



THE MEST AFRICA AGRITECH REPORT



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Director's Note

Agriculture is the backbone of West Africa's economy and identity, yet millions of farmers remain underserved by finance, infrastructure, and markets. This report on the AgriTech landscape in Ghana and West Africa highlights both the depth of these challenges and the remarkable ingenuity of African entrepreneurs building solutions.

At MEST Africa, we believe that technology, when applied with local insight, can unlock new levels of resilience and opportunity for farmers. Through the MEST Africa Challenge 2024, we saw firsthand how startups are tackling post-harvest losses, mechanization gaps, and market access barriers with creativity and grit. From locally manufactured equipment to mobile-first platforms, these ventures are proving that African AgriTech is not just about solving problems; it is about shaping the future of food systems on the continent.

This report is more than a reflection of where we are; it is a call to action. The path ahead demands greater collaboration among entrepreneurs, investors, governments, and development partners to ensure that the promise of AgriTech reaches every farmer, especially the smallholder farmers who feed our communities.

MEST Africa will continue to stand with these innovators; equipping, funding, and amplifying them as they turn challenges into scalable opportunities. Agriculture is not only our past; with the right tools and partnerships, it can be our most powerful driver of inclusive growth.



Ashwin Ravichandran

Programs and Portfolio Advisor, MEST Africa

Executive Summary

This report draws on insights from the 2024 MEST Africa Challenge (MAC), which, after running sector-agnostic tracks in past years, focused exclusively on AgriTech in 2024. This pivot mirrors a broader shift among innovators, investors, and ecosystem players toward addressing agriculture's toughest challenges, especially as climate change and persistent food insecurity put millions at risk. Across West Africa, agriculture remains the foundation of livelihoods and economic growth. Over 50% of Ghanaians are engaged directly or indirectly in agriculture and contribute nearly 20 percent of the GDP^{1,2}. Yet, smallholder farmers, who cultivate fewer than 2 hectares on average, grapple with outdated practices, volatile weather, soil degradation, and post-harvest losses of up to 50 percent for perishables. Chronic financing gaps compound these stresses: Under 5 percent of bank lending in the region goes to agriculture³. The result is low yields (as of 2022, cereal yields averaged 1.65t/ha in Africa versus 4t/ha globally)⁴, high production costs and persistent import-export imbalances keep farmer incomes and living standards far below their potential.

In response, a vibrant wave of AgriTech startups and agripreneurs are harnessing mobile platforms, AI, IoT sensors, and solar-powered cold storage to modernize practices, boost yields, and link producers directly to buyers. Case studies, from Nigeria's ColdHubs solar cold rooms to Ghana's Sesi Technologies moisture meters and Complete Farmer's aggregator platform, demonstrate real impact: reducing food spoilage, increasing smallholder farmers income and empowering data-driven decision-making on the farm. Sesi Technologies' moisture meters can reduce food spoilage by 30 percent for smallholder farmers⁵. This report also maps the broader ecosystem, accelerators, incubators, investors, and enablers that support AgriTech growth in West Africa. Local hubs, such as the Kosmos Innovation Center (KIC) in Ghana, and pan-African leaders like MEST Africa, propel startups through training, mentorship, and seed funding.

In 2024, the MAC program awarded capital and support to AgriTech innovators poised for regional scale. Meanwhile, development partners (GIZ, EU AgriFI), corporate-NGO grants (e.g., ABSA, Mastercard AgriTech Grant), and venture capitalists (e.g., Catalyst Fund and AgDevCo) have collectively deployed millions of dollars to catalyze the next generation of Agri-innovations. Looking ahead, the report identifies the key challenges, on-farm productivity constraints, market-access hurdles, and the threats these gaps pose to food security and regional economies. It highlights how innovators and agripreneurs are deploying technology-driven solutions to address them. It further maps the ecosystem of accelerators, investors, and development partners that support innovators working on these solutions.

1. FAO (2023). Ghana at a glance

2. Statista (2023). Ghana - Share of Economic Sectors in the Gross Domestic Product 2013-2023.

3. FAO Credit to agriculture Global and regional trends.

4. AFDB. Feed Africa. Accessed October 2025.

5. Sesi Technologies (2025). Why Moisture and Pests Are Destroying Farmer's Grains and How to Stop It.

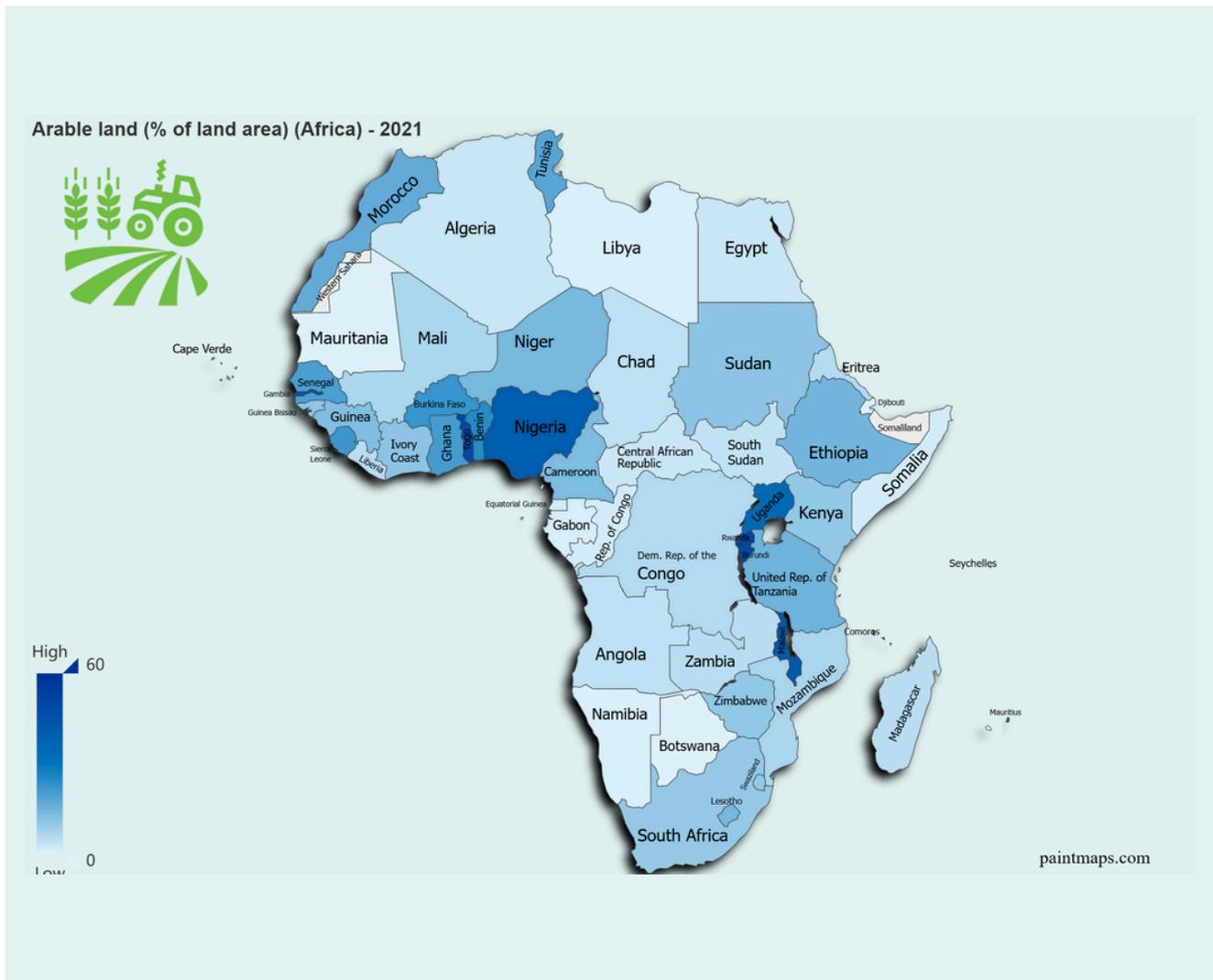


1. Introduction

From this Ancestral Soil to Digital Fields: The Agricultural Rebirth of West Africa

Africa has always been deeply rooted in agriculture. From the ancient irrigation systems of the Nile in Egypt to the expansive cocoa plantations of Ghana and Ivory Coast, farming is more than an economic activity. The continent holds about 65% of the world's uncultivated arable land, yet paradoxically, it still struggles to feed itself sustainably, but that is changing thanks to AgriTech⁶.

6. <https://tradingeconomics.com/nigeria/arable-land-hectares-wb-data.html>



Extent of arable land use in Africa

Today, African countries like Nigeria, Ghana, and Ivory Coast remain agricultural powerhouses in the West African subregion. Nigeria leads in crops like cassava and yams; Ghana and Ivory Coast together supply over 60% of the world's cocoa, with Ghana alone producing nearly 20% of the global supply and supporting three million livelihoods through cocoa farming^{7,8}. This deep agricultural heritage is matched by vast potential; Nigeria alone has over 36 million hectares of arable land⁹.

7. Flaherty, T.L. (2024). Around the world in eight commodities, episode one: Cocoa.

8. FreshPlaza.com (2023). Nigeria leads the world in yam, cassava and sweet potato production.

9. Tradingeconomics.com. (2024). Nigeria - Arable Land (hectares) - 2024 Data2025 Forecast 1961-2021 Historical.

Africa's Farmers Have Long Been at the Mercy of Nature

For generations, African farmers have lived at the mercy of environmental forces, drought, flooding, erratic rainfall, pest infestations, and wildfires. With limited access to weather data, insurance, or predictive tools, a single failed season could mean economic ruin. Climate change has only intensified these risks, while rapid population growth continues to outpace agricultural productivity.

Smallholder farmers, who constitute over 70-80% of Africa's farming population, are most exposed¹⁰. Farming on plots often smaller than 5 hectares¹¹, these producers form the backbone of food security but remain excluded from modern tools, finance, and markets.

The Rise of AgriTech: Building Resilience Through Innovation

In response to these challenges, Africa's agricultural landscape is undergoing a transformation. Across the continent, a new wave of innovators is reimagining how Africa grows, connects, and sustains its food systems — using technology to drive change in areas like



Climate-smart tools

from AI-powered weather forecasts to drought-resistant seeds.



Digital finance platforms

offering credit, insurance, and payments tailored to rural economies.



Processing, value addition and post-harvest technologies

from AI-powered weather forecasts to drought-resistant seeds.



Market linkages

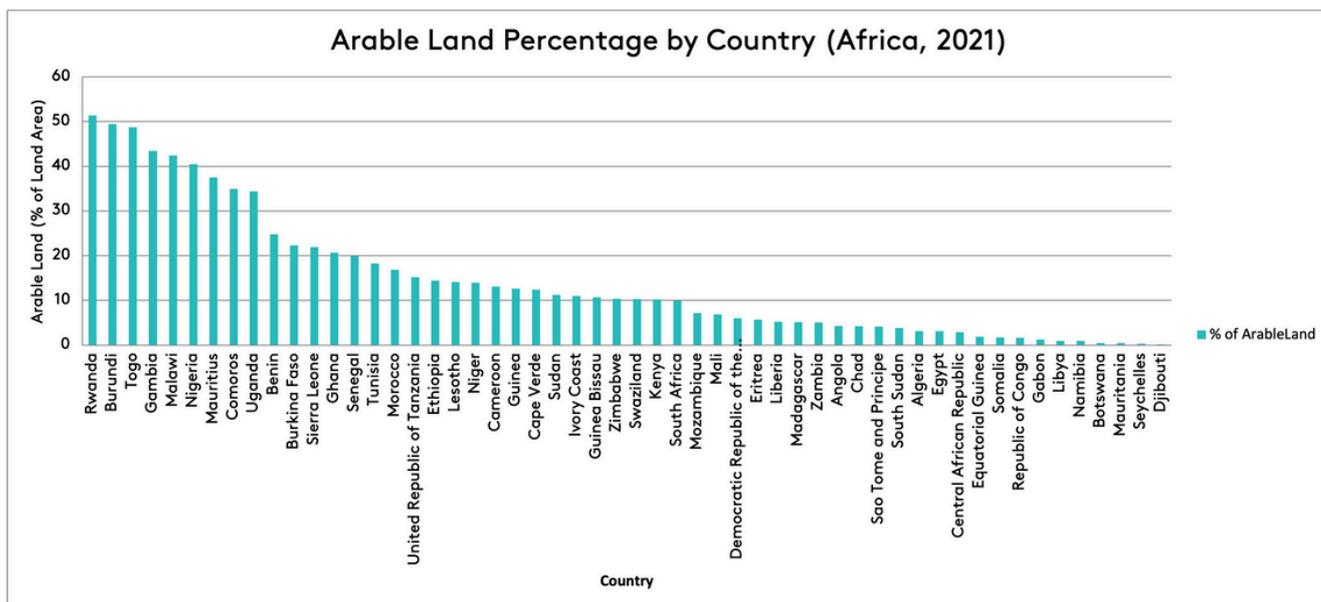
platforms that connect farmers directly to buyers, improving prices and reducing dependency on middlemen.

10. Hlophe-Ginindza, S.N. and Mpandeli, N.S. (2020). The Role of Small-Scale Farmers in Ensuring Food Security in Africa.

11. Fao.org. (2016). Subnational distribution of average farm size and smallholder contributions to global food production.

This AgriTech boom is not happening in isolation. It's being nurtured by a supportive ecosystem of incubators, accelerators, and government policies designed to support innovation. Across West Africa, governments are beginning to recognize the threats posed by climate change to agriculture and their economies, and technology's role in transforming it. Ghana, for example, has supported e-agriculture through initiatives like the Planting for Food and Jobs (PFJ) program, while programs and platforms like AgriHack, GreenTec Capital, and FAO-backed eagriculture programs are driving startup growth and visibility¹².

Crucially, Africa's youth are leading this transformation, leveraging mobile-first tools, AI, and digital platforms to move agriculture from a manual, vulnerable occupation to a tech-enabled, opportunity-rich industry. No longer just trying to survive nature, farmers, and the innovators who serve them, are learning to master it.



12. World bank (2017). Ghana: Agriculture Sector Policy Note.

Agricultural Market Overview in West Africa

West Africa's farm economy is a study in contrast. On one side, the region contributes to the global agricultural value chain with exports such as cocoa, cashew, cotton, and sesame, earning billions every year for economies like Nigeria, Ivory Coast, and Ghana. On the other side, the continent imports a mix of cash crops and staple foods, including chicken, dairy, grain, and farm inputs. This gap in local demand leaves a wide, promising gap for investors and innovators who can add value locally, boost animal protein supplies, and strengthen staple-crop production.

Cash Crops and Exports

Cash crops are central to West Africa's export economy. Cocoa dominates this space, with Ivory Coast and Ghana together supplying over 60% of global cocoa production¹³. In 2023, the EU's import of cocoa included 790,951 tonnes from Ivory Coast (worth \$2.27 billion) and 213,326 tonnes from Ghana (\$0.656 billion)¹⁴. Collectively, in 2023, West Africa exported approximately 3.1 billion kilograms of cocoa beans, valued at \$9.04 billion, with the EU (especially the Netherlands and Belgium) and Malaysia as the leading destinations¹⁵. Nigeria led global yam production with approximately 61.2 million tonnes valued at \$25 billion, making it the world's top producer.

That year, the country's cassava output reached nearly sixty-three million tonnes, representing over 20% of global output¹⁷. Cashew is another critical export commodity: in 2023, Nigeria exported 468.6 million kg valued at \$351 million, while Ghana exported 44.4 million kilograms (worth \$256 million), destined mainly for processing in India and Vietnam. Ivory Coast remains the regional leader with approximately 1.3 billion kg produced in 2023¹⁷.

Exports of coffee, cotton, tobacco, and sesame have also surged, notably making Nigeria one of the top global producers of sesame, signaling potential for productivity gains, though most raw exports fail to capture local value addition^{17,18}. Rice, one of the dietary staples in the region, is produced in many of the countries in the area, yet production falls short of local demand. Côte d'Ivoire leads in rice imports, valued at \$722 million per year, while other countries like Benin and Senegal also rely on imports in the hundreds of millions of dollars annually¹⁹.

13. Flaherty, T.L. (2024). Around the world in eight commodities, episode one: Cocoa .

14. Worldbank.org. (2023). European Union Cocoa beans, whole or broken, raw or roasted imports by country.

15. KPMG. Harnessing the potentials of the cash crops trading market in West Africa. Accessed October 2025.

16. Intelpoint, (2024). Yams led Nigeria's crop value in 2022 with \$25 billion

17. Otekunrin, O.A. (2024). Cassava (*Manihot esculenta* Crantz): a global scientific footprint—production, trade, and bibliometric insights.

18. Africa24 TV. (2024). Nigeria's Coffee Industry Aims for 2 Billion dollars Revenue by 2025

19. Adekunle Agbetiloye (2024). Top 10 African countries with the highest rice imports

The region also produces a wide variety of fruits and vegetables, including tomatoes, onions, chili peppers, pineapples, oranges, mangoes, and bananas. Production has nearly doubled since 1990, although export potential remains constrained by limited cold-chain infrastructure²⁰.



20. Egyir, I., Lartey, A., Amissah, N. and Elikplim, F. (n.d.). Report on the Horticulture Sector in West Africa. Accessed October 2025.

Livestock and Dairy

Livestock farming in West Africa remains informal and mainly subsistence-based, with millions of rural households keeping cattle, goats, sheep, or poultry for income and nutrition. In the Sahel (notably Mali, Niger, Burkina Faso, and northern Nigeria), nomadic and seminomadic pastoralism is common, with live animal trade supplying urban meat markets across borders, particularly to Nigeria and Ghana²¹. However, exports beyond Africa remain minimal due to constraints like animal diseases, low-yielding breeds, and lack of refrigerated infrastructure²².

Poultry demand has surged in West African cities, but local supply lags behind. In Ghana, for example, only 5-15% of poultry consumption is locally produced. Ghana currently imports over 240,000 MT of meat, that is, chicken, beef, and others, to make up for its meat deficit, costing the country over \$375 million annually²³.

The bulk of imports, however, are frozen chicken parts from Brazil, the U.S. and Europe²⁴. Despite protective tariffs, local producers struggle to compete with subsidized imports that benefit from cheaper feed and economies of scale.

Dairy markets also show high import dependency. In 2023, Nigeria imported dairy products worth \$568 million, relying on imports from the EU and New Zealand to fill the gap²⁵. According to the U.S. Department of Agriculture (2022), Ghana's dairy import market expanded by roughly 30% in 2021, reaching about \$127 million compared to \$97 million in 2020²⁶.

Across the region, milk consumption remains low, often under 10kg per person annually, but is steadily increasing with rising incomes²⁷. Yet challenges persist in the form of low-yield cattle, weak cold-chain systems, and the dominance of milk powder imports which hamper growth in local dairy production. To bridge this gap, investments in breed improvement, veterinary services, processing infrastructure, and storage will be vital for reducing import reliance and improving protein access in the region.

21. FAO. The role of livestock in food security, poverty reduction and wealth creation in West Africa.

22. Erdaw, M.M. (2023). Contribution, prospects and trends of livestock production in sub-Saharan Africa: a review.

23. Mofa.gov.gh. (2019). Revamping the Poultry Sector in Ghana. Accessed October 2025.

24. Worldbank.org. (2023b). Ghana Fresh or chilled whole poultry imports by country. Accessed October 2025.

25. USDA. (2024). Nigeria Officially Lifts Foreign Exchange Dairy Import Restrictions

26. USDA. (2022). An Overview of Ghana's Dairy Industry

27. Matthew Atongbiik Achaglinkame, Dari, L. and Mörlein, D. (2023). A review of dairy production and utilization in Ghana and Benin.

Trade Patterns and Market Gaps

While West Africa posts trade surpluses dominated by cash crops, it consistently imports vast quantities of key food items and agricultural inputs. Exports include cocoa, shea butter, rubber, coconut oil, cashew kernels, and tropical fruits, mainly destined for Europe and Asia. For instance, Nigeria's agricultural exports in Q1 2025 were led by cocoa (₦1.23 trillion) and cashew kernels (₦157.6 billion) to markets like the Netherlands, Belgium, India, and Vietnam²⁸.

Imports cover nearly all wheat (from Europe/Ukraine), rice (Asia), sugar (Brazil/India), and most agro-inputs (fertilizers from Morocco, China, etc). Moreover, imported frozen fish and poultry from Asia and EU markets fill protein gaps, often undercutting local producers.

These trade dynamics highlight clear opportunities for agribusiness in the following areas:

- Scaling up poultry production via local hatcheries/feed mills
- Expanding community dairy farming and localized milk processing
- Investing in domestic rice and grain production & milling
- Enhancing value-added processing of export crops (e.g. chocolate, packaged coffee)
- Boosting horticultural exports via cold-chain infrastructure
- Developing locally produced fertilizers and seeds to reduce dependence on imports and improve yields

28. Intelpoint. (2025). Cocoa led Nigeria's agricultural exports by value in Q1 2025, with over ₦1.2B. Accessed October 2025.



2. Challenges and Barriers in the agricultural supply chain

Seeds in Shallow Soil – The Struggles Beneath West Africa’s Agricultural Promise

Despite its rich natural endowments, West Africa’s agricultural sector faces systemic inefficiencies that prevent it from reaching its full potential. From the moment a farmer decides what to plant or rear, they confront a maze of financial bottlenecks, insecure land rights, labor shortages, outdated tools, and poor infrastructure. Climate variability worsens these vulnerabilities, and limited access to markets, data, and value chains widens the gap between production and profitability.

West Africa's agricultural sector, the livelihood base for millions, is marked by persistent constraints that span the entire value chain. From pre-planting to post-harvest, farmers face a myriad of challenges, including poor market intelligence, limited access to finance and mechanization, degraded soils, climate shocks, and weak infrastructure.

1. Deciding What to Grow: A Persistent Market Intelligence Gap

Smallholder farmers in West Africa often start the agricultural season with limited access to real-time data on pricing, demand, and weather factors that are crucial for making informed crop decisions. In Côte d'Ivoire, though the situation has improved since, more than 70% of the population lacked mobile broadband in 2018, a proxy for digital exclusion that hinders informed decision-making at the farm level²⁹. As a result, crop selection is often guided by tradition rather than timely market signals, leading to supply gluts or missed demand opportunities.

A vivid example is the case of tomatoes, a crop that begins to spoil within 2–4 days if not processed or consumed after harvest, resulting in a market mismatch that leads to waste rather than surplus. Without access to reliable storage or up-to-date market information, farmers risk investing in crops that cannot be sold in a timely manner.

2. Production: Inputs, Land, and Climate Constraints

Once production begins, farmers sometimes encounter a triad of constraints: degraded soils, limited access to inputs, and erratic climatic conditions. Over 80% of Africa's croplands has seen some levels of degradation, lacking essential nutrients and structure for optimal crop growth³⁰. This degradation requires heavier reliance on fertilizers and modern practices, yet West African farmers use only 13-20 kg of fertilizer per hectare, compared to the global average of 135 kg/ha³¹.

Adding to the challenge, mechanization remains very low, with fewer than 5% of farms in West Africa using tractors. In Nigeria, for example, 80% of farmers are smallholder farmers who produce 90% of the country's output, but they have limited access to tractors, improved seeds, and irrigation^{32,33}. Meanwhile, climate change continues to exert pressure, with increasingly unpredictable rainfall and drought cycles making planting windows more difficult.

29. Group, W.B. (2025). From fields to markets: the role of digital platforms in West Africa's agricultural success.

30. World Bank Blogs. (2025). Greening West African Soils. Accessed October 2025.

31. AGRA (2024). Africa must take advantage of 'smart' fertilizer subsidy initiatives to fight hunger.

32. AREMU F. J. (2025). A Second Look at Nigeria's Agricultural Mechanization: A Pathway to Transformational Growth

33. Adeite, A. (2021). Uncommon Facts About Smallholder Farmers in Nigeria. Accessed October 2025.

3. Harvesting and Post-Harvest Losses: A Leaky Chain

After production, crops face another challenge: post-harvest losses, which range from 30% to 50% in many parts of West Africa including Ghana³⁴. Most harvesting is manual, about 80% across Africa, leading to bruising and increased vulnerability to rot. Perishables like cassava, tomatoes, and vegetables are especially at risk, with short shelf lives that require immediate sale or cooling³⁵.

A USDA/FAO report cited in Ghana notes that cassava productivity is increasingly limited not by land or labour, but by a lack of storage capacity, a stark indicator of infrastructural bottlenecks³⁶. Fruits and vegetables mostly suffer losses in transit due to heat and bruising³⁷.

4. Infrastructure and Logistics: The Cost of Distance

Once crops are harvested, transporting them to buyers presents significant challenges. Rural roads in West Africa are mostly unpaved, which increases travel times and costs, especially during the rainy season when roads become impassable. High transport costs, often higher than in Latin America or Asia, are passed on to farmers through lower farmgate prices.

Truck drivers transporting farm produce to markets encounter numerous checkpoints, delays, and informal tolls. Bureaucracy adds friction at every stage, and by the time the product reaches its destination, much of its value has been lost. According to the Borderless Alliance, West Africa has some of the highest transport costs in the world, costs that are ultimately passed down to farmers³⁸. With no cold trucks or shaded containers, perishable goods like tomatoes, mangoes, and leafy vegetables begin to spoil the moment they leave the field.

5. Market Access Challenges

Even when crops reach urban centres or ports, farmers often struggle to access fair and transparent markets. Middlemen dominate price-setting, and many farmers lack the bargaining power or market information to negotiate effectively. Exporting is even harder, as phytosanitary standards (standards and international rules to ensure exported crops are free from pests and diseases), and certifications are expensive and challenging to meet without technical support.

34. Affognon, H., Mutungi, C., Sanginga, P. and Borgemeister, C. (2015). [Unpacking Postharvest Losses in Sub-Saharan Africa](#).

35. FAO. (2010). Continental Programme on Post-Harvest Losses (PHL) Reduction.

36. Mongabay Environmental News. (2015). West Africa's weakest links: Supply chain defects are behind worst food waste. Accessed October 2025.

37. Kumar, D. and Kalita, P. (2017). Reducing Postharvest Losses during Storage of Grain Crops to Strengthen Food Security in Developing Countries.

38. Tralac. Transportation costs and efficiency in west and central Africa. Accessed October 2025.



3. AgriTech Innovations in West Africa

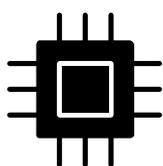
From Tilled Lands to Tech Hubs – The Digital Pulse of a New Agricultural Era

Where challenges once stalled progress, technology is now tilling new ground across West Africa’s agricultural landscape. From precision planting in Ghana’s Volta Region to drone-powered surveillance in Nigeria’s maize belt, AgriTech startups are rewriting the script of farming—making it smarter, faster, and more inclusive. These innovators are not only plugging gaps in finance, logistics, and productivity, but also turning farmers into connected, data-driven producers. What was once analog and uncertain is becoming digitized, trackable, and market-aligned.

A wave of digital-first agricultural ventures is taking root across West Africa, driven by a new generation of agripreneurs who are leveraging technology to overcome barriers in the agricultural value chain. From addressing limited access to finance and land to mitigating postharvest losses and market inefficiencies, these startups are developing innovative models that prioritize scalability, sustainability, and inclusivity. Utilizing mobile applications, AI, IoT systems, and clean energy solutions, these ventures are enhancing productivity, increasing resilience, and introducing entirely new modes of participation for smallholder farmers. This section profiles the ecosystem of AgriTech startups transforming agriculture in West Africa across key strategic intervention points, including demand forecasting, mechanization, financing, and market access.

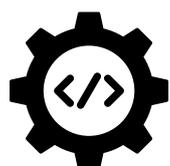
AgriTech Innovation Types and Subsectors in West Africa

AgriTech innovation in West Africa, like many technological innovations, can be broadly grouped into three technological approaches: hardware-based solutions, software-based solutions, and manufacturing-focused solutions. While each category has unique strengths and challenges, some successful ventures include more than one of these solutions. Beyond this technological lens, AgriTech ventures can also be grouped by their agricultural subsector focus, from market access to mechanization, crop health, and post-harvest management.



1. Hardware Innovations

These are tangible technologies deployed on farms or along the value chain, such as precision planting machines, IoT-enabled irrigation kits, soil and grain moisture meters, drones, and solar-powered cold rooms. Hardware innovations often deliver high-impact gains by boosting productivity or reducing losses, as seen with Ghana's Sesi Technologies (GrainMate moisture meter) and Nigeria's ColdHubs (solar-powered cold storage). However, building and scaling hardware is capital-intensive, requiring significant R&D, prototyping, and supply chain capacity. Many West African startups face hurdles with component imports, high manufacturing costs, and limited local fabrication infrastructure. They often require patient capital, sector-specific mentorship, and manufacturing partnerships to achieve cost-effective scaling.



2. Software Innovations

These are digital platforms, mobile applications, and cloud-based services that deliver advisory support, financial inclusion, and market linkages. Examples include Ghana's Farmerline (market data and digital marketplace) and Senegal's mLouma (real-time commodity marketplace). Software solutions typically scale faster than hardware due to lower initial capital requirements and the ubiquity of mobile phones. However, they face adoption barriers tied to digital literacy, trust, and infrastructure reliability, especially in rural communities. Monetization remains a challenge in markets with low farmer purchasing power, often pushing startups toward hybrid B2B2C models.



3. Manufacturing-Focused Innovations

A distinct but often under-acknowledged category involves AgriTech ventures that develop local manufacturing capacity for agricultural tools, machinery, and value-added products. Unlike hardware innovators who may outsource production, these companies establish or partner with fabrication facilities to produce at scale within the region. Examples include Ghana's SAYeTECH, which locally manufactures multipurpose threshers, and Nigeria's ReLeaf, which produces crop-processing equipment and bio-based materials³⁹. Manufacturing-oriented AgriTech plays a vital role in reducing import dependence, creating jobs, and adapting equipment designs to local conditions. They face challenges in accessing industrial-grade machinery, securing raw materials at stable prices, and navigating regulatory requirements for production and exports.

While the hardware, software, and manufacturing distinction helps clarify the technological foundations of AgriTech, many innovations in West Africa are best understood through their position in the agricultural value chain. For example, in Market Analysis (Demand Forecasting), platforms like Ghana's AgroCenta and Senegal's mLouma equip farmers with real-time price data and direct buyer linkages, enabling better crop planning and fairer market access. In Mechanization & Workforce, ventures such as Ghana's TroTro Tractor and Nigeria's Hello Tractor connect farmers to affordable, on-demand machinery services, easing labor shortages and boosting productivity.

In practice, many startups span multiple categories, such as a locally manufactured solar irrigation kit (manufacturing) fitted with IoT sensors (hardware) and linked to a mobile marketplace (software), underscoring the hybrid nature of solutions emerging in the region.

Below are some of the promising startups and companies in West Africa that are tackling agricultural challenges, applying hardware, software, and manufacturing innovations across these subsectors.

39. [SayeTECH](#). Accessed October 2025

Market Analysis (Demand Forecasting)

Innovations that help farmers understand which crops to grow and where to sell them include AgroCenta (Ghana), Farmerline (Ghana), and mLouma (Senegal). These platforms, mostly software solutions, collect market price data and link farmers directly to buyers. For example, Senegal's mLouma offers a web/mobile marketplace (with USSD support) that lists real-time prices and connects producers with retailers⁴⁰. AgroCenta integrates e-commerce, logistics, and finance so smallholder farmers can sell to larger traders at fair prices, having helped 35,000 farmers sell 15,000+ MT of grain since 2019⁴¹. Ghana's Farmerline provides up-to-date market forecasts and a digital marketplace, reaching thousands of farmers with market data and direct-buying platforms⁴².

Key Startup



Challenges

Many rural markets lack reliable internet; several solutions incorporate SMS/USSD (mLouma) or offline data collection.

Case Study: AgroCenta (Ghana)

A World Summit Award winning AgriTech, AgroCenta runs a digital platform connecting 45,000 smallholder farmers to buyers and financiers. Since 2017 it raised \$1.46M in funding and a \$250K GSMA grant to build and expand its product offerings. The platform lets farmers sell directly at market prices to wholesale buyers and offers finance (microloans, insurance) for inputs. To date it has enabled 28,000 Ghanaian farmers to sell over 20,000 MT of produce, improving incomes for women and remote farmers.

40. mLouma. Accessed October 2025

41. AgroCenta. AgroCenta Impact Report 2019. Accessed October 2025

42. <https://www.mission13.earth/Farmline>. Farmerline & its partners are at the forefront. Accessed October 2025

Financing (Capital & Insurance)

Access to finance remains a significant constraint for smallholder farmers, but AgriTech software startups are reshaping the landscape. In Nigeria, FarmCrowdy and ThriveAgric pioneered crowd-financing platforms that link farmers to investors. Farmcrowdy has over 400,000 customers and has raised over 1 million dollars to bring Nigerian farmers online and to the market^{43,44}. ThriveAgric has supported over 800,000 farmers across Nigeria, facilitating more than \$40 million in loans⁴⁵. In Ghana, AgroCenta and Complete Farmer offer farm loans bundled with market access and inputs^{46,47}. Grow For Me, a Ghanaian startup, lets individuals crowdfund regenerative farming projects, combining climate-smart training, market access, and returns from crop sales and carbon credits⁴⁸.

Key Startup



ThriveAgric

(investor-farm financing)



Complete Farmer

(farming Investment Platform)



FarmCrowdy

(crowd funding)



Challenges

Low banking penetration means many farmers lack credit history; startups often partner with NGOs or use mobile-money data instead of collateral.

43. Shieber, J. (2017). Farmcrowdy raises \$1M round to bring Nigerian farmers online and to market.

44. Farmcrowdy. Accessed October 2025.

45. Thriveagric.com. (2023). Breaking the Barriers - Our 2023 Impact Story. Accessed October 2025.

46. Completefarmer. Accessed October 2025.

47. AgroCenta. Accessed October 2025.

48. GrowForMe. Accessed October 2025.

Case Study: ThriveAgric (Nigeria).

Founded in 2017, ThriveAgric has grown into a continental AgriTech leader by blending data tech with finance. Its Agri-Operating System tracks farm and provides loans, inputs and market links. By 2022 its annual revenue soared from \$8.1M (2019) to \$73.3M, with 964.9% growth. ThriveAgric's network now spans 800,000+ farmers in Nigeria, Ghana, Kenya and Uganda. It has mobilized over \$100M in credit for farmers, driving the production of 2.3 million tons of grains. In 2024 it raised new capital (e.g. \$56.4M in debt financing) and won awards for scaling food security (Visa and FT recognitions). ThriveAgric exemplifies how integrated tech/finance models can impact food production at scale.

Land Acquisition (Farmland Access)

Farmland access platforms are still emerging. A handful of platforms, some software, and some hardware are beginning to address this gap by linking farmers to arable land. In Ghana, Complete Farmer offers a digital platform that enables users not only to cultivate but also to locate and lease farmland⁴⁶. Mechanization-focused ventures like TroTro Tractor contribute indirectly by enabling the cultivation of larger plots, thereby unlocking idle land for productive use. However, across much of West Africa, land access continues to be shaped by informal arrangements, often managed through community structures or farmer cooperatives, highlighting the need for scalable, tech-enabled solutions to formalize and democratize land allocation.

Key Startup

 Complete Farmer (Connects farmers to available lands)	 TroTro Tractor (tractor booking)
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Challenges

Land rights issues and fragmented land markets mean startups must navigate local laws and customs. Many farmers use informal sharecropping deals that are hard to digitize.

Labor (Mechanization & Workforce)

Several services and hardware solutions ease labor shortages by connecting farmers to machinery or workers. Ghana’s SAYeTECH develops sensor-enabled agricultural machinery, including multi-crop threshers and grain cleaners, tailored to the needs of African smallholder farmers³⁹. TroTro Tractor (Ghana) lets farmers pre-schedule SMS-based tractor-ploughing services from private tractor owners⁴⁹. Hello Tractor, started in Kenya with operations in multiple countries, including Nigeria, provides a mobile app where farmers book and pay for machines, and even offers a pay-as-you-go financing model for tractor buyers⁵⁰.

Key Startup

 SAYeTECH (Builds mechanization equipment)	 TroTro Tractor (SMS tractor booking)	 Hello Tractor (tractor booking)
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Challenges

High equipment costs and limited rural internet require hybrids (SMS-booking, local agents). Also, training is needed so farmers trust new machines.

Case Study: Hello Tractor (Nigeria).

Backed by a \$1M Heifer International investment, Hello Tractor provides IoT devices and an app so tractor owners lease machines to farmers via PAYG financing. The program enabled purchases of tractors in 3 Nigerian states (Nasarawa, Abuja, Enugu), effectively mobilizing machinery for thousands of smallholder farmers. By treating tractor leases as loans repayable from harvest income, Hello Tractor has lowered finance barriers and created a network of owned tractors available on-demand. This boosts productivity in regions that had only ~27 tractors per 100 km² (vs 200 globally).

49. Trotrotractor. Accessed October 2025

50. Hellotractor. Accessed October 2025

Land Preparation & Planting (Precision Agronomy)

Platforms and tools optimizing planting and inputs are mostly hardware, with some blend of software. Nigeria’s Kitovu Technology uses soil samples and market data to recommend precise fertilizer blends and planting plans; it offers weekly crop-health audits and warns of water stress⁵¹. Ghana’s Sesi Technologies built affordable soil and grain moisture meters; its handheld GrainMate lets farmers measure moisture content before planting or storage to reduce losses⁵². Other examples: satellite-based tools (e.g. agro-analytics startups like Rainforest Connection or AgroCenta’s tech arm) give weather-based planting advice.

Key Startup

 Sesi Technologies (FarmSense soil probes)	 Kitovu Technologies (AI soil-crop advisor)	 GEM Industrial (drone mapping for farm layout)
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Challenges

These solutions often need sensor/devices or data networks; rural areas may lack connectivity, or farmers may lack digital literacy.

Case Study: Sesi Technologies (Ghana).

Sesi’s flagship GrainMate is a low-cost moisture meter allowing farmers to test grain moisture before storage or further processing. Designed by engineer Isaac Sesi, it arose from a 2018 research on post-harvest losses. By 2024, over 5,000 farmers have used GrainMates. Sesi pivoted to revenue from device sales and won a \$50,000 GoGettaz prize in 2019, scaling the product line. Besides GrainMate, SesiTech offers FarmSense soil probes for Ghana fields. This technology has shown farmers can extend shelf-life (storage losses) by measuring moisture, a critical step before planting or storage.

51. Halcyon. (2025). Kitovu Technology Company | Halcyon. Accessed October 2025

52. Sesi Technologies. (2025). GrainMate - Affordable and Effective Grain Moisture Meter - Sesi Technologies. Accessed October 2025

Pest Control & Crop Health

Digital tools can help detect diseases and pests early. AgriPredict (Zambia), though not in West Africa, offers an AI forecasting platform to predict crop diseases, pest outbreaks, and optimal planting times (now piloting across Africa). RoboCare (Tunisia), also not in West Africa, uses drones and satellite imagery with AI to scan large farms for early signs of stress or pests (spraying capability is being added). African soil biotech firms like BioAni (Ivory Coast) produce organic fertilizers from insect larvae to improve plant immunity.



Challenges

High-tech solutions require smartphones or drones. In regions with poor connectivity, farmers may rely on local extension services or image-based services instead.

Monitoring (Sensors & Data Analytics)

Hardware solutions that monitor farms are on the rise. These solutions also include some software that helps complete the analysis process. GEM Industrial Solutions (Ghana) provides drone-enabled crop surveys, using high-res cameras and sensors to assess plant health, map fields, and (soon) do aerial spraying⁵³. Agro-sensing firms like CropLens use satellite data or IoT soil sensors to advise farmers. Many companies equip youth as “agrowatchers” who collect farm data via smartphone apps and provide tailored advice back to smallholder farmers.

Key Startup



Sesi Technologies

(soil sensors)



GEM Industrial

(drone analytics)



Challenges

Drone services can be expensive; many remote areas lack reliable internet for data transfer. Solutions often combine field visits with offline data collection apps.

Transportation & Logistics

Efficient transport is vital to getting crops to market, and a mixture of software and hardware solutions is tackling these challenges. Kobo360 (Pan-Africa) is a leading digital freight platform that connects shippers with truckers across West Africa via an app. Kobo360 now manages 10,000+ trucks for logistics and transportation⁵⁴. Another success is ColdHubs (Nigeria), a hub-plus-truck model for transportation and cold room storage.

Key Startup



Challenges

Poor road networks and high fuel costs often necessitate that logistics platforms provide working capital.

Case Study: Kobo360 (Nigeria).

Founded in 2017, Kobo360 built an “Uber for freight” app. Its 2019 Series A (\$20M equity + \$10M credit line), led by Goldman Sachs, allowed expansion into Togo, Ghana, and Kenya. The platform has more than 10,000 connected trucks and a language-adapted interface (Hausa, Pidgin) for drivers. Kobo360 also spun off KoPay (working-capital loans for drivers) and insurance/driver welfare products. By integrating mobile apps with financing, Kobo360 improved farm-to-market logistics across Nigeria and neighboring countries

54. Amaka Anagor-Ewuzie (2019). Kobo360 logistics plans to expand business presence in Ghana, Kenya

Storage (Post-Harvest Storage)

Reducing spoilage is tackled by novel cold-chain solutions. ColdHubs (Nigeria) offers on-site mini solar-cold rooms at farm clusters and markets; farmers pay per-use. Since 2016, ColdHubs has installed 58 hubs, preserving 3 tons per unit. In total Cold, it has saved ~42,000MT of fruits/vegetables from spoilage, extending shelf life from 2 to 21 days. It has 5,250 farmers using its service (aiming for 50,000)⁵⁵. Another example is AkoFresh (Ghana), also using solar fridges in farming communities to provide cold storage services⁵⁶. Some start-ups (e.g. Bramble Energy) make modular farm coolers. Some mobile cold-truck ideas are also in pilots.

Key Startup



Challenges

High capital outlay for cold rooms and erratic power remain barriers. ColdHubs' solar solution and pay-per-use model is addressing this gap effectively.

Case Study: Cold Hubs (Nigeria).

ColdHubs installs 3 to 100-ton solar cold-storage kiosks in markets and farms. In 6+ years, it operated 54 hubs across Nigeria, saving 42,024 tons of produce from waste. Smallholder users now number ~5,250, with fees as low as \$0.20/day to freeze their vegetables. Data telematics monitor temperature, power and usage in real time. ColdHubs plans expansion (Benin, cold trucks) and a mobile app for booking space. By eliminating the 40% post-harvest losses typical in West Africa, ColdHubs significantly boosts farmer incomes and food security.

55. Ayre, K.-L. (2022). Why we invested: ColdHubs is decreasing food spoilage by reducing barriers to cold storage access - BFA Global

56. Akofresh. Accessed October 2025.

Processing, Value Addition, and Agricultural Waste Management

The processing and value addition subsector is dominated by manufacturing startups that are upcycling or processing farm outputs into higher-value products. In Ghana, Kodu Technology makes biodegradable sanitary pads from banana/plantain fibers, turning farm waste into menstruation products⁵⁷. FreshLine (Ghana) launched “Akoma Tomato Powder” (100% natural, preservative-free) from excess tomatoes⁵⁸. In Nigeria, companies like Releaf Earth use crop waste (almond shells, cassava) to make biochar or animal feed. Generally, many AgriTech firms offer storage/shipping, but fewer tackle on-farm processing.

Key Startup

 Kodu Tech (Biodegradable sanitary pad from plant waste)	 FreshLine Post Harvest (Tomato powder from excess tomatoes)	 Releaf Earth (biochar & dried foods)
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Challenges

Value-addition often requires local factories or cold-chains beyond a single startup’s scope. Innovation tends to focus on niche products (e.g. food powders), rather than large-scale agro-industrial processing.

57. Kodutechnology . Accessed October 2025

58. Francis (2024). Inspiring Startups with Juliet ETEFE: Preserving tomatoes and empowering farmers. Accessed October 2025

Market Access (Local & Export)

Digital marketplaces and trade platforms broaden sales channels. In addition to Farmerline, Complete Farmer, and AgroCenta (above), Farmcrowdy and ThriveAgric now have aggregation and export divisions: Farmcrowdy’s “Foods” unit sells crops online to consumers, and ThriveAgric assists farmers in shipping export-grade produce.

Key Startup

 FarmCrowdy (direct-to-consumer produce sales)	 Farmerline (input/market e-commerce)	 ThriveAgric (market linkages)
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Challenges

Cross-border exports face certification hurdles. Many platforms address domestic markets first.

Case Study: Farmerline (Ghana).

Farmerline brands itself as the “Amazon of farmers.” After its \$12.9M pre-Series A raise (2022), it aims to scale to 300,000 farmers – ~4x its current base. Farmerline uses this capital to expand warehousing and transport networks. It provides farmers with inputs and digital agronomy, then buys their harvest to sell into Ghanaian and Ivorian markets via its own distribution chain. By building physical supply infrastructure alongside an app, Farmerline is tackling both local market linkages and rural logistic gaps.

Livestock & Aquaculture Innovations

For animal farming (poultry, fish, etc.), startups address feed, health and sales: FeatheryCare (Ghana) developed “Cluck AI”, cameras + sensors that monitor chicken behavior to spot disease or stress, boosting survival and productivity⁵⁹.

Key Startup



FeatheryCare

(Bird Monitoring with AI
and Sensors)



Challenges

Rural livestock farmers often lack connectivity; Some solutions need reliable electricity. Financing is limited for hardware (drones, sensors) in this sector.

59. Featherycare. Accessed October 2025.



4. Key players and the ecosystem

Networks, Backers & Builders: Mapping the ecosystem behind the AgriTech boom in West Africa

From Lagos to Dakar, a lattice of tech hubs, incubators, and mission-driven funds is turning bright ideas into field-ready solutions. Kosmos Innovation Centre, MEST Africa, Co-creation HUB (CcHUB), and CTIC Dakar provide much-needed coaching and funding to help founders develop market-ready solutions. Grants from Mastercard Foundation, cheques from EU AgriFI, and tickets from Catalyst Fund also give startups the runway to scale across their solution and plug into government programs seeking impactful innovations for African farmers.

Tech Hubs, Incubators, Accelerators, And Their Impact on AgriTech

West Africa's AgriTech growth is supported by an active ecosystem of tech hubs, incubators, accelerators, and funders that turn bright ideas into field-ready solutions⁶⁰. Notable among these are Ghana's Kosmos Innovation Center (KIC) and MEST Africa's, which provide entrepreneurs with training, mentorship, and seed funding. KIC Ghana alone has trained hundreds of young agripreneurs, supported over 40 startups, and through those ventures reached more than 100,000 farmers with innovative solutions⁶¹. Likewise, MEST's pan-African entrepreneurial program, which has incubated founders from 22+ African countries, equips startup teams with essential skills and early-stage capital⁶².

These players, along with Nigeria's famed CcHUB and Senegal's CTIC Dakar, are part of a growing number of ecosystem players who form a lattice of support, giving startups the runway to scale and plug into broader initiatives. For the first 7yrs of its operation; CTIC Dakar (one of Francophone West Africa's first incubators) nurtured over 170 digital startups and SMEs through public-private partnerships⁶³. In Nigeria, many AgriTech founders get their start at local incubators such as Passion Incubator, Wenvovation Hub, and CcHUB, which offer a launchpad of mentorship and funding⁶⁴. A select few even join global accelerators, for example, Nigeria's ThriveAgric went through Y Combinator, and Farmcrowdy through Techstars⁴⁵.

Together, this network of hubs, accelerators, and competitions (from KIC's AgriTech Challenge to MEST Africa Challenge and CcHUB programs) provides the backbone for AgriTech innovation. They not only impart business skills and technical training but also connect startups to investors and government programs. Governments and international foundations often collaborate with these hubs, e.g. Ghana's government-backed innovation centers, Nigeria's new rural tech hub initiatives, and partnerships with entities like the Mastercard Foundation and Tony Elumelu Foundation, help funnel resources and mentorship into AgriTech ventures. This dynamic, cross-border support ecosystem is a crucial enabler, empowering startups, boosting youth employment, and delivering scalable solutions for Africa's farmers.



Startup Journeys: from Idea to Impact

The value of this ecosystem support is best illustrated through the journeys of emerging AgriTech startups across the region. In Ghana, several ventures trace their roots to hub programs and have leveraged early support into real growth. For instance, Complete Farmer began as a concept in MEST's Entrepreneur-in-Training program and grew into a digital platform connecting growers to global buyers. With MEST's incubation and subsequent backing, Complete Farmer progressed from a startup idea to a scalable agribusiness, eventually attracting significant investment. In 2023, it raised over \$10 million in private funding and later secured a €2.2 million EU AgriFI grant to build new crop fulfillment centers³⁴.

This support fueled Complete Farmer's expansion, enabling it to aggregate produce for thousands of smallholder farmers and improve market access through modern infrastructure. Similarly, Ghana's Kodu Technologies and AkoFresh trace their origins to KIC's AgriTech Challenge. Kodu was born from a KIC competition win, receiving seed funding and mentorship as a winner, which allowed its founders to turn an innovative idea (repurposing agricultural waste fibers into affordable biodegradable sanitary pads) into a viable social enterprise. AkoFresh, another KIC-supported startup, leveraged the incubator's guidance to develop solar-powered cold storage and processing units that tackle post-harvest losses in rural Ghana. With KIC's mentorship and grant, AkoFresh moved from concept to pilot, deploying cold rooms and food packing solutions for small farmers (critical in remote areas with no cold chain)⁶⁴. Both Kodu Technologies and AkoFresh later participated in the UNICEF Startup Lab program, organized in part with and run by MEST Africa. Another beneficiary of the ecosystem's support is SAYeTECH, winner of the MEST Africa 2024 MAC competition. SaYeTech builds mechanization and precision agricultural tools that target critical gap in affordable, locally appropriate mechanization to boost productivity in rural farming communities. Having already received support through programs like Impulse Accelerator in the past, SaYeTech gained exposure and won \$65,000 in equity investment and grant to help expand its operations⁶⁵.

60. KIC. A New Era for Kosmos Innovation Center in Ghana

61. MEST. Meltwater Foundation

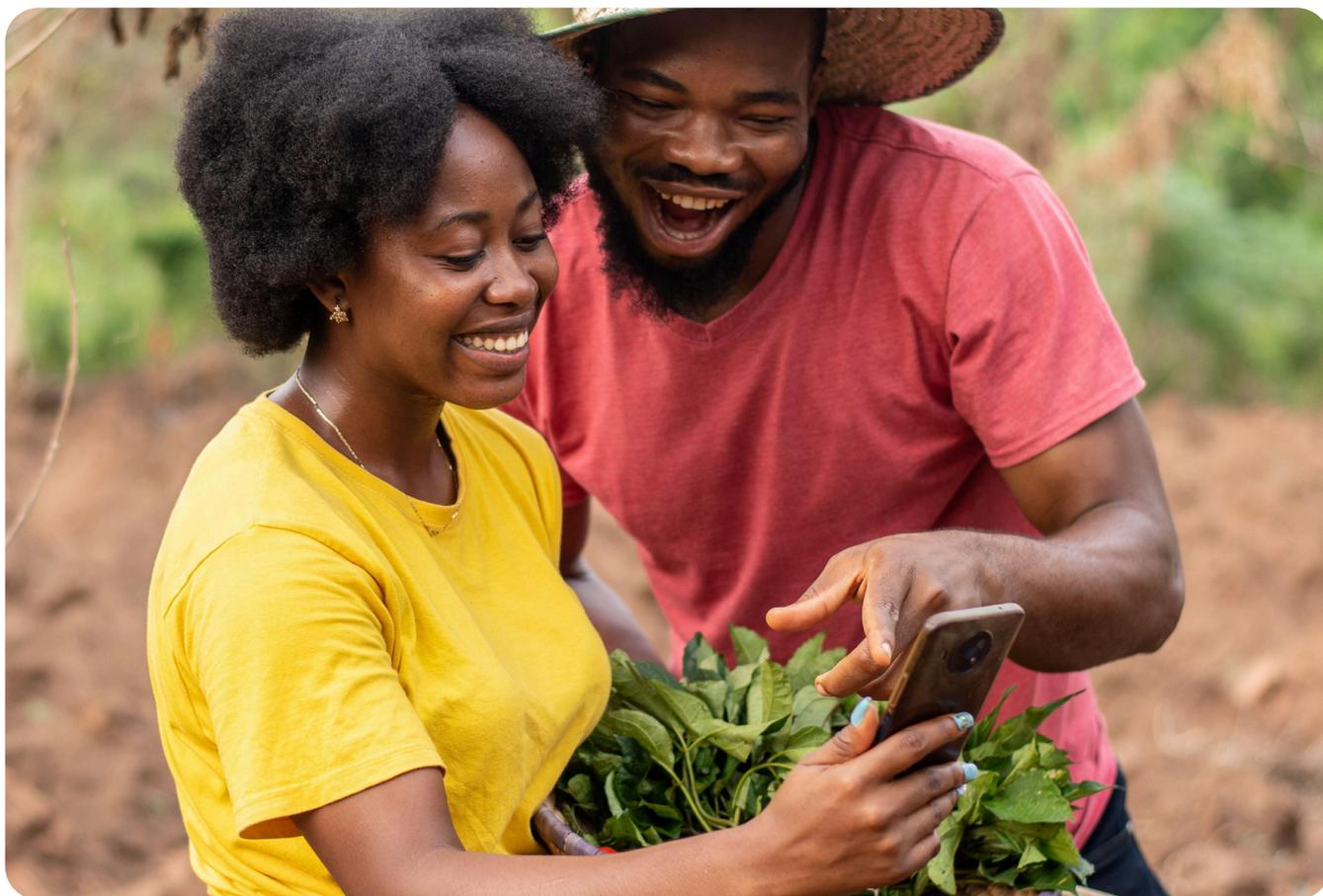
62. CTIC Dakar, a catalyst for technological and entrepreneurial innovation in Senegal

63. GSMA. AgriTech in Nigeria. Investment opportunities and challenges.

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Nigeria's AgriTech sector has produced its own success stories thanks to ecosystem support. ThriveAgric, for example, illustrates how local and international backing can propel a startup's trajectory. Founded in 2017 in Abuja, ThriveAgric started in a Nigerian tech incubator (Ventures Platform)⁴⁵. The team then gained admission to Y Combinator's accelerator in 2019, a prestigious program that boosted the company's credibility and helped attract talent and investors. With the exposure and mentorship from such programs, ThriveAgric rapidly scaled its model of crowdfunding farm inputs and providing market access for farmers. By 2022, the startup had closed one of Africa's largest AgriTech funding rounds, roughly \$56 million, a single deal that represented nearly half of all AgriTech investment in Africa that year^{66,67}. Today, ThriveAgric has grown from a small idea to a pan-African venture: it operates across Nigeria (partnering with financial institutions and even global firms like Visa) and has expanded pilot programs into Ghana and Kenya. The company reports working with over 500,000 smallholder farmers and disbursing more than \$100 million in input financing to farmers to date⁶⁸. Such growth was enabled by the strong foundation of early-stage support, including local incubator backing and global accelerator mentorship, that helped ThriveAgric refine its model, prove its viability, and connect with the right investors. Notably, one of Nigeria's first major AgriTech startups Farmcrowdy, followed a similar path a few years earlier: after joining local incubators, FarmCrowdy was selected by Techstars in 2017, which provided it with international exposure and capital.

Farmcrowdy went on to build an online platform for crowd farming that, by late 2019, had enrolled over 20,000 farmers and was aiming to reach 50,000 farmers by the end of 2020⁶⁹. These startup journeys, from Complete Farmer and Kodu in Ghana to ThriveAgric and Farmcrowdy in Nigeria, demonstrate how strategic ecosystem support (training, mentorship, seed funding, and accelerator networks) has been the catalyst for AgriTech innovators to refine their products, validate their models, and transition from prototype to impact at scale.



64. kicghana. Accessed October 2025

65. Medium. (2024). SAYeTECH Wins MEST Africa Challenge 2024, Securing \$50,000 in Funding.

66. ThriveAgric. AgriTech as an essential partner for enhancing food security in Nigeria

67. Disrupt Africa. The-African-Tech-Startups-Funding-Report-2023

68. Thriveagric.com. (2023a). AgriTech as an essential partner for enhancing food security in Nigeria

69. GSMA (2020). AgriTech in Nigeria Investment opportunities and challenges

From Support to Outcomes: Impact on Communities

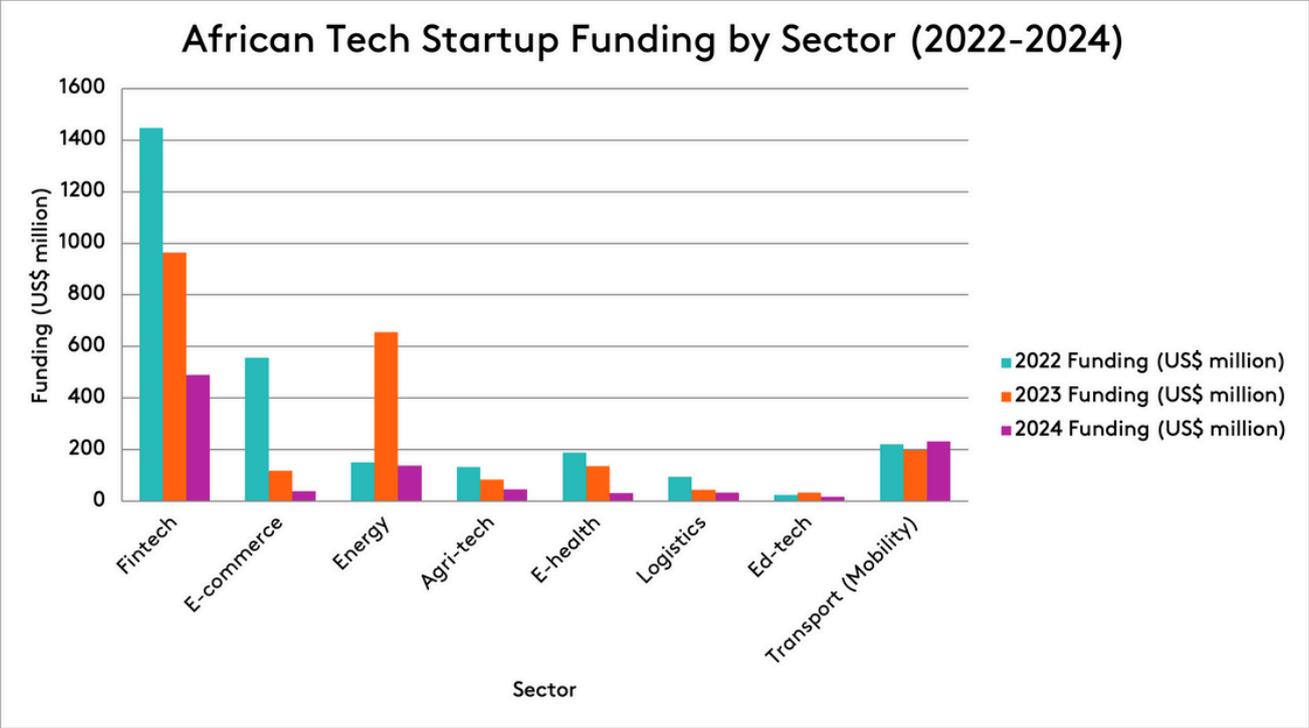
Equally important are the on-the-ground impacts that these ecosystem-nurtured startups are now delivering. Many AgriTech companies that survived the early stages due to hub or incubator support are creating jobs, boosting farmer incomes, and enhancing food security in their communities. For example, Complete Farmer's platform has helped growers reduce post-harvest spoilage by linking them to efficient supply chains, reportedly cutting spoilage by over 30% in some cases, and enabling farmers to fetch better prices, thereby significantly improving incomes⁴⁶. AkoFresh's solar-powered cold rooms allow horticultural farmers to preserve crop quality and avoid losses that traditionally claim up to 40-50% of perishable harvests in Africa⁵⁶. By saving more of each harvest from spoilage, farmers can earn more revenue and stabilize their livelihoods. Startups emerging from programs run by ecosystem players like KIC and MEST Africa have also begun to spur local employment as they scale. AkoFresh, for instance, not only helps farmers store produce but also requires teams to manage logistics and maintenance of its cold-chain units, creating new jobs in those rural areas.

In Ghana, AgriTech ventures are driving rural development through digital inclusion: smallholder farmers gain access to inputs, financing, and real-time information via mobile platforms, while their crops reach buyers more efficiently, increasing profitability. The broader qualitative impact is evident in farming communities, higher yields and steadier incomes are lifting living standards, while tech-enabled practices build resilience against climate and market shocks. In Nigeria, ThriveAgic's network of farmers has seen productivity improvements; the company notes that smallholder farmers under its program achieved double the national average yields by using better seeds, fertilizers, and practices⁴⁵. This translates to higher earnings for those farmers and greater food availability in their communities. AgriTech platforms like Grow For Me in Ghana similarly report empowering thousands of farmers to increase their income and break free from cycles of poverty through improved market access and financing⁷⁰. In sum, the ecosystem's support has not only ensured these startups' growth and survival but it has also amplified their socioeconomic impact on the ground. Farmers are earning more and wasting less, youth are finding agri-sector jobs, and communities are becoming more food-secure. These tangible outcomes underscore why sustained backing of key enablers like MEST Africa, KIC, CcHUB, CTIC, and others is vital. Their mentorship and resources act as a force multiplier for innovation, turning fledgling AgriTech ideas into engines of rural development and food security across West Africa.

70. MyJoyOnline. (2025). Grow For Me: Transforming Agriculture through mobile investment

Investment Trends in West African AgriTech

Progress Amidst Undercapitalization: Venture funding for West African tech startups has accelerated in recent years, and AgriTech is beginning to draw greater investor interest. In 2023, Ghanaian startups across sectors attracted over \$27.28 million in venture capital, placing Ghana among Africa’s top six investment destinations⁷¹. Several AgriTech ventures in the region have secured notable deals, reflecting growing enthusiasm for agriculture-focused innovation. However, despite these positive trends, funding for AgriTech remains disproportionately low compared to more dominant sectors. Nowhere is this contrast clearer than in the continental data: at the peak of funding in 2022 in Africa, fintech startups accounted for roughly one-third of all African tech funding (205 fintech ventures raised about \$1.45 billion, 43% of total funding), whereas AgriTech startups represented only about 3.6% of funded startups and 4% of total investment. While funding began to slow in 2023 and 2024, the relative gap between funding for AgriTech and other sectors like Fintech and E-Commerce remained almost the same ⁷². This means that while agriculture employs and feeds millions, tech startups in finance continue to attract an order of magnitude more capital than those in agriculture. The gap highlights that AgriTech, although critical for livelihoods and food security, remains an undercapitalized sector in the eyes of investors when compared to other sectors like fintech and E-commerce’s continued dominance.



71. Disrupt Africa. The African Tech Startups Funding Report 2023

72. Disrupt Africa. The African Tech Startups Funding Report

Public, private partnerships, and targeted programs are beginning to address this funding imbalance by creating opportunities for early-stage AgriTech growth. For example, in Ghana, the Kosmos Innovation Center (KIC) and the Mastercard Foundation launched an Agribusiness Business Booster in 2022 to support 900 agri-focused micro, small, and medium enterprises (MSMEs) over four years⁷³. The program offers capacity-building, mentorship, market linkages, and investor-readiness support, helping AgriTech startups position themselves for scale. As part of the same multi-year partnership, the expanded AgriTech Challenge training initiative is expected to equip about 4,700 Ghanaian youth with agribusiness entrepreneurship skills. In parallel, corporate grant-making has become a vital funding avenue. In 2023, Absa Bank Ghana and the Mastercard Foundation awarded a total of GH¢2.5 million in grants to ten promising fintech and AgriTech startups under the Absa Young Africa Works program. Among the recipients, drone-based AgriTech venture Wonfliki received GH¢250,000 to support their business. These grants demonstrate how creative partnerships are seeding early-stage agricultural innovations and improving access to capital for startups in the region⁷⁴.

Development finance initiatives and venture investors are also bridging the funding gap for West African AgriTech. In 2025, the European Union's AgriFI program (managed by EDFI) invested approximately €2.2 million (about \$2.5 million) in Ghana's digital farming platform Complete Farmer to establish six new fulfillment centers in northern Ghana. These hubs will aggregate crops, certify quality, and manage logistics to improve market access for roughly 5,000 smallholder farmers. Early-stage venture capital is also flowing into African AgriTech through climate-focused funds such as the Catalyst Fund, which is targeting \$40 million to back African startups developing climate-resilient solutions. Specialist impact investors like AgDevCo focus exclusively on financing African agriculture businesses. The impact of private capital is evident in Complete Farmer's growth trajectory, as the company has raised over \$10 million in private funding alongside development finance⁴⁶.

Regional Disparities, West Africa's Uneven Landscape:

The distribution of AgriTech funding and support is also highly uneven across West African countries. Nigeria, being one of Africa's "big four" tech hubs, captures the lion's share of investment in the region's AgriTech scene. Nigeria alone accounted for the majority of AgriTech funding in Africa from 2022 to 2024. In 2022, seven Nigerian AgriTech startups raising about US\$72.8 million, outpacing even Kenya's AgriTech funding that year. By contrast, other West African nations saw only minimal AgriTech deals. Ghana, despite its vibrant startup ecosystem, had relatively few AgriTech funding rounds in 2022 (and none approaching Nigeria's scale), while countries like Senegal, Ivory Coast, and others lagged even further behind.

73. KIC and Mastercard Foundation. Agri-Micro, Small, and Medium Enterprises (MSMEs) Acceleration Program

74. Wonfliki. Absa-Mastercard Young Africa Works

In the same year, Nigeria and Kenya together captured 93.5% of all AgriTech investment. This leaves only a few percentage points of capital spread across the rest of Africa, including West African states outside of Nigeria⁷⁵. Put simply, within West Africa, there is a stark gulf between the investment magnet that is Nigeria and the many other countries where AgriTech entrepreneurs struggle to raise funding. As the MEST Africa Challenge organizers observed, while Ghana and Nigeria have attracted substantial startup investment, many other West African markets go unnoticed and underfunded, lacking the developed ecosystems needed to draw capital.

Consequences and the Case for Greater Support:

These funding gaps, both across sectors and across countries, directly affect AgriTech's ability to scale and deliver impact. With far fewer resources than other sectors like fintech and E-commerce, AgriTech startups face shorter runways and difficulty expanding innovations that could transform agriculture. Many struggle to afford the Research and Development, talent, and market access needed for growth. This disparity also means that in countries outside the main tech hubs, capable agripreneurs may never secure the capital or mentorship required to refine their solutions. Bridging this gap will require concerted action from both public and private stakeholders. On one hand, policymakers and development partners must align national priorities and resources to support AgriTech innovation through favorable policies, public R&D funding, and inclusion of AgriTech in digitalization agendas. Encouragingly, some governments are starting to act: Ghana's digital strategy now explicitly promotes e-agriculture and innovation as tools for development⁷⁶. On the other hand, more venture investors and banks need to recognize AgriTech's potential and roll out targeted funds, credit, or blended finance for the sector. In essence, while great strides have been made by ecosystem actors and some forward-thinking programs, some gaps remain. Addressing these disparities, by channeling more investment into AgriTech and extending startup support beyond the usual hotspots, is critical if Africa is to build a sustainable, tech-driven agricultural future.

Government and NGO Support for AgriTech in West Africa

Governments and NGOs across West Africa play a central role in catalyzing the region's AgriTech ecosystem. In Ghana, the government has launched several flagship programs to modernize agriculture, including the Planting for Food and Jobs (PFJ) initiative (2017-2022), which increased access to inputs and supported youth employment in farming. Digital pilots such as the Ghana Agriculture and Agribusiness Platform (GhAAP) introduced e-voucher systems to streamline seed and fertilizer distribution⁷⁷. The public sector also supports entrepreneurship through platforms like the Ghana Innovation Hub, backed by the Ministry of Communications and the World Bank's eTransform project, which provides co-working space, startup support,

75. Disrupt Africa. The African Tech Startups Funding Report 2022

76. Ministry of Communications and Digitalisation. Digital Ghana Agenda: Policy Brief. 2021.

77. MOFA, Ghana - Planting for Food and Jobs

and digital training. These programs are aligned with Ghana's broader Digitalization Strategy, which explicitly promotes e-agriculture and innovation as tools for national development.

Development partners further bolster the ecosystem. The German Development Cooperation (GIZ) funds a suite of initiatives aimed at job creation, agribusiness support, and value chain development across Ghana and the subregion. Its AgriBiz program alone supports hundreds of SMEs with financing, advisory services, and training. GIZ also backs regional land governance projects such as the Strengthening Land Policy in Africa (SLGA), which promotes policy reform and land data digitization. Meanwhile, USAID's Feed the Future initiative uses tools like mobile data collection and GIS mapping to link thousands of smallholder farmers to buyers and extension agents in Ghana, and its Market Systems and Resilience (MSR) program, launched in 2022, aims to strengthen agricultural supply chains. The Mastercard Foundation, under its Young Africa Works strategy, has committed substantial funding to youth agripreneurship in Ghana, supporting platforms like the Kosmos Innovation Centre (KIC) to build AgriTech startups and create employment.

The KIC Mastercard Foundation collaboration goes beyond general funding support: the KIC Business Booster is designed to strengthen 900 agri-focused MSMEs over four years through capacity-building, mentorship, market linkages, and investor-readiness programs. Its expanded AgriTech Challenge training is expected to equip around 4,700 Ghanaian youth with agribusiness entrepreneurship skills, creating a pipeline of innovation-ready startups. These structured interventions ensure that early-stage founders not only access resources but also acquire the skills and networks needed for sustainable growth⁷⁷.

Other international actors, including AGRA, IFAD, and various local NGOs, contribute to improving access to inputs, digitizing land registries, and expanding extension services, together forming a robust support system for AgriTech innovators across the region. This blend of government policy initiatives, donor funding, corporate partnerships, and NGO-led programs creates an enabling environment in which West Africa's AgriTech startups can emerge, grow, and scale their impact

Spotlight: MEST Africa and the MEST Africa Challenge

One of MEST Africa's flagship initiatives is the MEST Africa Challenge (MAC), a pan-African pitch competition aimed at early-stage tech startups. In 2024, the competition adopted the theme "Find Your Soil", focusing exclusively on AgriTech innovation in West Africa. Dozens of applications were received from across the region, with six finalists selected from countries including Ghana, Nigeria, Benin, and Senegal. The theme highlighted the urgent need for local agricultural solutions and the growing opportunity in tech-driven agriculture. The MEST Africa Challenge (MAC) 2024 provided a concentrated lens on how targeted ecosystem interventions can accelerate AgriTech innovation across West Africa. This edition focused solely on West Africa, targeting key markets across 14 countries, with a primary emphasis on AgriTech solutions that tackle agricultural challenges, enhance sustainability, build climate resilience, and drive farmer-centric innovation. From an initial pool of 599 applications (draft and submitted), 298 startups completed the process. Applications spanned both early-stage ventures and more established agribusinesses, with revenue profiles ranging from pre-revenue to moderate monthly income. The semi-final stage showcased the top 20 scoring startups via a virtual pitch format, evaluated on criteria including market size, business model, traction, and team capability. The exceptionally high quality of pitches prompted organizers to advance seven finalists rather than the planned five.

The MAC 2024 finalists displayed a diverse range of AgriTech innovations across West Africa, spanning multiple agricultural sub-sectors:

Mechanization and Equipment

- **SAYeTECH Company Ltd (Ghana)** provides mechanization solutions for smallholder farmers, integrating sustainability into the design and manufacturing of farm equipment. (Winner of MAC 2024)

Market Place and Market Access

- **Afrikamart** operates a sustainability-driven platform that integrates women and youth into inclusive, eco-friendly agricultural supply chains, improving market access for farmers.
- **AquaTrack** connects fish farmers directly to buyers while promoting data-driven and sustainable aquaculture practices, ensuring fair pricing and reduced market inefficiencies.

Monitoring and Farm Analysis

- **GEM Industrial Solutions** delivers commercial drone services for precision agricultural mapping, crop health monitoring, and data-driven farm management.

Logistics and Supply chain

- **Intersip International** facilitates large-scale, scalable campaigns for agribusiness stakeholders, enabling rapid feedback loops and efficient stakeholder engagement across value chains.

Financing and Insurance

- **TOLBI Inc** is a climate-AgriTech enterprise leveraging emerging technologies to strengthen food security and improve the livelihoods of small-scale producers, including access to climate-smart financing tools.

Final Event Highlights – MAC 2024

The finale of MAC 2024 in December brought together a strategic dialogue and live pitching session, anchored by a high-level panel discussion on “Revolutionizing Agriculture through Technology.” Industry leaders from Farmerline, the Ghana Climate Innovation Centre (GCIC), and MEST Africa highlighted the need for agricultural solutions that are rooted in local realities, resilient to climate shocks, and aligned with farmers’ practical needs.

The judging panel, featuring representatives from the Royal Norwegian Embassy in Ghana and GCIC, selected SAYeTECH as the overall winner for its strong potential to transform the agricultural sector and deliver tangible value to farmers. Founded by Theodore Ohene-Botchway, SAYeTECH designs and builds farm machinery specifically tailored to the needs of African smallholder farmers, aiming to boost rural mechanization through locally appropriate technologies. This mission aligns closely with MEST’s commitment to fostering innovations with meaningful local impact. The startup received mentorship, USD 50,000 in SAFE investment and an additional USD 15,000 grant to support its expansion and strengthen its delivery capacity.

Afrikamart and Intersip International were named first and second runners-up respectively. Beyond the winners’ circle, MAC 2024 demonstrated the depth and inclusivity of the regional challenge, engaging a broad network of partners, from established hubs like Impact Hub Dakar and Co-Creation Hub Nigeria, to grassroots enablers such as Sémè City in Benin and iLab Liberia. This strategy ensured participation across Anglophone, Francophone, and Lusophone West Africa, supported by localized recruitment, multi-lingual outreach, and a targeted AgriTech focus.

The 2024 MAC exemplifies MEST’s growing contribution to AgriTech entrepreneurship in West Africa. The challenge provides founders with capital, visibility, and networks, positioning them for growth. As one MAC organizer noted, the “Find Your Soil” theme was meant to help innovators find the ecosystems where they could thrive⁴. In this way, the competition became more than just a funding event, it functioned as a launchpad for scalable, locally grounded AgriTech.



5. Opportunities and the future

Green Shoots, Wide Runway: Why the Next Season Looks Bright

Cheap smartphones now unlock drip-kit loans and drought insurance in seconds. Solar chillers curb post-harvest losses, while climate-smart seed keeps yields steady in fickle rains. From fintech to cold chain, West Africa's AgriTech runway keeps stretching

Opportunity Areas and Thematic Trends

Digital Finance and Mobile Agriculture

Mobile-driven innovation is transforming West African agriculture, unlocking new pathways to resilience for farmers, agribusinesses, and communities. In Ghana, the rapid rise of mobile money, growing from 39 million to 66 million accounts between 2020 and 2023, has created a robust foundation for digital agriculture. With mobile penetration now exceeding 200% and annual transactions topping \$40 billion, the infrastructure is in place to scale agri-fintech and innovative advisory tools.

This growth is fueling an ecosystem of financial services tailored to rural realities. Mobile wallets, e-vouchers, and mobile-based loans are reshaping how farmers access inputs, receive subsidies, and manage risks. Index-based microinsurance, delivered via telecom platforms, now provides timely payouts for climate events like droughts. Digital credit tools, supported by machine learning and farm data, are emerging, though formal lending remains limited. Ghanaian farmers without access to formal finance still face borrowing rates above 60% APR from informal lenders, underscoring the urgency for innovation.

At the same time, mobile platforms are helping farmers make better decisions. Companies like Farmerline send agronomy tips and market alerts through SMS, while satellite-based tools such as those from The Climate Corporation provide real-time insights on weather and pests. Still, consistent adoption remains a hurdle. In Kenya, more than half of smallholder farmers used digital tools in 2023, but only a minority used them regularly, a trend Ghana is beginning to mirror.

Looking ahead, AI and Big Data represent the next frontier. Forecasting models for weather, pest outbreaks, and crop pricing tailored to West African contexts are gaining traction. Yet Ghana's current score on the Digital Agriculture Readiness Index, just 30-35%, shows how much untapped potential remains. By investing in rural connectivity, open data platforms, and farmer-centered digital services, West Africa could empower millions with tools that boost productivity, reduce losses, and build resilience across the agricultural value chain.

Post-harvest Infrastructure and Logistics

Across the region, 30-50% of perishable crops are lost after harvest, before they ever reach the consumer. These losses are a silent drag on farmer incomes, food prices, and nutrition outcomes. In Ghana, the figure reaches as high as 38% for fruits and vegetables.

The problem is not a lack of production, but rather a lack of infrastructure. There are critical gaps in cold storage, aggregation points, refrigerated transport, and efficient last-mile logistics, especially in rural and off-grid areas. For many countries in the region, unreliable road networks and limited access to cold chains make it difficult to move perishables from farms to urban markets or export hubs. This is especially true for high-value crops like mangoes, pineapples, and leafy greens.

For innovators and investors, this presents a clear and urgent opportunity. Solar-powered cooling solutions, modular aggregation centers, and digitally-enabled transport systems are underutilized and underserved. There is also room to build logistics platforms that coordinate warehousing, inventory, and fulfillment tailored for smallholder value chains.

Expanding infrastructure for post-harvest handling is one of the clearest win-win areas for investment in the region. It can simultaneously reduce food waste, improve nutrition outcomes, and unlock new income streams across the value chain, from farmers to traders to exporters. As demand for fresh produce grows across African cities and export markets, the need for robust post-harvest systems will only intensify.

The opportunity is wide open. What's missing is not the need, but the infrastructure, coordination, and capital to meet it.

Climate-Smart Technologies (irrigation, resilient crops)

Climate-Smart Technologies are key for perishable exports (pineapple, mango, shrimp, etc). Inadequate rural roads remain a bottleneck, so donor-backed road upgrades (e.g., through the World Bank) and private logistics investments are critical. Overall, filling the post-harvest gap (storage, cooling, aggregation) is estimated to offer multi-billion-dollar economic gains by cutting waste.

West Africa's agriculture remains highly vulnerable to climate volatility. In Ghana, less than 3% of arable land is irrigated, exposing crops to rainfall disruptions. Across the region, similar patterns limit productivity and increase food insecurity.

Yet this vulnerability is opening space for innovation. Demand is growing for affordable irrigation, drought-tolerant seeds, and adaptive practices. Pilots with solar pumps and drip irrigation kits show substantial yield gains, but scaling remains limited. Regional R&D hubs like IITA are advancing resilient seed varieties, but local adoption is still low.

This gap is an opportunity. Climate-smart tools, whether precision irrigation, early-warning apps, or resilient inputs, can stabilize production and unlock new markets. With supportive policy and investment, this space offers strong growth potential for AgriTech startups across West Africa.

Value Addition and Food Processing

West Africa's agri-sector holds untapped potential in food processing and value addition. While Ghana leads in cocoa processing, with nearly all exports now semi-finished, most other crops remain under-processed, and food imports still exceed \$2.5 billion annually.

This signals a significant opportunity. Investments in local milling, juicing, canning, and agro-parks can reduce import dependence, boost farmer incomes, and create rural jobs. With AfCFTA offering access to regional markets for processed goods, West Africa is well-positioned to become a hub for agro-industrial growth. The future lies in quality infrastructure, standards, and strong local sourcing.

Regional and Export Market Expansion

West Africa's 400-million-strong market presents a powerful growth frontier for agribusiness. Ghana, with rising urban demand and AfCFTA access, is well-positioned to scale exports of value-added goods, moving beyond cocoa to cashew, pineapple, and processed staples.

Tariff-free trade, regional logistics corridors, and new export hubs offer momentum. But success depends on stronger infrastructure, packaging, and quality standards. The future lies in positioning West African agribusinesses as competitive suppliers across Africa and globally, linking smallholder farmers to bigger markets through AgriTech and trade-ready systems.

Conclusion

Ghana and the wider West African region stand at the threshold of an agricultural transformation powered by technology. While farming has long been the cornerstone of livelihoods, employing over half of Ghana's workforce and a similar proportion across neighboring countries, smallholder producers have historically faced fragmented markets, extreme weather, and limited access to finance and infrastructure. Today, AgriTech innovations are beginning to bridge these gaps.

From solar-cooled storage units in Nigeria and Ghana that cut post-harvest losses by up to 30%, to mobile platforms in Côte d'Ivoire that deliver micro-loans and market information directly to farmers' phones, a growing cohort of startups is demonstrating scalable impact. Programs like the 2024 MEST Africa Challenge (MAC) AgriTech edition have catalyzed this progress by spotlighting ventures across West Africa, awarding capital, mentorship, and regional networks to solutions that address local realities.

Supporting these innovators is an ecosystem of accelerators, development partners, and corporate-NGO initiatives. Emerging impact investors and venture funds are also allocating tens of millions of dollars to AgriTech across the region, further validating the business case for digital agriculture, climate-smart practices, post-harvest infrastructure, agri-fintech, and value-addition.

As Ghana and its neighbors continue to harmonize trade under the AfCFTA and refine policies that unlock land access and rural connectivity, these innovations can scale more rapidly, creating resilient food systems, boosting farmer incomes, and generating new rural employment. The momentum is clear: by strengthening collaboration among startups, governments, traditional land custodians, and investors, West Africa is poised to transform agriculture from a subsistence activity into a dynamic, technology-driven engine of growth and food security for the region.

