

# agr<sup>o</sup>riches

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## GHANA TODAY

Cocoa Farmers Applaud  
Akufo-Addo for cocoa  
producer price increase

## ARTICLE

Terraponics: The Synergy of  
Vertical Farming

## NOTRE CHRONIQUE

Agriculture en France : un  
projet de loi introduisant les  
prix planchers.

# THE ORGANIC REVOLUTION IN GHANA

MR. LIU NANA YAW - CEO, WINSTEP CO. LTD

JANUARY 2024





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**Executive Publisher**

Mr. David Tai

**Asst. Marketing Manager**

Mavis Essaba Mensah

**Creative Designer**

Bismark Kwabena Baiden

**Content Developers**

Prince Opoku Dogbey

Yosua Domedjui

Nana Ama Oforiwaa Antwi

**Senior Editorial Supervisor**

Prince Opoku Dogbey

**Information Technology**

Prince Kudowor

**Growth and Strategy Team**

Leo Chan

Mavis Essaba Mensah

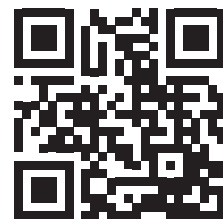
**Social Media Manager**

Chelsea Nkuah

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

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# CONTENTS



04



06



23



10



07



12

## EDITORIAL 04

The Need for Organic Farming:  
Cultivating a Sustainable Future

## CROP PROFILE 05

Black Sapote

## GHANA TODAY 06

Cocoa Farmers Applaud Akufo-Addo  
for cocoa producer price increase

## CONTINENTAL DIGEST 07

Zimbabwe Reaches New Heights In  
Agriculture Through Strategic Initiatives

## WORLD NEWS 08

European Farms See Shift in Prices:  
Modest Rises in Outputs, Sinking  
Costs for Inputs

## ARTICLE 09

Exploring the Eco-efficiency of  
Alley Cropping for Sustaining Farming

## TECHNOLOGICAL TRENDS 10

Rain Guage

## INSIGHT AFRICA 12

The Challenge of Food Security  
in Developing Countries

## CENTRE SPREAD 14

The Organic Revolution  
In Ghana

## THE PLATTER 16

Black Chapote Bread

## ARTICLE 17

Addressing the Urgency to Increase  
Food Production in Ghana

## ARTICLE 21

Terraponics: The Synergy  
of Vertical Farming

## NOTRE CHRONIQUE 22

Agriculture en France : un projet  
de loi introduisant les prix planchers.

## NOTRE CHRONIQUE 23

FAO : l'implication intensive dans  
la lutte contre le changement climatique



### Preserving Soil Health

Healthy soil is the backbone of successful agriculture, and organic farming places a strong emphasis on maintaining soil fertility and structure. By avoiding synthetic chemicals, organic farmers nurture a diverse microbial community in the soil, enhancing its ability to retain water, resist erosion, and support robust plant growth.

### Protecting Water Quality

Chemical runoff from conventional farms can contaminate water sources, posing risks to aquatic ecosystems and human health. Organic farming's reliance on natural fertilizers and pest control methods significantly reduces the likelihood of harmful substances entering waterways. As a result, organic practices play a crucial role in preserving water quality.

### Human Health and Safety

The impact of agricultural practices on human health is a growing concern. Residues from synthetic pesticides and fertilizers can find their way into the food we consume, potentially leading to health issues.

Embracing organic practices is not just a choice for the environmentally conscious; it is a step towards securing a healthier, more resilient future for our planet and generations to come.

# The Need for Organic Farming: Cultivating a Sustainable Future

By Prince Opoku Dogbey

In an era where the environmental impact of human activities is under scrutiny, the call for sustainable practices in every aspect of life has never been more urgent. One crucial area demanding attention is agriculture, with an increasing realization of the profound benefits of organic farming. As the world grapples with climate change, biodiversity loss, and concerns about chemical residues in our food, the need for organic farming has become paramount.

### Environmental Conservation

One of the primary arguments in favor of organic farming is its positive impact on the environment. Conventional farming often relies on synthetic fertilizers and pesticides that can leach into the soil and water, causing harm to ecosystems. In contrast, organic farming prioritizes natural processes, eschewing synthetic chemicals in favor of composting, crop rotation, and biological pest control.

# Black Sapote

By Prince Opoku Dogbey

Often referred to as the "Chocolate Pudding Fruit," the black sapote earned its name due to the rich, chocolate-like flavor and custard-like texture of its pulp when ripe.

## Origin

Black Sapote (*Diospyros texana*) is a tropical fruit native to Mexico and parts of Central America. Belonging to the family Ebenaceae, this evergreen tree thrives in warm, subtropical climates. It has been cultivated in various countries, including Australia, the Philippines, and parts of the United States, where it has adapted well to the conducive growing conditions.

## Description

The fruit has a green, somewhat unassuming exterior that belies the deliciousness hidden inside. As it ripens, the skin turns dark brown or nearly black, indicating its readiness for consumption. The flesh is smooth and velvety, resembling the consistency of chocolate pudding, hence its popular moniker.

## Health Benefits

### 1. Rich in Antioxidants

Black sapote is a notable source of antioxidants, such as vitamin C and carotenoids. These compounds help combat oxidative stress in the body, potentially reducing the risk of chronic diseases.

### 2. Dietary Fiber for Digestive Health

The fruit is high in dietary fiber, promoting a healthy digestive system. Adequate fiber intake supports regular bowel movements, prevents constipation, and contributes to overall gut health.

### 3. Vitamins and Minerals

Black sapote is a good source of essential vitamins and minerals, including vitamin A, potassium, and folate. These nutrients play crucial roles in maintaining vision, regulating blood pressure, and supporting cell division and DNA synthesis.

### 4. Heart Health

The potassium content in black sapote contributes to heart health by helping regulate blood pressure. Additionally, the fruit's low sodium content further supports cardiovascular well-being.



# Cocoa Farmers Applaud Akufo-Addo for cocoa producer price increase

By Prince Opoku Dogbey

Charles Gyemfi, President of the Best Cocoa Farmers Association, expressed gratitude during a courtesy call at the Jubilee House, praising the President for his unwavering support and commitment to the cocoa industry.

Gyemfi, a former National Best Cocoa Farmer, highlighted the disbelief among farmers when the government announced the unprecedented 2023/2024 producer price, stating, "If it goes on like that, we will not give you showdown but show up."

Reflecting on challenges faced prior to 2017, Gyemfi



mentioned the impact of the swollen shoot virus disease on cocoa trees. However, government intervention, involving tree cutting, farmer compensation, and tree replanting at no cost, successfully eradicated the disease and led to increased foodstuff production, providing additional income for farmers.

Gyemfi acknowledged government initiatives such as mechanization, irrigation, pruning, hand pollination, early mass spraying, and value addition, all of which contributed to uplifting the industry. The government's assistance also led to the creation of approximately 8,000 cooperatives and farmer groups.

Despite the commendation, Gyemfi appealed to the government to ensure sufficient funds for immediate payment to farmers at the start of the season, aiming to prevent smuggling.

President Akufo-Addo expressed gratitude for the farmers' recognition of government efforts, commending their substantial contributions to the country's economy over the years.

The farmers' delegation was led by COCOBOD's Chief Executive and Board Chairman, Joseph Boahen Aidoo, Peter Mac Manu, and Minister of Food and Agriculture, Dr. Bryan Acheampong.



# Zimbabwe Reaches New Heights In Agriculture Through Strategic Initiatives

By Prince Opoku Dogbey

The success comes as a testament to the effectiveness of the Land Reform program under the Second Republic.

Since the inception of the Second Republic, President Mnangagwa's emphasis on increased production and productivity in agriculture has yielded remarkable results. The country not only exceeded its initial agriculture target of US\$8 billion but also prompted a revision to a more ambitious goal of US\$13.75 billion by 2025.

Zimbabwe's achievements include record-breaking wheat, tobacco, and maize production under the Second Republic. The country now stands as the largest tobacco grower in Africa, ranking sixth globally. Notably, despite its smaller land area and population compared to top global producers like China and India, Zimbabwe boasts a significant tobacco production figure.

In the wheat sector, Zimbabwe is among the top eight producers in Africa, joining Ethiopia as one of the continent's two wheat self-sufficient countries. The nation has maintained food security for the past four seasons, producing wheat to cater to its population.

Beyond staple crops, Zimbabwe has also made a mark as one of the world's largest exporters of

*Zimbabwe is making waves in the agricultural sector, showcasing its prowess by achieving impressive yields in various crops and securing its position as a leader on the African continent.*

blueberries. The country's agricultural sector's revival has resulted in substantial global impact, with blueberry exports growing by an impressive 85 percent.

The positive trends extend to maize production, where Zimbabwe produced almost 2.3 million tonnes last season, showcasing continuous improvement despite regional comparisons with Zambia. The achievements in agriculture position Zimbabwe to reach its Vision 2030 goal of becoming an upper-middle-class society ahead of schedule. The success is attributed to the Agriculture Recovery and Growth Plan implemented in 2020, reversing negative trends and propelling the sector to new heights.

President Mnangagwa's commitment to the irreversible Land Reform Programme has garnered support, leading to increased private sector participation and the creation of employment opportunities.





# EUROPEAN FARMS SEE SHIFT IN PRICES: MODEST RISES IN OUTPUTS, SINKING COSTS FOR INPUTS

By Nana Ama Oforiwaa Antwi

**A**fter two years of unstable price swings, European agricultural markets stabilized in 2023, with moderate increases in farm gate receipts and a welcome plunge in the cost of essential inputs. This data, released today by Eurostat, the EU's statistics agency, paints a picture of a sector finding its footing after a turbulent spell.

Overall, the average price of agricultural goods across the EU climbed a modest 2% compared to 2022. However, beneath this headline figure lies a tale of contrasting fortunes for different products. Olive oil, basking in the glow of increased demand and limited supply, saw a staggering 54% price surge, while potato farmers pocketed an extra 23% thanks to widespread drought impacting yields. Pork and egg producers also joined the winners'

circle, with prices rising 22% and 20% respectively.

But not all sunshine and roses adorned the fields. Cereal farmers watched their income shrink by 26%, a direct consequence of ample global harvests putting downward pressure on prices. Similar, though less dramatic, dips were experienced for fruit (-5%) and poultry (-3%).

The story on the input side, however, was one of resounding relief. The average price of fertilizers and soil improvers tumbled 23%, a welcome respite for farmers grappling with soaring production costs in recent years. Energy lubricants followed suit, falling 12%, offering further breathing room.

However, not all input categories joined the downward trend. Plant protection products bucked the trend, with prices climbing 9%, likely reflecting ongoing concerns about crop pests and diseases. Seeds and planting stock also defied the general decline, registering a 9% price increase.

Weather played a starring role in this agricultural price drama. The aforementioned drought, while a boon for potato growers, pushed up prices in 24 EU countries, with Germany, Slovakia, and Croatia witnessing the most dramatic increases. Conversely, fertilizer prices, heavily influenced by falling gas prices, saw drops in 22 member states, with Luxembourg, Sweden, and Finland enjoying the steepest declines.



# WINSTEP COMPANY LIMITED

PFRD Registration Number: PFRD/PR/23/395-1

# GR



+233 244 265 471

+233 249 906 891

GA-226-8929, Un House, Prof. Atta Mills High Street Accra - Ghana

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*Koma ni Yengolinga ka kpigi anfaani bindirigu ka kanbong pali*

*Bo eka ketewaa bi wo kua ye ho na nya nnobae pa  
a ahoden wo mu ne sika bebre*

*Tso ga homevi ađe de agbledede me; eye wo nukuwo nava nyuie,  
eye na zu hotsuito*

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# Rain Guage

By Prince Opoku Dogbey



By strategically placing these instruments across fields, farmers can gather localized data, allowing for nuanced decision-making. Modern rain gauge equipment often comes equipped with wireless connectivity, enabling real-time data transmission to centralized systems. This connectivity ensures that farmers receive timely information, enabling them to respond promptly to changing weather conditions.

In the intricate dance between nature and agriculture, understanding and managing water resources is paramount. Among the tools crucial to this endeavor, the humble rain gauge emerges as a stalwart companion for farmers. In the agricultural landscape, where precipitation levels dictate planting schedules, irrigation needs, and overall crop health, rain gauge equipment plays a pivotal role in informed decision-making.

A rain gauge is a straightforward yet indispensable instrument designed to measure the amount of rainfall in a specific area over a given period. Its importance in agriculture cannot be overstated, as rainfall is a primary factor influencing crop growth and yield. Farmers rely on accurate rainfall data to determine when to plant, irrigate, or harvest, aligning their actions with the natural rhythm of precipitation.

Precision in agriculture is a growing trend, and rain gauges contribute significantly to this shift.

In water-scarce regions, where every drop counts, rain gauges aid in efficient water management. Farmers can optimize irrigation schedules based on actual rainfall data, preventing over-irrigation and conserving this precious resource. This not only benefits the environment but also contributes to cost savings for farmers.



Furthermore, the historical data collected by rain gauges becomes a valuable resource for long-term planning. Farmers can analyze trends, understand climate patterns, and make informed decisions about crop selection and land management practices. This foresight is especially crucial in the face of climate change, where unpredictable weather patterns pose new challenges to agricultural productivity.

As technology continues to advance, integrating rain gauge data into smart farming systems holds immense potential. Automated weather stations and sensor networks, working in tandem with rain gauges, can provide a comprehensive view of environmental conditions. This holistic approach empowers farmers with the knowledge needed to navigate the uncertainties of weather and climate, fostering resilience in agriculture.

In conclusion, the unassuming rain gauge stands as a guardian of agricultural sustainability.

In the ever-evolving landscape of agriculture, the spotlight is increasingly turning towards organic fertilizers as the unsung heroes of sustainable farming. As the awareness of the connection between food and health grows, understanding the role of organic fertilizers becomes pivotal in cultivating a nourishing and wholesome environment for crops.

Unlike their synthetic counterparts, organic fertilizers are derived from natural sources, such as plant and animal matter, compost, and other organic residues. These fertilizers harness the power of nature's recycling system, providing a holistic approach to plant nutrition. Common examples include compost, manure, bone meal, and seaweed extracts.

One of the key advantages of organic fertilizers lies in their ability to deliver a diverse array of nutrients. Beyond the traditional trio of nitrogen, phosphorus, and potassium (NPK), organic fertilizers contain a spectrum of micronutrients essential for plant growth. This nutrient complexity contributes to the development of robust, nutrient-rich crops that, in turn, nourish those who consume them.

The environmental footprint of organic fertilizers is significantly lighter compared to their synthetic counterparts. Or-

# Organic fertilizers, the best way to go?

By Prince Opoku Dogbey



ganic farming practices emphasize a closed-loop system where organic residues are recycled, reducing reliance on external inputs. This approach minimizes the risk of soil and water contamination, fostering healthier ecosystems and safeguarding biodiversity.

The benefits of organic fertilizers extend beyond the fields, impacting human health in profound ways. By avoiding the use of synthetic chemicals, organic farming reduces the risk of residual pesticides and chemical fertilizers in the food chain. Consumers can enjoy produce that is not only free from harmful residues but also packed with essential nutrients, contributing to overall well-being.

The symbiotic relationship between organic fertilizers and soil health is a cornerstone of sustainable agriculture. Organic fertilizers enhance soil structure, water retention, and microbial activity. This, in turn, creates an environment where plants can thrive naturally, fostering resilience against pests and diseases without the need for chemical interventions.

As the embrace of organic agriculture grows, it becomes not just a choice for the environmentally conscious but a pledge towards a healthier, more sustainable future for our planet and its inhabitants.



Inadequate infrastructure and limited access to markets are additional hurdles. Insufficient transportation and storage facilities often result in post-harvest losses, reducing the overall availability of food. Unequal distribution systems hinder the efficient flow of goods from surplus to deficit regions within a country, compounding this issue.

Socio-economic factors, such as poverty and a lack of education, contribute to the complexity of the food security challenge. Impoverished communities often lack the means to invest in modern agricultural technologies, limiting their productivity. Moreover, a lack of education hampers the adoption of sustainable farming practices that could enhance yields without depleting natural resources.

Addressing food security in developing countries requires a multifaceted approach. Investing in climate-resilient agriculture, improving infrastructure, and establishing fair and efficient market systems are crucial steps. Empowering local communities through education and providing them with the tools to enhance their agricultural practices can foster sustainable development.

International collaboration is equally vital, as global issues like climate change and trade policies significantly impact local food systems. Through fostering partnerships, sharing knowledge, and implementing targeted interventions, the global community can strive to uphold the right to food for every individual, regardless of their geographic location or economic status. Achieving a more food-secure future in developing countries requires a collective effort to overcome challenges and pave the way.

# The Challenge of Food Security in Developing Countries

By Nana Ama Oforiwaa Antwi

Food security remains a critical global concern, particularly in developing countries, where populations often struggle to meet their basic nutritional needs. The intricate interplay of factors such as climate change, limited resources, and socio-economic challenges poses a constant threat to the availability, accessibility, and utilisation of food. This article delves into the challenges faced by developing nations in ensuring food security and explores potential solutions.

One of the primary challenges is the vulnerability of agriculture to the adverse impacts of climate change. Erratic weather patterns, extreme events, and shifting precipitation can lead to crop failures and reduced yields, jeopardising the livelihoods of millions dependent on agriculture. As many developing countries heavily rely on rain-fed agriculture and lack the resources to invest in resilient farming





## Farmland Globally

Do you know that half the habitable land on earth is used for farming?

## Coconut Husk

Coconut husk is an excellent alternative to traditional soil, offering good aeration and water retention properties.



# THE ORGANIC REVOLUTION IN GHANA

**In the ever-evolving tapestry of agriculture, the resurgence of organic farming is reclaiming its roots in Ghana. Amidst the historic reliance on traditional practices, the advent of synthetic fertilizers temporarily shifted the paradigm, yet the unintended consequences prompted a return to the organic essence.**

**O**rganic farming, deeply rooted in our heritage, has witnessed a resurgence, and its benefits are now more profound than ever. With the agricultural landscape undergoing a transformation, we sought insights from the forefront of this organic revolution.

Mr. Liu Nana Yaw, the Chief Executive Officer of Winstep Company Limited, a visionary force behind the introduction of Comcat fertilizer to the market spoke to Agroriches TV in an interview.

According to him, Winstep's commitment to unlocking the potential of Ghana's agricultural sector through organic fertilizers became evident. Comcat, a recently certified organic fertilizer by the Ministry of Food and Agriculture's Plant Protection and Regulatory Services Directorate (PPRSD), has emerged as a game-changer, garnering attention for its promise of delivering higher and healthier crop yields.

Mr. Liu Nana Yaw emphasized the transformative power of Comcat, noting its efficacy in enhancing crop yields. The fertilizer has earned the moniker, "Invest Less, Benefit More, Get Rich," epitomizing its value proposition. By choosing Comcat, farmers not only reduce investment costs in fertilizers but also witness amplified benefits, ultimately fostering prosperity.

Comcat distinguishes itself through user-friendly application methods and an organic composition, making it the preferred choice for farmers seeking a reliable and effective solution to enhance crop growth.

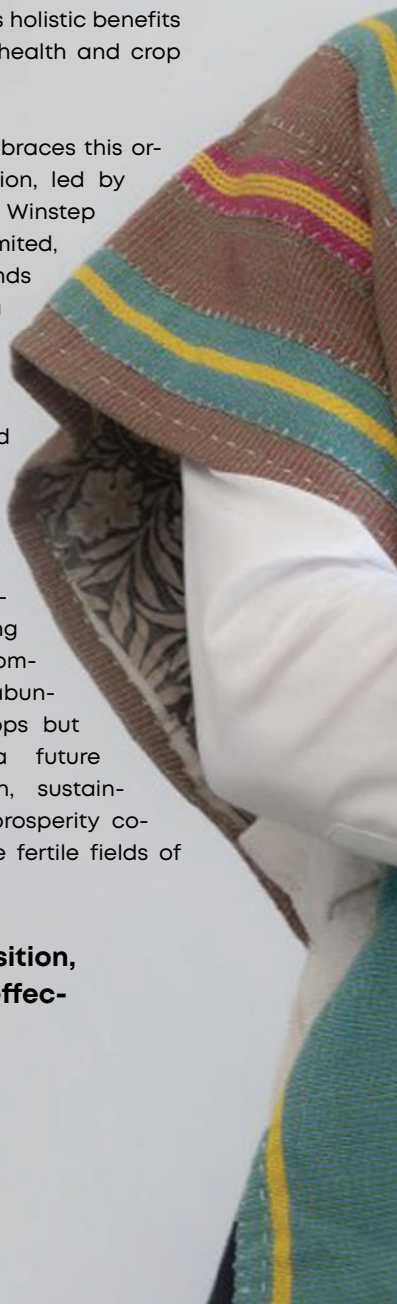
The Director, Mr. Hope Nyadi, underscored the health-friendly nature of Comcat. He urged farmers to embrace this fertilizer, highlighting its origin from the earth, reinforcing soil health, and promoting the growth of nutrient-rich, healthy foods.

Comcat's non-toxic composition ensures environmental harmony, aligning with sustainable agricultural practices. The positive impact on vital metabolic processes, such as photosynthesis and respiration in plants

and crops, reduces stress loads on crops, contributing to enhanced overall yield. Agronomist Philemon Mensah further elaborated on Comcat's soil-friendly attributes, elucidating its holistic benefits for both soil health and crop vitality.

As Ghana embraces this organic revolution, led by the likes of Winstep Company Limited, Comcat stands not just as a fertilizer but as a symbol of sustainable and prosperous agricultural practices. The journey towards organic farming beckons, promising not just abundance in crops but cultivating a future where health, sustainability, and prosperity coalesce on the fertile fields of Ghana.

**“Comcat’s user-friendly application methods and organic composition, makes it the preferred choice for farmers seeking a reliable and effective solution to enhance crop growth.”**





# LIU MAMA YAW

CEO, WINSTEP COMPANY LIMITED

# Black Chapote Bread

By Nana Ama Oforiwaa Antwi

The black chapote fruit is also known as the chocolate pudding fruit and as such, is usually used for puddings. But today, we are making a loaf of delicious bread, with this unique fruit!

## Ingredients

1 ripe black sapote  
1/2 stick of butter, melted (equal to 1/2 cup)  
1 egg, beaten  
2 teaspoons vanilla extract  
1 teaspoon baking soda  
pinch of salt  
1 1/2 cups of all-purpose flour  
3/4 cup sugar

## Instructions

1. Cut the black sapote in half and using a spoon, scoop out the soft fruit into a medium-sized bowl and remove the seeds.
2. Add the melted butter to the black sapote and mash together with a fork.
3. Next, stir in the sugar, vanilla, and egg.
4. In a separate bowl, mix the flour, baking soda, and salt.
5. Pour it into the bowl with the black sapote and mix with a fork until it's well blended.
6. Pour into a greased bread pan and bake at 350 degrees for one hour. (You can use one regular-sized bread pan or two mini bread pans.)



**Let it cool, then enjoy!**



# Addressing the Urgency to Increase Food Production in Ghana

By Prince Opoku Dogbey

**In Ghana, the call to bolster food production echoes with urgency as the nation navigates the complex interplay of population growth, economic development, and global uncertainties. With a population expected to surge in the coming years, the need to augment food production has never been more critical.**

**R**apid population growth directly translates to an increased demand for food. By 2050, Ghana's population is anticipated to surpass 40 million. To ensure food security for all citizens, it is imperative to enhance agricultural output. A robust agricultural sector not only meets the nutritional needs of the population but also serves as a catalyst for economic growth, offering employment opportunities and fostering rural development.

Global challenges, including cli-

mate change and fluctuating commodity prices, further underscore the necessity for a self-sufficient food production system. By enhancing local production, Ghana can mitigate the impact of external shocks on its food supply, ensuring resilience in the face of a changing climate and global economic uncertainties.

Moreover, an increase in food production aligns with Ghana's vision for economic transformation. Agriculture remains a cornerstone of the nation's economy, and a boost in food production contributes to poverty reduction, rural livelihood improvement, and overall economic stability.

As Ghana charts its course towards a sustainable and food-secure future, the imperative to increase food production is not merely a policy directive but a collective responsibility.

By investing in agricultural innovation, technology, and supportive policies, Ghana can not only feed its growing population but also position itself as a key player in the global food landscape. The journey towards increased food production is a path to resilience, prosperity, and a more sustainable future for the people of Ghana.



# Alley-We Go

Trees to the left  
Fruits to the right  
Onwards we go one logo line  
arms-stretched forward looking right ahead  
our commander in between the alleys, inspecting  
our lines  
he checks if we are upright  
he checks if we look faint  
with his strict eyes he watches for a moment  
with his sharp turns, he watches for change  
we all stand at attention, waiting for his command  
when to take a break, when to eat, when to drink  
water, and when to return home.  
When it seemed the command would never come  
When we lost track of listening  
Just like a sunshower  
Loud as the mower  
He barked.  
Alley, We Go!

— Poem By Nana Ama Oforiwaa Antwi

# Terraponics: The Synergy of Vertical Farming

By Nana Ama Oforiwaa Antwi

In the quest to find sustainable ways to increase the world's food production while sustaining our resources, several innovative methods have been introduced into the world. This includes climate-smart practices such as vertical farming, which entails hydroponics, aquaponics, aeroponics, and terraponics. While the first three have become somewhat popular, terraponics, on the other hand, is not as popular as its fellows.

Let's talk about what terraponics is all about.

The word "terra" is Latin for earth. This method of vertical farming integrates terrestrial and aquatic ecosystems to create a harmonious environment that maximises productivity while minimising environmental impact.

Terraponics utilises a system where plants grow in the soil while receiving nutrient-rich water from an aquaponic system. This synergy between soil- and water-based cultivation methods addresses some of the limitations associated with each approach individually.

In a terraponics system, fish waste from the aquaponic component provides essential nutrients to the soil, promoting plant growth. This nutrient-rich water is then recirculated

back to the aquaponic system, completing a closed-loop cycle that minimises resource waste. This sustainable approach not only conserves water but also reduces the need for chemical fertilisers, making terraponics an environmentally friendly alternative.

One of the key advantages of terraponics is its versatility. Unlike traditional agriculture, which heavily relies on arable land, and hydroponics, which solely relies on soluble nutrients, terraponics fuses the latter with aquaponics and can also be implemented in a variety of settings, including urban environments with limited space. This flexibility makes it an attractive option for addressing food security challenges in densely populated areas.

Furthermore, terraponics promotes biodiversity by fostering a balanced ecosystem. Fish in the aquaponic system play a crucial role in maintaining water quality, while beneficial organisms in the soil contribute to overall plant health. This holistic approach minimises the need for pesticides and herbicides, creating a more resilient and self-sustaining agricultural system.

As the world grapples with the increasing demand for food production and the need to mitigate

environmental impact, terraponics stands out as a promising solution. By harnessing the strengths of both soil and aquaponic cultivation methods, terraponics offers a glimpse into the future of sustainable agriculture—one where efficiency, resource conservation, and environmental stewardship go hand in hand.

# Smart Farming Investment Tips

By Jessica Meledi

**Embarking on a farm business requires more than just a green thumb; it demands strategic planning, financial acumen, and a keen understanding of the agricultural landscape. Here are some tips to ensure you invest wisely and cultivate success in your farm business:**

### 1. Comprehensive Business Plan

Start with a well-thought-out business plan that outlines your goals, target market, crop or livestock selection, and financial projections. A comprehensive plan serves as a roadmap, guiding your investment decisions and business growth.

### 2. Market Research and Trends

Stay abreast of market trends and consumer demands. Conduct thorough market research to identify niche opportunities, assess competition, and understand pricing dynamics. A keen understanding of the market will inform your crop or livestock choices.

### 3. Diversification Strategies

Diversification is a key risk management strategy. Explore multiple revenue streams within your farm business. This could include diverse crops, value-added products, agritourism, or even partnerships with local businesses.

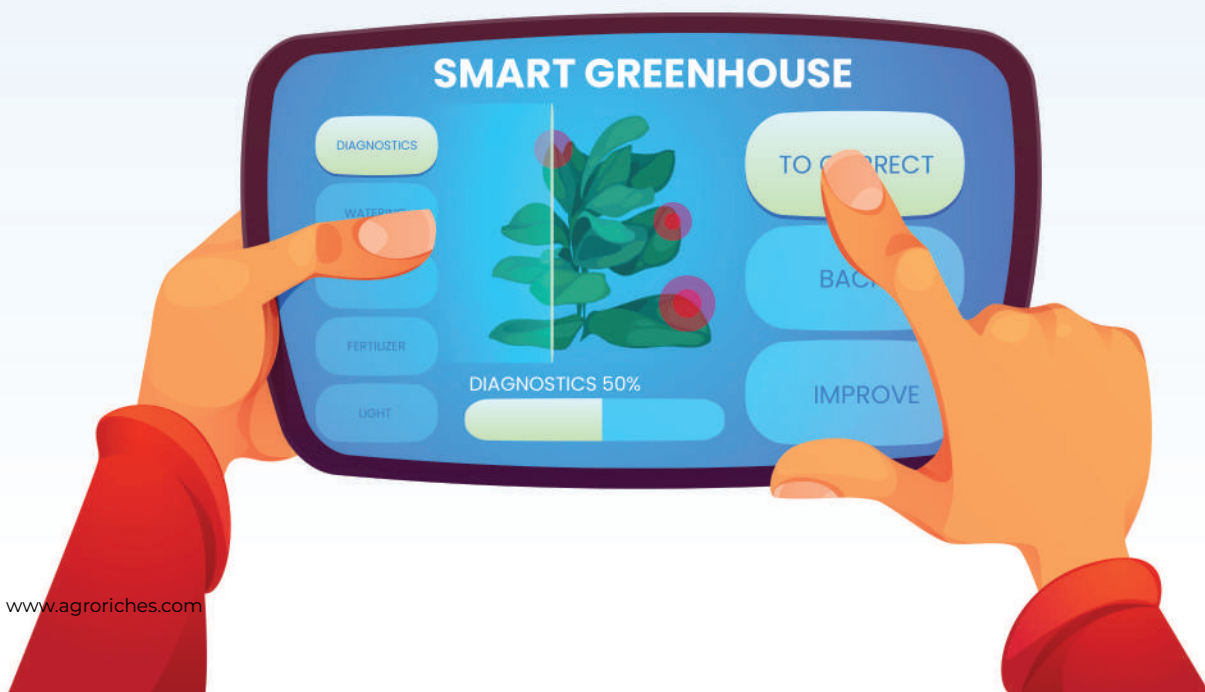
### 4. Invest in Technology

Embrace agricultural technology to enhance efficiency and productivity. Precision farming, automated irrigation systems, and data analytics can optimize resource use, reduce costs, and improve overall farm management.

### 5. Soil Health and Sustainable Practices:

Prioritize soil health and adopt sustainable farming practices. Investing in soil testing, organic fertilizers, and crop rotation not only ensures long-term productivity but also aligns with growing consumer preferences for sustainable agriculture.

By adhering to these farm investment tips, you lay a solid foundation for a thriving and sustainable agricultural venture. Remember, successful farming is not just about cultivating crops or raising livestock; it's about cultivating a business that flourishes in harmony with the land and changing market dynamics.



# Exploring the Eco-efficiency of Alley Cropping for Sustaining Farming

By Nana Ama Oforiwaa Antwi

**A**s the world is determined to find sustainable ways to increase production, several innovative methods of farming have emerged to support this feat, and among the tall list is alley cropping.

According to N.V. Thevathasan and P.K.R. Nair, in the second edition of the Encyclopaedia of Soils in the Environment, researchers introduced the method in the 1970s and 1980s in the tropics as an alternative to the long-term fallows of shifting cultivation.

This method has, in recent times, emerged as a promising technique that integrates the cultivation of trees with traditional crop farming. This method integrates

the cultivation of trees with traditional crop farming by planting rows of trees and/or shrubs to create alleys where



agricultural or horticultural crops are produced. The trees may include valuable hardwood veneer or lumber species, nut or other specialty crop trees or shrubs, or desirable softwood species for wood fibre production. The intentional combination of these components brings about numerous ecological and economic benefits.

One of the primary advantages of alley cropping is enhanced biodiversity. The presence of trees fosters a diverse ecosystem, attracting beneficial insects and providing a habitat for birds. This natural balance can help control pests and reduce the need for chemical pesticides, promoting a more sustainable and eco-friendly farming approach.

Alley cropping also contributes to improved soil health. The trees' root systems prevent soil erosion, and as leaves fall, they add organic matter to the soil, enhancing its fertility. The diverse root structures of both crops and trees create a more complex and resilient soil profile, reducing nutrient runoff and improving water retention.

From an economic standpoint, alley cropping can offer farmers a diversified income stream. Planting timber or fruit-bearing trees in the alleys can provide additional products and revenue, complementing the income generated from the main crops. This diversification not only helps stabilise income but also increases the overall resilience of the farming system.

Furthermore, alley cropping is recognized for its potential to mitigate climate change. As climate crises result in complications in the agricultural sector, the trees absorb carbon dioxide from the atmosphere, acting as carbon sinks and contributing to overall carbon sequestration. Alley cropping is a testament to agriculture's innovation and adaptability. By integrating trees into crop production, farmers can create a more resilient, biodiverse, and economically viable farming system.

# Agriculture en France : un projet de loi introduisant les prix planchers.

Par Prince Feliho

**D**ans un rapport publié ce mercredi, les députés préconisent l'instauration de prix minimums pour les produits agricoles, parmi une cinquantaine de recommandations visant à promouvoir des pratiques agricoles plus respectueuses de la biodiversité.

Hubert Ott (MoDem) et Manon Meunier (LFI), les auteurs du rapport, conseillent « d'assurer un revenu minimum aux agriculteurs en fixant des prix minimums pour les produits agricoles et en limitant les marges ».

Cette clause était un élément essentiel d'une proposition de loi des Insoumis qui a été rejetée le 30 novembre dernier par une faible marge de voix alors qu'elle était combattue par la majorité. Les Insoumis ont déclaré mardi qu'ils reprogrammeraient un projet de loi introduisant ces prix planchers. Lors d'une conférence de presse, Mme Meunier a affirmé que ces prix planchers sont essentiels à la "résilience économique" des exploitations agricoles et à l'autonomisation des agriculteurs dans le cadre de la transition écologique.

Un membre de la majorité, M. Ott, a nuancé son soutien à cette proposition en déclarant : « Je ne pense pas que les conditions soient réunies pour que nous puissions le faire, car nous ne pouvons pas utiliser quelque mesure que ce soit pour encourager l'importation de produits moins respectueux de l'environnement ». Le prix plancher est un objectif que nous pouvons nous fixer.

Les rapporteurs proposent, entre autres, de "créer un chèque alimentaire pour l'achat de produits biologiques sous condition de ressources" et d'inciter les agriculteurs à prendre plus de risques en créant un fonds d'assurance mutuelle financé par l'industrie agrochimique pour les dédommager en cas de baisse ou de perte de récoltes.

Mme Meunier est la seule à mettre en œuvre certaines mesures, comme le retrait des négociations et des traités de libre-échange ou la suppression du label "Haute valeur environnementale", considéré comme concurrent du label "Agriculture biologique", plus contraignant.





## FAO : l'implication intensive dans la lutte contre le changement climatique

Par Pavel Chamabe

« L'Organisation météorologique mondiale (OMM) a officiellement reconnu l'année 2023 comme la plus chaude depuis que l'on tient des registres climatiques, selon ses annonces les plus récentes »

Kaveh Zahedi, chef de la division climatique de l'Organisation des Nations unies pour l'alimentation et l'agriculture (FAO), souligne le rôle essentiel que joue l'agriculture dans l'atténuation du changement climatique et la sécurité alimentaire mondiale, à une époque où les températures augmentent de façon alarmante.

**Cette affirmation est faite à la lumière du fait que 2023 a été officiellement déclarée l'année la plus chaude jamais enregistrée.**

Ces données surprenantes indiquent que la température moyenne annuelle de la planète en 2022 était supérieure de près de 1,5 degré Celsius aux niveaux préindustriels, ce qui souligne la nécessité impérieuse de lutter contre le changement clima-

tique.

Kaveh Zahedi souligne les conséquences importantes des phénomènes météorologiques extrêmes tels que les incendies de forêt, les sécheresses et les inondations, et met en garde contre l'indifférence à l'égard de ces phénomènes inquiétants. Il souligne que les communautés agricoles de première ligne sont particulièrement touchées par ces événements et insiste sur la nécessité de prendre des mesures préventives.

"Nous ne pouvons pas nous contenter d'être des observateurs passifs d'un climat en mutation, et l'agriculture a un rôle central à jouer", a déclaré M. Zahedi.

Les systèmes agroalimentaires ont un potentiel important de réduction des émissions de gaz à effet de serre, alors qu'ils contribuent simultanément à environ un tiers des émissions de gaz à effet de serre. Selon Kaveh Zahedi, des méthodes agricoles plus résilientes, durables et efficaces peuvent aider les nations à s'adapter aux conditions changeantes et à réduire

les émissions tout en maintenant l'accès universel à la nourriture.

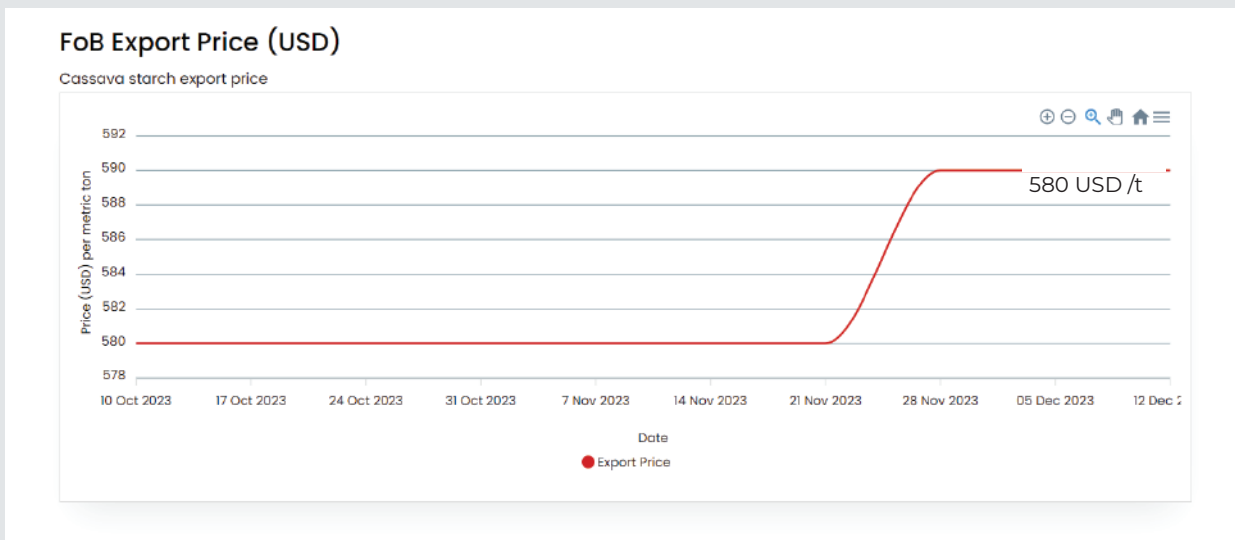
L'idée principale est que l'agriculture durable permet d'atteindre un niveau d'émissions nettes nulles dans le domaine de la production alimentaire. En outre, Kaveh Zahedi souligne le potentiel du secteur pour la production d'énergie renouvelable et explique comment les exploitations agricoles peuvent utiliser des solutions énergétiques intelligentes pour devenir des producteurs d'énergie renouvelable.

La FAO collabore activement avec les nations pour créer et mettre en pratique des stratégies qui augmenteront la résilience des systèmes agroalimentaires face au changement climatique. Le partenariat de la FAO avec le Fonds pour l'environnement mondial (FEM), qui a soutenu plus de 120 pays dans des projets visant à améliorer l'environnement mondial, est un exemple réussi de ce type de coopération.

# 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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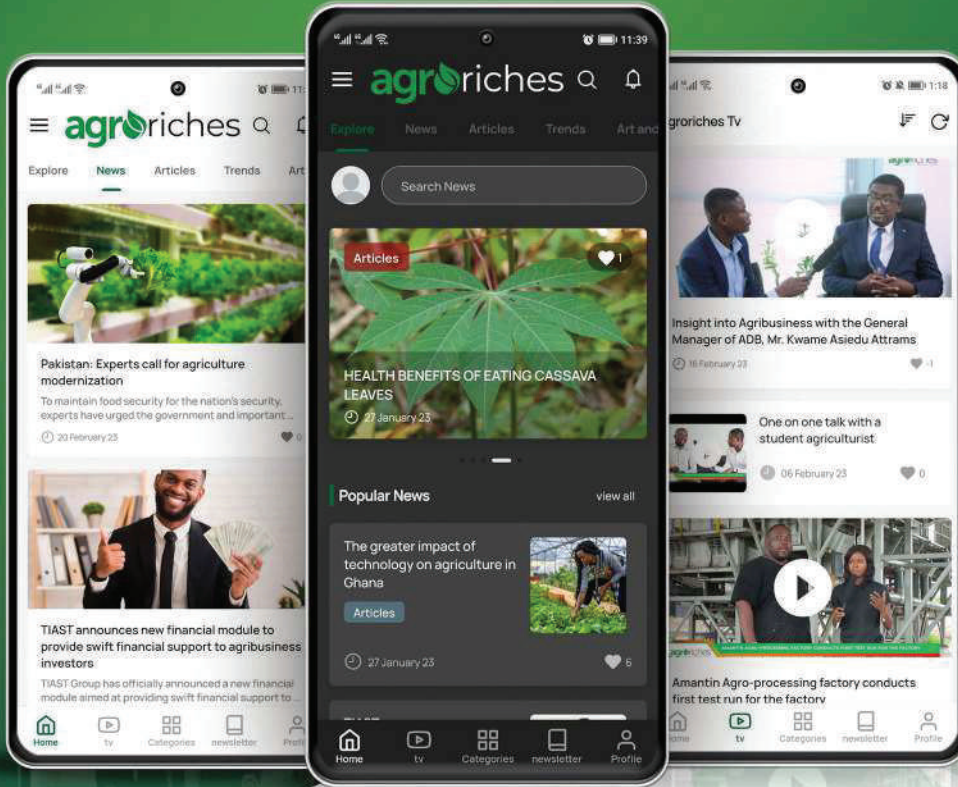
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