting with Mrs. Harriet Thompson, the British High Commissioner, Minister Owusu-Bandehene expressed concern over the annual wastage of 889,000 metric tons of cashew fruits in the region due to the lack of processing facilities. She emphasized the urgent need for value addition initiatives to capitalize on the region's cashew production potential.

The Minister highlighted the significant cashew plantation acreage, totaling about 74,000 acres, and an annual production of 88,900 tons of cashew beans. However, she lamented the challenges faced by the sector, including fragmented value chains, price volatility, and inadequate farm management practices.

In addition to the cashew industry, Minister Owusu-Bandehene identified the poultry sector as another key economic driver in the region. With over 1,160 farmers and approximately 8,000,000 poultry stock, the sector holds immense potential. Nevertheless, challenges such as the absence of a laboratory, high costs of poultry feed and drugs, and stiff competition from imported products hinder its growth.

Mrs. Thompson, the British High Commissioner, commended the economic potential of the region, especially in the poultry sector. She affirmed the UK's commitment to supporting trade in Ghana through initiatives aimed at value addition and market expansion.

The meeting between Minister Owusu-Bandehene and Mrs. Thompson underscores the importance of collaboration between Ghana and its development partners to unlock the full potential of the agricultural sector and drive economic growth in the Bono Region.

Agric Expert Calls for Increased Gov't Investment to Boost Food Production in Nigeria

By Prince Opoku Dogbey

Agriculture expert Mr. Titilayo Adebajo, Managing Director of Agreobirth Company, has emphasized the urgent need for both federal and state governments in Nigeria to substantially increase their annual budgets allocated to agriculture.

Adebajo underscored the importance of this move in augmenting food production and alleviating economic hardships across the nation.

Speaking with the News Agency of Nigeria (NAN) in Epe, Adebajo highlighted that elevated budgets for the agricultural sector would not only enhance food production but also mitigate economic challenges faced by farmers. He stressed the significance of governmental support to sustain farmers' interest in the profession and to encourage more Nigerians to pursue farming.

According to Adebajo, it's imperative for farmers to receive comprehensive support, including access to agricultural inputs, easy loan accessibility, and assistance with land preparations. He expressed concern over the prevalent hardships encountered by farmers, leading some to abandon farming altogether, which adversely impacts the nation's food supply.

Acknowledging the efforts of governments in supporting agriculture, Adebajo emphasized the necessity for increased investments in the sector. He emphasized the practical application of the adage, 'no farmer, no nation,' highlighting the critical role farmers play in ensuring food security.

Moreover, Adebajo stressed the importance of motivating youth to engage in farming activities. He suggested that equipping young farmers with modern tools



and techniques would make farming more appealing and less arduous. Adebajo noted that the reliance on outdated farming methods often deters younger generations from embracing agriculture.

Adebajo advocated for the provision of modern farming equipment and essential inputs such as fertilizers, agro-chemicals, and quality seedlings to enhance food production across Nigeria. He emphasized that a well-developed agricultural sector is pivotal in safeguarding any nation from hunger and starvation.

In conclusion, Adebajo urged governments to prioritize substantial investments in agriculture and to attract both local and foreign investors to bolster food supply in Nigeria. He emphasized that concerted efforts in this regard would not only enhance food security but also drive economic growth and prosperity across the nation.



Farmers in Prague Protest EU Agriculture Policies, Demand Reforms

By Nana Ama Oforiwaa Antwi

In a demonstration of discontent, hundreds of tractors converged on downtown Prague in Czech Republic on Monday as farmers voiced their grievances against European Union agriculture policies, citing unfair practices and burdensome regulations.

Despite the absence of major Czech farmer organizations, who distanced themselves from the rally due to its association with recent pro-Russian demonstrations, the protest proceeded, albeit without disrupting traffic.

City Hall cautioned against unnecessary travel to Prague on Monday, as the protesters aimed to deliver a letter outlining their demands to Agriculture Minister Marek Vyborný. Central to their concerns is the EU's Green Deal, which proposes restrictions on chemical usage and greenhouse gas emissions, prompting calls for the country's withdrawal from the agreement. Some protesters went as far as demanding the government's resignation.

While certain farmer groups plan separate demonstrations later in the week, solidarity with counterparts from neighboring countries is evident. Similar protests have surfaced across the EU, with farmers decrying policies that they argue impose financial strains and render their products less competitive against non-EU imports.

Although the European Commission has made concessions in recent weeks, such as shelving plans to curtail pesticide usage, tensions persist as farmers continue to advocate for reforms.

The Impact of Agrochemicals on Human Health and the Environment

By Nana Ama Oforiwaa Antwi

Agrochemicals, including pesticides and herbicides, have long been essential tools in modern agriculture, aiding in pest control and weed management to ensure high crop yields. However, their widespread use has raised concerns about their impact on human health and the environment.

These chemicals, designed to kill or control pests and weeds, can pose significant risks to human health through exposure via ingestion, inhalation, or skin contact. Pesticides, in particular, have been linked to various health issues, including respiratory problems, neurological disorders, and reproductive issues.

Studies have also suggested associations between pesticide exposure and increased risks of certain cancers, such as leukemia and lymphoma. Furthermore, farmworkers and individuals living in agricultural areas are particularly vulnerable to exposure, highlighting the importance of proper handling and application practices.

Moreover, agrochemicals can have detrimental effects on the environment, including water contamination, soil degradation, and harm to non-target organisms. Runoff from fields treated with pesticides and

herbicides can leach into nearby water bodies, contaminating aquatic ecosystems and threatening aquatic life. In addition, these chemicals can persist in the environment for extended periods, leading to bioaccumulation in organisms and potential disruption of food chains.

Furthermore, the overuse and misuse of agrochemicals can contribute to the development of pesticide resistance in target pests and weeds, rendering these chemicals less effective over time.

Addressing the adverse effects of agrochemicals requires a multi-faceted approach, including stricter regulations on chemical usage, promotion of integrated pest management practices, and support for organic and agro-ecological farming methods.

Furthermore, investing in research and innovation to develop safer, more sustainable alternatives to conventional agrochemicals is imperative. This includes exploring the use of biopesticides, biologically derived substances that control pests while posing minimal risks to human health and the environment.

While agrochemicals have played a crucial role in modern agriculture, their indiscriminate use poses significant risks to both human health and the environment. Addressing these challenges requires concerted efforts from policymakers, farmers, researchers, and consumers to promote sustainable farming practices that prioritize safety, environmental stewardship, and long-term agricultural viability.



Spectrophotometry

By Prince Opoku Dogbey

Spectrophotometry, a versatile analytical technique, holds significant importance in agricultural research and practices. In agriculture, spectrophotometry enables scientists to assess the chemical composition of various agricultural samples, including soil, water, plant tissues, fertilizers, and pesticides. This technology relies on the principle of measuring the amount of light absorbed or transmitted by a substance at different wavelengths, providing valuable insights into the composition, concentration, and quality of agricultural materials.

In soil science, spectrophotometry is employed to analyze soil samples for essential nutrients such as nitrogen, phosphorus, potassium, and micronutrients like iron, zinc, and manganese. By determining the nutrient levels in the soil, farmers can make informed decisions regarding fertilizer application and soil amendments to optimize crop growth and yield.

Water quality assessment is another crucial application of spectrophotometry in agriculture. By analyzing water samples from irrigation sources, rivers, lakes, and groundwater, researchers can evaluate parameters such as turbidity, dissolved oxygen, pH, nutrient concentrations, and pesticide residues. Monitoring water quality helps ensure the suitability of water sources for irrigation, livestock consumption, and ecological health while mitigating the risks of contamination and environmental degradation.



Spectrophotometric techniques are extensively utilized in plant science and crop protection. Researchers employ spectrophotometry to analyze plant pigments such as chlorophyll, carotenoids, and anthocyanins, providing insights into photosynthetic activity, plant health, and stress responses. Spectrophotometric assays also facilitate the detection and quantification of plant pathogens, toxins, and biochemical markers associated with disease resistance and stress tolerance.

Moreover, spectrophotometric methods play a crucial role in quality control and assurance across the agricultural industry. By quantifying active ingredients and contaminants in agricultural inputs such as fertilizers, pesticides, and animal feeds, spectrophotometry helps maintain product integrity, safety, and efficacy.

In essence, spectrophotometry serves as a cornerstone technology in agriculture, facilitating a wide range of applications essential for enhancing productivity, sustainability, and environmental stewardship in agricultural systems. Its versatility, accuracy, and reliability make it an indispensable tool for advancing agricultural research, innovation, and practices in the quest for global food security and sustainable development.

Staking

By Bismark Kwabena Baiden

Staking is a fundamental technique in agriculture, essential for supporting plants and optimizing their growth. With various methods available, selecting the most suitable approach depends on factors such as plant type, growth habits, and environmental conditions.

One effective method involves using stakes made from materials like bamboo, wood, or metal. These stakes provide structural support for plants such as tomatoes, peppers, and vine crops like cucumbers and beans. Properly positioned stakes offer stability, prevent sprawling, and facilitate air circulation around plants, reducing the risk of diseases.

Another popular staking technique involves the use of trellises and wire systems. Particularly beneficial for climbing plants such as peas, grapes, and certain varieties of tomatoes, trellises encourage vertical growth, optimize space utilization, and facilitate harvesting and maintenance tasks.

In addition to providing support, staking also promotes uniformity in plant growth and fruit development. By lifting plants off the ground, staking minimizes contact with soil, reducing the likelihood of fruit rot and pest infestations. Moreover, it enhances exposure to sunlight and air, essential for photosynthesis and preventing fungal diseases.

Proper staking practices involve securing plants without causing damage to stems or roots. Careful placement of stakes and tying materials ensures sufficient support while allowing for natural movement and expansion as plants mature.

In conclusion, the best way to practice staking in agriculture involves selecting appropriate materials and techniques tailored to specific plant requirements. By implementing effective staking methods, farmers can optimize plant growth, enhance productivity, and maximize yields, contributing to sustainable and successful agricultural practices.

Egypt's Minister of Agriculture Collaborates with World Bank on Sustainable Development Initiatives

By Nana Ama Oforiwaa Antwi



Egypt's Minister of Agriculture and Land Reclamation, Elsayed Elkosayer, met with Miskreem Barhan, the Regional Director for Sustainable Development in the Middle East and North Africa at the World Bank, and her delegation, to discuss joint projects and future cooperation in the fields of agriculture and food security.

Elkosayer thanked the World Bank for its ongoing support of Egypt and praised its role in promoting sustainable development. He stressed the need for more funding for innovation, governance, and resilience in the agricultural sector, especially in light of the challenges posed by climate change.

He also highlighted the importance of the Climate Resilient Agriculture and Food Transformation (CRAFT) project, which aims to improve irrigation systems, adopt climate-smart technologies and practices, and integrate smallholders into the food system.

He said that this project is part of the Nexus Of Water, Food & Energy (NWFE) initiative and is coordinated with the Ministry of International Cooperation. Barhan expressed the World Bank's readiness to assist Egypt in developing its agricultural sector, which she considered one of the most vital sectors for the region.

She said that the World Bank has a plan to support projects related to early warning and crop adaptation, and hoped for close collaboration between the Bank's agricultural team and the technicians from the Ministry of Agriculture and the Ministry of International Cooperation.

In the mid-20th century, the Green Revolution transformed global agriculture through the adoption of high-yielding crop varieties, modern irrigation systems, and synthetic fertilizers and pesticides.



Orange peels

The essential oils extracted from orange peels are used in aromatherapy for their uplifting and invigorating scent, which can help reduce stress and improve mood.

SAVING THE PLANET WITH GREEN

By Prince Opoku Dogbey

In the face of escalating climate change concerns, agriculture emerges as both a contributor to environmental challenges and a critical solution in the fight against climate change. The green revolution needed to save our planet lies within the very soil we cultivate and the practices we employ in agriculture.

Agriculture, as a sector, is intricately intertwined with climate change. From deforestation for agricultural expansion to greenhouse gas emissions from livestock and fertilizers, the agricultural industry has significant environmental implications. However, it also holds immense potential to mitigate climate change through sustainable practices.

One of the most impactful ways agriculture can reduce the effects of climate change is through carbon sequestration. Healthy soils act as carbon sinks, absorbing carbon dioxide from the atmosphere and storing it in the soil. Practices such as cover cropping, crop rotation, and minimal tillage help improve soil health, increase organic matter content, and enhance carbon sequestration capabilities.

Furthermore, agroforestry—the integration of trees and shrubs into agricultural landscapes—offers multiple benefits for climate change mitigation. Trees not only sequester carbon dioxide but also provide shade, regulate microclimates, prevent soil erosion, and enhance biodiversity. Agroforestry systems can also contribute to sustainable land management, providing additional income streams for farmers through timber, fruits, and other non-timber forest products.

Another crucial aspect of climate-smart agriculture is water management. Droughts and water scarcity, exacerbated by climate change, pose significant challenges to agricultural productivity and food security. Implementing water-efficient irrigation techniques, such as drip irrigation and rainwater harvesting, helps conserve water resources and mitigate the impact of droughts on crop yields.





Moreover, sustainable crop and livestock management practices play a pivotal role in reducing greenhouse gas emissions from agriculture. Improving nutrient management, optimizing fertilizer use, and implementing enteric fermentation mitigation strategies in livestock farming can significantly reduce emissions of methane and nitrous oxide, potent greenhouse gases contributing to global warming.

In addition to on-farm practices, sustainable supply chain management and food waste reduction initiatives are essential components of climate-resilient agriculture. Efficient transportation, storage, and distribution systems can minimize energy consumption and greenhouse gas emissions associated with food production and distribution.

As we strive to save the planet with green, collaboration among policymakers, farmers, researchers, and consumers is paramount. Governments must incentivize and support the adoption of sustainable agricultural practices through policies, subsidies, and research funding. Consumers can also contribute by making informed choices, supporting local and sustainable food systems, and minimizing food waste.

In conclusion, agriculture holds immense potential to mitigate climate change and build resilience in the face of environmental challenges. By embracing sustainable practices, investing in innovation, and fostering collaboration across sectors, we can harness the power of agriculture to safeguard our planet for future generations. It is not merely a choice but a necessity in our collective efforts to combat climate change and create a sustainable future.

Marula Fruit Salad with Honey-Lime Dressing

By Nana Ama Oforiwaa Antwi

This marula fruit salad with honey-lime dressing is perfect for any occasion, whether it's a summer picnic, backyard barbecue, or simply a light and healthy snack. Enjoy the vibrant colors, tropical flavors, and nutritious goodness of this delightful fruit salad!

Ingredients

For the salad:

- 2 cups of fresh marula fruit, sliced
- 1 cup of pineapple chunks
- 1 cup of mango chunks
- 1 cup of strawberries, sliced
- 1/2 cup of blueberries
- 1/2 cup of raspberries
- 1/4 cup of fresh mint leaves, chopped (optional, for garnish)

For the honey-lime dressing:

- 2 tablespoons of honey
- Juice of 2 limes
- Zest of 1 lime
- 1 tablespoon of extra virgin olive oil

Instructions

1. In a large mixing bowl, combine the sliced marula fruit, pineapple chunks, mango chunks, strawberries, blueberries, and raspberries. Gently toss the fruits together to mix evenly.
2. In a separate small bowl, whisk together the honey, lime juice, lime zest, and extra virgin olive oil until well combined to make the dressing.
3. Pour the honey-lime dressing over the fruit salad mixture in a large bowl.
4. Gently toss the fruit salad again until all the fruits are evenly coated with the dressing.
5. Transfer the marula fruit salad to a serving dish or individual bowls.
6. Garnish the fruit salad with fresh mint leaves for an extra burst of flavor and presentation.
7. Serve the marula fruit salad immediately as a refreshing and nutritious dessert or side dish.



REVIVING AGRICULTURE THROUGH COMMUNITY-SUPPORTED MODELS IN GHANA

By Nana Ama Oforiwaa Antwi

Nestled within the verdant landscapes of Ghana lies a promising strategy for rejuvenating agriculture and bolstering community resilience: Community Supported Agriculture (CSA) models. As the world confronts pressing food security challenges, CSA emerges as a beacon of hope, embodying principles of sustainability, community engagement, and direct farmer-consumer relationships.

At its core, CSA is a partnership between farmers and consumers where community members invest in a farm's harvest in advance, sharing both the risks and rewards of agricultural production. This model not only ensures a stable income for farmers but also provides consumers with fresh, local-

ly-grown produce while fostering a deeper connection to the land and the people who cultivate it.

In Ghana, where agriculture forms the backbone of the economy and sustains millions of livelihoods, CSA holds immense potential for transforming the sector. By embracing CSA principles, Ghanaian farmers can diversify their crops, reduce dependence on external markets, and mitigate the impacts of climate change.

One shining example of CSA in Ghana is the "Farmers-First" initiative in the Ashanti region. Here, smallholder farmers have joined forces with local communities to establish CSA cooperatives, pooling resources and knowledge to cultivate a wide range of crops sustainably. Through collective decision-making and shared responsibilities, these farmers have not only increased their yields but also improved food security and nutrition within their communities.

Moreover, CSA models in Ghana promote agroecological practices that prioritize environmental conservation and biodiversity. By incorporating traditional farming techniques and indigenous crop varieties, farmers can enhance soil fertility, conserve water, and preserve Ghana's rich agricultural heritage for future generations.

However, challenges persist in scaling up CSA initiatives across Ghana. Limited access to financing, inadequate infrastructure, and lack of awareness among consumers remain significant barriers that must be addressed.

Governments, NGOs, and private sector actors must collaborate to provide technical assistance, financial support, and market linkages to empower smallholder farmers and facilitate the expansion of CSA networks nationwide.

Community Supported Agriculture models offer a compelling pathway towards sustainable development in Ghana's agricultural sector. By fostering collaboration, resilience, and innovation, CSA not only strengthens local food systems but also nurtures vibrant, thriving communities rooted in a shared commitment to the land and its bounty. As Ghana charts its course towards a more sustainable future, embracing the principles of CSA will undoubtedly play a pivotal role in realizing this vision.



Fields of Plenty

In fields of plenty, where the earth's
embrace holds tales untold,
Where the sun's golden fingers
gently kiss the soil, bold.

Here, in the heart of nature's realm,
stories quietly unfold,
As the farmer's hands sow seeds of
promise, manifold.

Amidst the endless expanse, where the
wind whispers secrets grand,
Each blade of grass, each flower, a
testament to the land.

Hands weathered by toil, hearts
aligned with nature's band,
In the symphony of seasons, they walk
hand in hand.

From the tender sprout emerging to
the towering stalks so tall,
Through the heat of summer's blaze
and the autumn's gentle fall.

In the cycle of growth, where life answers
its sacred call,
From the seed's humble whisper to the
harvest's vibrant thrall.

At dawn's first light, the earth awakens with
a sigh, In dusk's soft embrace, dreams
take flight, reaching for the sky.

In the fields of plenty, where hope and labor lie,
We find the essence of life, under the vast and open sky.

— Poem By Nana Ama Oforiwaa Antwi

In the realm of agriculture, few crops hold the promise of prosperity and sustainability quite like the humble coconut. With its myriad uses and adaptability to diverse climates, coconut farming emerges as not just a livelihood option but a pathway towards economic growth, environmental sustainability, and community resilience.

Coconut farming, often referred to as the "tree of life," offers a plethora of benefits that extend far beyond its delicious fruit. From the lush tropics to coastal regions worldwide, coconut palms thrive in a variety of environments, making them accessible to farmers across different landscapes.

One of the most compelling reasons to venture into coconut farming lies in its economic potential. The coconut palm is a versatile crop, with virtually every part of the tree holding value. Beyond the sweet and refreshing coconut water and the nutritious flesh, coconuts yield oil, milk, and a myriad of by-products like coconut flour, sugar, and vinegar. The global demand for coconut-based products continues to rise, presenting lucrative opportunities for coconut farmers to capitalize on this trend.

Furthermore, coconut farming offers sustainable livelihoods and economic empowerment, particularly in rural and coastal communities. Smallholder farmers, often marginalized in traditional agricultural systems, can benefit from the relatively low input costs and high returns associated with coconut cultivation. By diversifying income streams and enhancing resilience to market fluctuations, coconut



Try Coconut Farming this Year!

By Mavis Essaba Mensah

farming contributes to poverty alleviation and food security in vulnerable regions.

Beyond its economic significance, coconut farming plays a crucial role in environmental conservation and climate change mitigation. Coconut palms are resilient to extreme weather conditions, including hurricanes and cyclones, making them valuable assets in disaster-prone areas. Moreover, coconut plantations serve as carbon sinks, sequestering carbon dioxide from the atmosphere and mitigating the impacts of climate change.

The environmental benefits of coconut farming extend to soil conservation and biodiversity preservation. Coconut palms help prevent soil erosion, stabilize coastal ecosystems, and provide habitat and sustenance for diverse flora and fauna. Sustainable coconut farming practices, such as intercropping and agroforestry, further enhance ecosystem resilience and promote biodiversity conservation.

In conclusion, the importance of going into coconut farming cannot be overstated. As we navigate the challenges of a rapidly changing world, embracing sustainable agricultural practices like coconut farming offers a pathway towards prosperity, sustainability, and resilience. By harnessing the potential of the "tree of life," we can unlock opportunities for economic growth, environmental stewardship, and community well-being, paving the way towards a brighter and more sustainable future.

Budding

By Mavis Essaba Mensah

Budding is a popular method of plant propagation used by farmers to grow new plants from existing ones. Here are some farm tips on how to perform budding effectively:

1. **Select the Right Time:** Timing is crucial when it comes to budding. Choose a time when the bark of the rootstock plant is slipping, meaning it's easily separated from the wood underneath. This typically occurs during the growing season when the bark is actively growing and can be easily manipulated.

2. **Choose Healthy Stock:** Ensure that both the rootstock (the plant you're budding onto) and the scion (the plant you're taking the bud from) are

healthy and free from diseases or pests. Healthy stock increases the chances of successful budding and promotes vigorous growth in the new plant.

3. **Prepare the Materials:** Have all your tools ready before you begin budding. You'll need a sharp budding knife or blade, rubber budding strips or grafting tape, and possibly a grafting sealant to protect the bud union.

4. **Select the Budwood:** Choose a healthy, actively growing bud from the desired plant variety. The bud should be plump and located in the leaf axils of the scion plant. Take care to select buds that are at the right stage of development and avoid using overly mature or immature buds.

5. **Prepare the Rootstock:** Make a T-shaped incision or a shield-shaped incision on the rootstock plant, depending on the type of budding you're performing. Carefully lift the bark to create a pocket for inserting the bud.

6. **Insert the Bud:** Gently insert the bud into the incision on the rootstock, ensuring that the bud shield fits snugly into the pocket you've created. Take care not to damage the delicate bud during insertion.

7. **Secure the Bud:** Use rubber budding strips or grafting tape to secure the bud in place. Make sure the bud is tightly wrapped to prevent moisture loss and to facilitate the union between the bud and the rootstock.

8. **Monitor and Maintain:** After budding, monitor the progress of the graft union regularly. Keep the budding area clean and free from weeds or competing growth. Water the newly budded plant appropriately to promote healthy growth.

9. **Be Patient:** Successful budding takes time, so be patient and allow the graft union to establish properly. Avoid disturbing the budding area unnecessarily and provide optimal growing conditions for the new plant.

By following these farm tips and techniques, you can increase your chances of successful budding and propagate new plants effectively on your farm.



SOIL, THE UNSUNG HERO

By Nana Ama Oforiwaa Antwi

The soil beneath our feet serves as the foundation of life, playing a crucial role in the growth and sustenance of plants. Its composition, structure, and nutrient content profoundly influence the health and productivity of vegetation.

The physical properties of soil, such as texture, porosity, and water retention capacity, directly affect plant root development and nutrient uptake. Soil with a balanced texture, containing the optimal mix of sand, silt, and clay particles, provides adequate aeration and drainage for roots to penetrate and access essential nutrients and water.

Furthermore, the chemical composition of soil determines its fertility and nutrient availability to plants. Essential macronutrients like nitrogen, phosphorus, and potassium, as well as micronutrients such as iron, zinc, and magnesium, are vital for plant growth and development. Soil pH levels also play a crucial role, influencing nutrient solubility and microbial activity in the rhizosphere.

Moreover, soil biology, including the presence of beneficial microbes and soil organisms, contributes to nutrient cycling, soil structure, and plant health. Mycorrhizal fungi form symbiotic relationships with plant roots, facilitating nutrient uptake and enhancing plant resilience to environmental stressors.

In essence, the soil serves as a dynamic living ecosystem, nurturing and sustaining plant life through its intricate web of physical, chemical, and biological interactions. Understanding the complex interplay between soil and plants is essential for optimizing agricultural productivity, promoting environmental sustainability, and ensuring food security in a changing world.

As stewards of the land, it is imperative that we recognize the invaluable contribution of soil to plant growth and nurture this precious resource for future generations.

Agriculture en Côte d'Ivoire : 5,3 millions pour restaurer les terres agricoles dégradé

Par Yosua Domedjui

Avec une contribution de 15 % au PIB, le cacao est le principal moteur de la croissance économique en Côte d'Ivoire. Le gouvernement encourage l'utilisation de méthodes de culture durables afin de réduire l'influence de l'industrie sur la couverture forestière.

Le 22 février, le projet "Scaling up transformative innovations in cocoa-based food systems, land use and restoration in Côte d'Ivoire" (SCOLUR-CI) a été officiellement lancé en Côte d'Ivoire par Kouadio Adaman, représentant du ministre de l'agriculture.

Ce nouveau projet, qui s'inscrit dans le cadre du Plan National d'Investissement Agricole de la Côte d'Ivoire (PNIA2), a un coût total de 5,3 millions de dollars et est soutenu par le Fonds pour l'Environnement Mondial (FEM).

Afin de restaurer les terres agricoles et forestières dégradées par la promotion de l'agroforesterie dans le secteur du cacao, le Centre international de recherche en agroforesterie (ICRAF) réalisera le projet en



partenariat avec le Conseil Café-Cacao et d'autres organismes publics.

Le projet devrait bénéficier à plus de 200 000 personnes et vise quatre zones forestières, notamment dans les régions de l'Indénié-Djuablin, de La Mé, du Cavally et du Guémon. La création de plans de gestion intégrée pour les paysages de cacao et de forêt sera l'objectif principal des activités, l'accent étant mis sur l'encouragement de techniques agroforestières durables.

Selon Mahama Zoungrana, Représentant de la FAO en Côte d'Ivoire, "les résultats attendus comprennent une restauration accrue des forêts sur 514 899 ha, une amélioration de l'efficacité et de la durabilité des chaînes de valeur du cacao sur 20 000 ha en agroforesterie, et une augmentation de la superficie du paysage forestier cacaoyer en conservation".

Les statistiques gouvernementales montrent que la superficie forestière du pays a diminué, passant de 17 millions d'hectares en 1960 à 3 millions d'hectares aujourd'hui, principalement en raison de la culture du cacao.

Investissement Majeur dans la Production de Noix de Macadamia en Afrique de l'Est et Australie

Par Yosua Domedjui

La production de noix de macadamia est principalement concentrée dans les sous-régions de l'Afrique de l'Est et de l'Afrique australe. La Tanzanie et le Kenya sont les principaux acteurs de cette dernière région.

La société française de gestion d'actifs Mirova a récemment donné 8,5 millions de dollars à l'entreprise suisse Pamoja, qui cultive et vend des noix de macadamia durables au Kenya et en Tanzanie.

Selon le site Internet local Capital Fm, cette aide financière permettra à l'entreprise d'étendre rapidement ses activités dans ces deux pays. L'objectif déclaré du groupe est d'aider plus de 13 000 petits agriculteurs et de gérer 6 200 hectares conformément aux normes de durabilité d'ici 2031.

"Grâce à notre partenariat avec Mirova, nous allons pouvoir accroître nos efforts pour soutenir l'utilisation rentable et durable des terres arables et former les producteurs aux meilleures pratiques de production. De plus, nous allons pouvoir renforcer notre outil industriel, a déclaré Guillaume Maillard, directeur général de Pamoja.

A travers sa filiale TenSenses, l'entreprise travaille déjà avec près de 6 000 petits producteurs au Kenya et exploite une usine de transformation industrielle de noix de macadamia. Macjaro, une filiale locale, supervise les opérations en Tanzanie et est actuellement engagée dans le développement d'un domaine agricole de plus de 350 hectares dans le pays.

Le groupe Pamoja a été créé en 2014 et est impliqué dans les industries du café et de la banane en Afrique de l'Est. Après l'Afrique du Sud, le Kenya est le deuxième producteur de noix de macadamia du continent. En 2021, le pays a récolté plus de 42 500 tonnes de noix, selon les statistiques officielles.

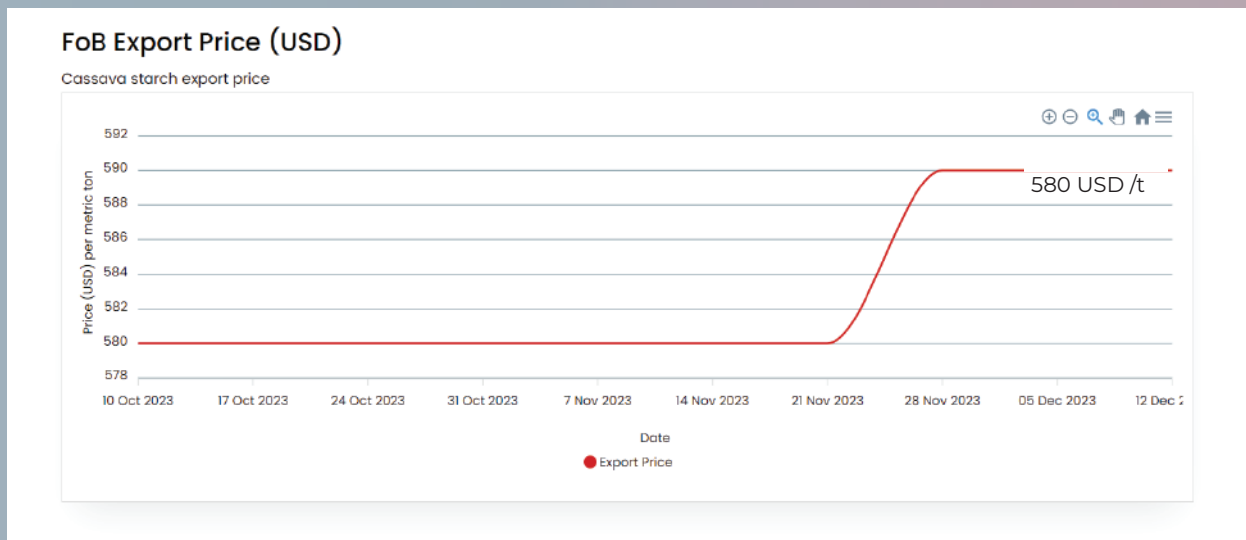


Price Trends

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.



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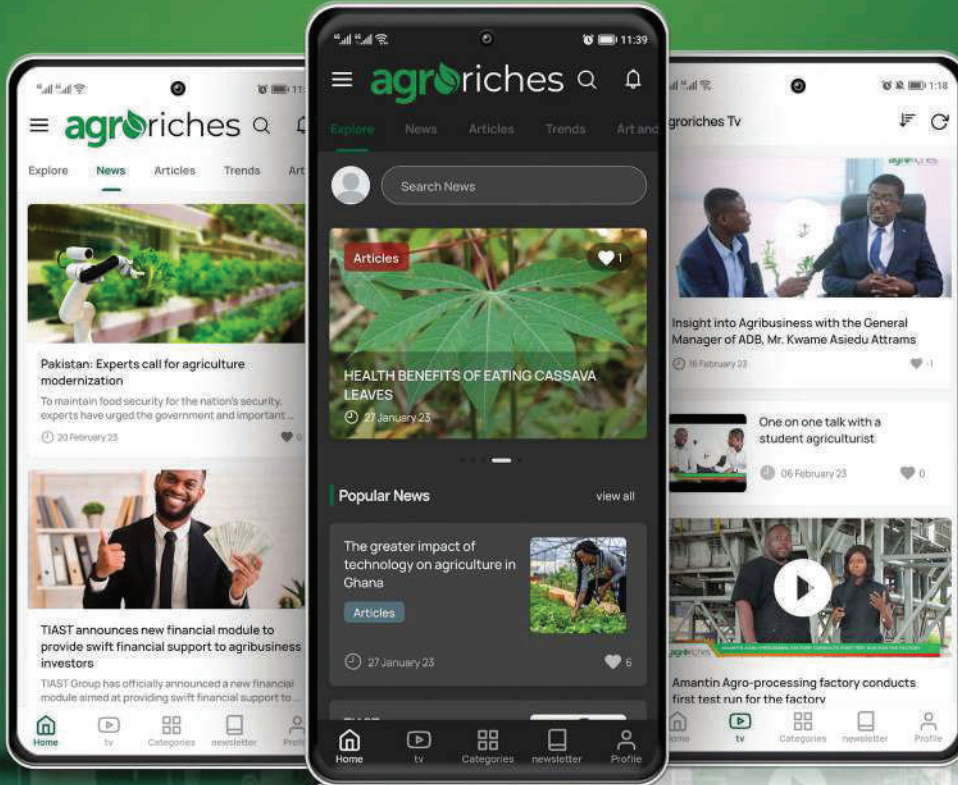
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