Africa AgriFoodTech Investment Report 2023







Contents

03	Introduction
06	Key insights
80	AgFunder
09	2023 Investment highlights
17	2022 Investment trends
19	Mercy Corps Ventures
27	FMO Endeavor
28	Agrifoodtech categories in-depth Featuring startups - Meridian / UjuziKilimo / Complete Farmer
42	Investments by theme
46	Investments by stage
52	Category definitions
53	Sources & methodology
54	Image credits



African agrifoodtech investing in 2023



Our second edition of the Africa agrifoodtech investment report comes with good and bad news. In it, we detail the record-breaking levels of investment in food and agriculture startups in 2022, when dollar volumes bucked the global decline in venture capital investment to reach \$636 million, a 25% increase compared to 2021. In 2022, Africa was the only region in the world to post gains.

However those gains are set to come crashing down in 2023 as we record a 77% drop in funding in the first half of 2023 compared to H12022. Global macroeconomic conditions characterized by rising interest rates and currency volatilities instigated by a strengthening US dollar and inflationary pressures have kept investors away. The trend is not unique to agrifood; Africa investment across sectors dropped by similar levels, according to our new data partner Briter Bridges.

But for an industry that employs some 70% of the continent's population in one way or another, the downward trend is concerning.

Readers will hopefully be buoyed to see overall momentum for agrifoodtech in Africa, which has attracted some \$1.8 billion in private funding since 2013. Investor interest in some categories

remains buoyant, including farmer marketplaces and fintech tools at both ends of the supply chain, as well as midstream technologies, albeit at a slower pace than in previous years.

Alongside our data partners, we are starting to analyze investment flows into Africa-focused companies that may be headquartered elsewhere globally (see p. 19), typically in an attempt to attract more global investors.

We've also deepened our analysis of the funding landscape for both climate technologies in agrifood and companies with female founders (see ps. 43-46).

We are very grateful to our partners the Bill & Melinda Gates Foundation, FMO Ventures Program and Mercy Corps Ventures for their support for this report, without whom it would not be possible to produce.

Happy reading! Louisa Burwood-Taylor and the AgFunder team













About us

......



AgFunder is one of the world's most active foodtech and agtech VCs. We're rethinking venture capital for the 21st century. Born in Silicon Valley in 2013, we use technology, media and our global network to invest in and support transformational founders and technologies. With the world's only global agrifoodtech investment portfolio, we've invested in more than 60 companies across six continents.

AFN

AgFunderNews reports on the evolution of the global food and agriculture system. By going beyond the headlines, we analyze the people, companies and technologies aiming to improve human and planetary health. Publishing daily news, our team of awardwinning journalists delivers deeper insight on the growing foodtech, agtech and climate tech industries. A multimedia publication, AgFunderNews is a division of AgFunder Inc, one of the world's most active agrifoodtech venture capital firms.

Our partners

......

BILL& MELINDA GATES foundation

Guided by the belief that every life has equal value, the Bill & Melinda Gates Foundation works to help all people lead healthy, productive lives. In developing countries, it focuses on improving people's health and giving them the chance to lift themselves out of hunger and extreme poverty. FMO, the Dutch entrepreneurial development bank, supports sustainable private sector growth by investing in ambitious projects and entrepreneurs. The FMO Ventures Program, co-funded by the Dutch Ministry of Foreign Affairs and the European Union, focuses on fintech, access to energy, and agrifoodtech.





VENTURES

Mercy Corps Ventures is one of the most active seed and early-stage investors in emerging markets. We invest in tech-enabled solutions across agriculture and food systems, inclusive fintech, and climate-smart technologies, supporting 44 companies to scale and raise \$400.4 million in follow-on capital.

Key insights

African agrifoodtech funding is on the decline in 2023 after a record-breaking 2022, when investment reached \$636 million, a 25% year-over-year increase.

Funding in the first half of 2023 reached just \$99 million across 51 deals, down from \$429 million across 89 deals in H1 2021.

Three countries – Kenya, Nigeria and Egypt – cumulatively raised \$546.8 million, or 86% of total funding in 2022.

Kenya was the most active country in 2022, overtaking Nigeria to close \$280.4 million in investment across 38 rounds. This was boosted by a few large deals.

Nigerian agrifoodtech deals were similar in number to Kenya with 35 deals amounting to \$154 million.

In H1 2023, Kenyan and Nigerian startups raised nearly the same amount of funding at \$41 million and \$45 million respectively.

Kenyan agrifoodtech startups have raised the most in the past 10 years at \$608 million. That's one third of the \$1.8 billion of total funding to African agrifoodtech since 2013.

Kenya's Wasoko raised the biggest round of 2022, bringing in \$125 million for its technology connecting small shops to the digital economy.

Thanks to Wasoko, In-store Retail & Restaurant Tech was the best-funded downstream category in 2022, raising a total of \$182 million across 25 deals, a 434% YoY increase in funding across fewer deals than 2021.

respectively YoY.

Africa has few innovators in globally strong categories such as Farm Management Software, Sensing & IoT and Innovative Foods. The former raised just \$3 million and the latter under \$1 million in 2022. However, both categories closed more deals, potentially highlighting growing activity.

Median growth-stage deal sizes in African agrifoodtech – \$19 million – are still well below the global median.

AFRICA AGRIFOODTECH INVESTMENT REPORT 2023 | AGFUNDER.COM

Midstream Technologies was the best-funded category, raising \$184.8 million in 2022. However it did so over fewer deals (down 31% YoY) due to the highest average deal size across categories.

Agribusiness Marketplaces & Fintech was the strongest upstream category in 2022 reaching \$160 million across 31 deals, a 413% and 29% increase







TOTAL **AGRIFOODTECH INVESTMENTS OF 2022** \$636 million **FUNDING**

BIGGEST UPSTREAM CATEGORY Agribusiness Marketplaces & Fintech \$160 MILLION FUNDING

BIGGEST DOWNSTREAM CATEGORY In-Store Retail & **Restaurant Tech**

\$182 MILLION FUNDING

BIGGEST DEAL OF 2022 KENYA'S Wasoko **\$125 MILLION FUNDING IN-STORE RETAIL & RESTAURANT TECH**

BIGGEST AGRIBUSINESS MARKETPLACES & FINTECH DEAL NIGERIA'S ThriveAgric

> **\$55 MILLION** FUNDING







AgFunder is a pioneer in agrifoodtech. With a history of supporting entrepreneurs long before this became a topic on investors' agendas, the firm has invested in more than 60 companies across 6 continents. Currently, it manages an AUM exceeding \$180m and will soon close its \$100m Fund IV.

agfunder.com



AgFunder has invested in world-leading deep tech startups that tackle important themes such as automation, carbon markets, food as medicine, sustainability, green ammonia, and more. These investments include "the John Deere of vertical farming" Intelligent Growth Solutions, food-asmedicine discovery platforms Brightseed and Faeth Therapeutics; fast-growing marketplaces serving millions of farmers and consumers in emerging economies, <u>DeHaat and Jüsto;</u> autonomous farming company <u>Bear Flag Robotics;</u> animal-free leather producer <u>MycoWorks</u>; and green ammonia producer Nium.

One of the keys to AgFunder's success is its media and research arm, AgFunderNews, which has become the global epicenter for agrifood technology intelligence with subscribers from top stakeholders across the landscape. Together with GAIA, AgFunder's database and proprietary machine learning platform, the firm has developed a unique ability to source deals, expertise, investors, networks, and information for its portfolio companies and LPs.

AgFunder focuses on supporting the best entrepreneurs and companies, regardless of their geographical location. With roughly 50% of its companies based in the US, a track record of successful exits, and a global network, AgFunder has established itself as the go-to partner for investors seeking global exposure to the agrifoodtech sector.



Notable LPs that have been attracted by AgFunder's diverse and compelling portfolio include Japan's \$1 trillion agriculture, fisheries, and forestry bank, The Norinchukin Bank; two of the most renowned European climate-focused family offices; multiple brand-name corporate investors internationally; and one of the top US agricultural university endowments; among others.





2023 Investment highlights



10 years of agrifoodtech in Africa

\$636 million

raised in Africa in 2022

\$1.8 billion

raised in Africa since 2013

\$29.6 billion

raised globally in 2022





10 years of agrifoodtech in Africa

Top 10 countries by investment 2013-2022

It has been a decade of vibrancy in Africa's agrifoodtech ecosystem. Buoyed by groundbreaking innovations geared at transforming food and agriculture, global investors have pumped \$1.76bn into startups across the continent.

Four countries driving innovation have attracted 95% of the funding. With climate change and shifting global dynamics like the Russia-Ukraine war, inflows of investments are bound to continue, albeit likely at a reduced pace.

10-year funding total

(**\$ USD**)

Country	\$ USD million
Kenya	608
Nigeria	448
Egypt	317
South Africa	270
Mauritius	30
Zambia	21
Ghana	20
Morocco	19
Tunisia	15
Uganda	13





Uncertain macroeconomic conditions, rising interest rates and inflationary pressures have dampened investor confidence this year. For agrifoodtech startups in Africa, this has been reflected by a large 77% drop in funding year-over-year.

While 2022 was certainly an outlier, with some large deals skewing the totals, startups are experiencing a funding drought, emphasized by the diminished deal count. A case in point is Kenya's Twiga Foods; despite raising \$160m over the years, the firm plans to shed 33% of its workforce to remain afloat.

2019-2023





Top 5 countries H1 2023 (\$ USD)

Despite an overall plunge in funding across Africa, Nigeria and Kenya have maintained their lead accounting for 83.3% of funding during the first half of this year.

The two countries are home to some of the biggest agrifoodtech startups like Thrive Agric, Releaf, and Apollo Agriculture.





While 2021 was a bumper year for agrifoodtech in Africa – and globally -with funding hitting \$482.3 million, the trend was only maintained during the first quarter of 2022 driven by a couple of mega-deals such as retail tech Wasoko's \$125m round and Apollo Agriculture's Series B.

350 300 250 Total funding millions \$ USD 200 150 100 \$49 \$40 MILLION MILLION \$23 MILLION 50 0 2020 Q1 2020 Q2 2020 Q3





A key factor behind the decline is the concentration of mature agrifoodtech startups in a few markets; in erstwhile critical markets like Egypt, where agriculture and food account for 12% of GDP, funding has decelerated substantially.





Agrifoodtech VC trend predictions for 2023

......

2023 is shaping up as a gloomy year for agrifoodtech financing in Africa, and more globally. There's little likelihood of a substantial rebound after a rather depressed first half. However, easing global macroeconomic upheavals could be incentives for investors to cautiously open funding taps. The conscious decision by African nations to elevate climate change in the dialogue on agricultural transformation could also resonate positively with venture capitalists. However, identifying credible startups with impactful solutions continues to be a challenge.



Long term optimism

Katapult is excited and bullish about the prospects for the African agrifoodtech market over the coming years. The optimism is borne in our core strategy aimed at accelerating and venture funding seed stage entrepreneurs solving challenges and realising opportunities in Africa's food and climate systems. Specifically, we see opportunities to scale technologies contributing to sustainable food production, transformative and inclusive services and efficient supply chains and infrastructure on the continent. Despite the recent 'funding winter' in Africa, long term fundamentals of technology uptake, population growth and the immediacy of risks and opportunities posed by climate change position agrifoodtech strongly.

Danny Smith, **Regional Director, Katapult Africa**

02

Opportunities from challenges

Africa's agrifoodtech sector looks very promising. Owing to substantial weakening of currencies across many of the economies, and high level of inflation, importing food commodities into Africa is becoming very challenging and expensive. This reality has the potential to open opportunities for local producers. This means that firms that deploy the use technology can seize the moment and improve productivity. Notably, those opportunities are not going to be wholly located in the actual farming process. We see growth in agro-lending, agro-light processing, agro-logistics and agro-marketplace. Tekedia Capital has invested in many agritech startups and I can say the current forex challenges in Nigeria have positively improved their market positions because most consumers are sourcing locally.

Ndubuisi Ekekwe, Chairman, Tekedia Capital.







2022 Investment trends



Investments by country

Top countries 2022 (\$ USD)

The size and importance of a country's agriculture industry to its economy is not an indicator of its agrifoodtech prowess. A case in point is Ethiopia, where agriculture accounts for nearly 40% of GDP, yet lacks innovation, attracting a mere \$5m across three deals in 2022.

In contrast, Kenya, Nigeria and Egypt are thriving, accounting for about 86% of total funding and deals.

South Africa, which has often been a key market, is feeling the negative impacts of a prolonged economic crisis. The country recorded a near flat increase in deals while funding nosedived by 18.5% percent compared to 2021.

Country	\$ USD million
Kenya	280
Nigeria	154
Egypt	112
Mauritius	19
South Africa	18
Ghana	15
Namibia	15
lvory Coast	6
ethiopia	5
Lesotho	4







Companies HQ'd outside of Africa

It's not uncommon for African tech companies to be founded in their home country but later move their headquarters to developed markets to more easily attract funding from a global investor base. This is a trend in other emerging markets too, such as Argentina.

At AgFunder, we've been unable to keep track of these movements; we base our reporting on where that company is currently headquartered.

It's common for entrepreneurs focused on Africa, founding companies from cities like London or New York-again something that is tricky to track on a global scale.

Our data partner Briter Bridges has started to track these movements. This snapshot shows some of the funding to Africa-focused agrifoodtech startups that could be missing from our report.

Top locations of Africa-focused agrifoodtech startups HQ'd internationally 2020-2022



of Africa-focused agrifoodtech funding went to non-Africa HQ companies between 2020 and 2022, valued at \$314 million



of Africa-focused agrifoodtech deals closed between 2020 and 2022 were for non-Africa HQ companies,

across 124 deals

••••

Country	Preferred HQ	Country F	Preferred HQ
United States	55.8%	Netherlands	3.8%
United Kingdom	13.5%	Belgium	1.9%
France	9.6%	Germany	1.9%
Switzerland	7.7%	Sweden	1.9%
Mexico	3.8%	United Arab Emirate	s 0.0%





Partner **Mercy Corps Ventures**



VENTURES

Mercy Corps Ventures catalyzes tech-enabled solutions in emerging markets. These solutions have the potential to reinvent agriculture to meet the needs of growing global demand, while increasing the climate resilience and financial inclusion of smallholder farmers, rural producers, and agribusinesses.

Investing at the early-stages of innovation, we go beyond capital, providing hands-on support to power startups from seed to scale. Our portfolio includes 20 companies driving solutions in adaptive agriculture and food systems.

complete farmer. agruppa Cinch ÁgriAku Ignitia TROPICAL WEATHER FORECASTIN FLOODBASE Harvesting MERIDIA UNLOCKING VALUE PULA **TFAUS** STABLE **STABLE** WA SO KO Age Suyo topl Kwanza Tukule Vergor VASHAM

Smallholder farmers play a pivotal role in ensuring sustainable and equitable global food security. However, they face significant barriers to contributing to food systems, improving their own financial stability, and building resilience to the impacts of climate change.

Tech-powered solutions have the potential to make agriculture a more stable and profitable livelihood for smallholder farmers, rural producers, and agri-focused small businesses, while becoming more climateproof and regenerative.

We invest across a diverse range of solutions equipping farmers and underserved agribusinesses to participate in the next generation of food systems. This includes: full-suite farmer platforms, financial services for smallholders, B2B agri-marketplaces, precision agriculture, post-harvest management and technology, regenerative finance, and land aggregation.

Pula designs and delivers innovative agricultural insurance and digital products to help smallholder farmers in Africa endure yield risks, improve their farming practices, and bolster their incomes over time. Pula's unique offering is that they distribute the product through partners engaged in increasing farmer resilience such as agriculture supply companies, global NGOs, microfinance institutions, and governments, strengthening the entire value chain.

Cinch is a Kenya-based land management enterprise that brings economies of industrial scale to the individual acre.



Through aggregating land parcels held by smallholder farmers and centrally managing them with economies of scale, Cinch can support the transition into high revenue-generating activities, such as diversified vegetable field-based crops, agroforestry, and renewable energy.

Complete Farmer is a data-driven digital agriculture platform to improve farming performance and accuracy for multiple stakeholders in Ghana, including farmers, growers, buyers, suppliers, logistics and service providers. Through the platform, smallholder farmers gain access to inputs, information on climate-smart agricultural practices, access to markets, logistics, credit, and insurance to increase their income and resilience.

"We invest in founders operating at the forefront of innovation, building the technologies and business models that will spur the next green revolution."

Investments by supply chain

2018-2022

While some large investments in companies operating in the middle of the supply chain slightly skewed the 2021 data, it's still fair to say that investor appetite has since shifted - or expanded - to other parts of the supply chain with particular growth upstream.

Cumulatively, upstream and downstream startups attracted 64.4% of total funding in 2022.

Much of this funding at both ends of the supply chain went to technologies that are bringing farmers and retailers online and giving them better access to goods and services.

See our supply chain classification on p46.











Investments by supply chain

2018-2022

Economic crises across key markets in Africa, coupled with emerging investor exit challenges, are starting to take their toll on dealmaking. After a peak in 2021, deals dropped 16.1% in 2022.

Upstream startups have been less affected, posting a 23.6% year-overyear increase in deal activity.

Consumer-focused companies were the worst hit with a 29% decline, which could be an early indication that Africa's agrifoodtech space is entering a cooling period. In fact, with most deals set on a five to seven-year lifecycle, early investors are looking for exits where challenges abound, including the lack of diverse exit instruments in Africa's capital markets.



Downstream









Top read AgFunderNews Africa articles of past 12 months

- Bringing regenerative agriculture to Africa: Kenyan farmers are enthusiastic but need better packaged infonew report
- Boomitra partners with FtMA to launch flagship soil carbon project for East Africa's smallholders
- Why John Deere invested in Africa's Hello Tractor
- 5 Nigerian agrifintech startups providing digital financial services for smallholder farmers

- Africa's next leap forward (part 1): Agrifoodtech startups to watch, from Cupmena to Aerobotics
- Digitizing the supply chain drove investment increase in African agrifoodtech in 2022
- Africa needs more ag biotech investment. Here's why



FoodTech AgTech Investment Industry Research Opinion V Jobs Sponsors V About Contact Us

Global	Edition	-	Q
Global	Edition	-	ų





Image credit: iStock

Bringing regenerative agriculture to Africa: Kenyan farmers are enthusiastic but need better packaged info – new report

May 8, 2023 Lucy Ngige

Regenerative agriculture is a common term among farmers in the global north today. A wide range of investors, corporations and innovations are all vying to play a role in the transition of the world's acres to a

method of farming that's mooted to be able to improve soil health, increase yields long term, reverse desertification, protect biodiversity, sequester carbon and otherwise reduce the negative externalities of conventional, synthetic and chemical input-based agriculture.

In the global south, where farmers have not had the same access to high quality, and potentially damaging, fertilizers and pesticides, the regenerative agriculture movement has been slower. It's also likely that in the absence of these inputs, several farmers may already be farming somewhat regeneratively, a farming approach and set of practices that indigenous populations have used across the globe for thousands of years.

In Africa, as farmers increasingly feel the adverse effects of climate change, exacerbating the low yields already associated with smallholder farming, organizations are starting to work with farmers to help them transition their farms and improve their livelihoods.

Dutch venture builder Enviu, which has operations in East Africa, is one such proponent of adapting regenerative agriculture practices in the region. For Enviu, regenerative agriculture includes helping farmers minimize their tillage as well as use of inorganic inputs, diversifying their crops, livestock integration to help with soil fertility, cover cropping and rain water harvesting mechanisms.







Advertisement





Investments by category 2022 (\$ USD)

Though overall agrifoodtech funding is declining, startups committed to solving stubborn challenges in the middle of the supply chain remain resilient in attracting funding.

A key challenge in Africa is postharvest losses, estimated at about 40%. For startups that link producers with consumers, address access to financing for farmers, eliminate logistics bottlenecks, and facilitate agricultural diversification, funding continues to flow. This explains the surge of funding to startups that serve the restaurants and retail segment. For these startups, funding rose by a whopping 435% compared to 2021.

Midstream Technologies

In-Store Retail & Restaurant Tech

Agribusiness Marketplaces & Fintech

Bioenergy/Biomaterials

eGrocery

Novel Farming Systems

Online Restaurants & Meal Marketplaces

Farm Robotics, Mechanization + Equipment

Cloud Retail Infrastructure

Home and Cooking

Farm Management Software & Sensing

Ag Biotechnology

Innovative Food





Investments by category 2022 (\$ USD)

Just like in funding, midstream, in-store retail and restaurant and agrifintech startups dominated in terms of the number of deals. The 80 deals in the three categories accounted for slightly over 50% of the total deals. This was an indication that despite vibrancy in innovations, the level of sophistication remains low in Africa where agricultural practices largely remain menial. Deals in farm robotics and mechanization, for instance, remain low at only 1.3%. The same applies for biotechnology owing to the refusal by most countries to embrace genetically modified organisms.

Categories by funding (\$ USD)





UpstreamMidstreamDownstream

	\$ USD	Rounds
	\$ 185m	24
	\$ 182m	25
า	\$ 160m	31
	\$ 20m	2
	\$ 19 m	4
	\$ 1 4m	13
	\$ 13 m	7
pment	\$ 10 m	2
aces	\$ 11 m	10
	\$ 9m	13
	\$ 8m	3
ng	\$ 3m	10
	\$ 0.8m	3
	\$ 0.6m	8

Investment by deal count





Investments by category

2018-2022 (\$ USD)

While five years ago the craze around vertical farms and greenhouse farming saw investors pump a lot of capital into these startups, their excitement has since dried across the globe.

Though still resilient, the same fate could befall African Midstream Tech startups in the coming years. After recording a 750% increase in funding between 2018 and 2022, last year they recorded a 45% drop in funding.

Over the same five-year period, instore retail and restaurant, and ag marketplace and fintech startups have seen their funding increase by 435% and 416% respectively.



5 years of funding in five select categories

---- Novel Farming Systems ---- Farm Mgmt SW, Sensing & IoT



FMO Ventures Program + Endeavor



The African Agri-Tech Scale-Up Program, developed in partnership between FMO and Endeavor South Africa, provided 10 promising startups with the full support of the Endeavor network by connecting them with thought leaders, entrepreneurs, mentors and investors. Endeavor is the leading global community of, by, and for high-impact entrepreneurs.

••••• endeavor.co.za



....

"[Our Endeavor Portfolio manager] is a STAR. Her interest in what we are building in TOFA. Her knowledge, insights and ability to connect us to resources to meet our needs is second to none. She is speedy in her actions and expects us to be likewise." UJU UZO-OJINNAKA, FOUNDER & CEO, TRADERS OF AFRICA



"My call with Farouk Gumel was still the most inspiring and I almost recall the call word for word. Brutally honest and informed insights shared continue to help us navigate our strategy"

AISHA RAHEEM, CO-FOUNDER & CEO, FARMZ2U



"Greatest learning is that we had the wrong business model-we rebuilt our foundation, realigned our team and now our model has 10x more potential. Our processes are documented, resilient, and optimized; our team is up to speed and autonomous; in Q1 we saw a 3x MoM increase in revenue with little capital investment."

BERTRAND FOFFE, CO-FOUNDER & CEO, JANGOLO

-endeavor

FARMERLINE



















AGROMOVIL





THIS REPORT IS SUPPORTED BY THE FMO VENTURES PROGRAM TECHNICAL ASSISTANCE FACILITY WHICH IS CO-FUNDED BY THE DUTCH MINISTRY OF FOREIGN AFFAIRS AND THE EUROPEAN UNION. THE REPORT'S CONTENT IS THE SOLE RESPONSIBILITY OF AGFUNDER INC. AND DOES NOT NECESSARILY REFLECT THE VIEWS OF THE EUROPEAN UNION.





Agrifodtech categories in-depth



Agribusiness Marketplaces & Fintech



2022 Funding by region (\$ USD)

••••

Archaic and often informal, local and smallscale systems contribute to food insecurity across the African continent. For this reason, startups that connect farmers with better inputs, equipment, supplies, and markets, and those that solve financial access constraints, are attracting the attention of investors. Across three African regions, investors pumped \$160 million into this category.





Agribusiness Marketplaces & Fintech

Top deals 2022 (\$ USD)

A few key deals defying the tides. Nigeria's ThriveAgric and Kenya's Apollo Agriculture cumulatively secured \$90 million in debt and Series B funding. These deals, coupled by a few others, have shown that startups in Africa must keep evolving and reengineering their service offerings in line with changing market dynamics. In April 2023 for instance, Kenya's Victory Farms raised \$35 million in a Series B round to expand into new markets.

Providing financial literacy







Startup spotlight **Complete Farmer**

AGRIBUSINESS MARKETPLACES & FINTECH

Complete Farmer is on a mission to connect the people who feed the world by digitizing the agricultural value chain. The marketplace startup has built a platform that balances the needs of growers, vendors and buyers, thus creating efficiency in the demand and supply of agricultural commodities.



completefarmer.com



What are the biggest challenges facing the food and agriculture industries across Africa today?

Among the key challenges is low productivity. This stems in part from the restricted availability of modern farming inputs including fertilizers, pesticides and improved seeds. Another challenge is the low rate of empowerment, particularly among smallholder farmers and women.

How do you hope to solve them with your technology?

Complete Farmer has developed a digital marketplace designed to address the gaps within the agriculture value chain. Our mission is to act as a connecting link between the various stakeholders



involved in food production, processing and distribution, starting from the grassroots level. Through our platform, we aim to foster a more efficient and inclusive agricultural ecosystem that benefits all participants.

How does the African agrifoodtech ecosystem differ today compared to the past?

One notable change is the significant surge in investments and funding for agrifoodtech startups. Farmers are also embracing technology by turning to digital tools and technologies to enhance productivity, expand market access and make well informed decisions.

What is missing from the African agrifoodtech ecosystem?

The ecosystem continues to grapple with issues of limited internet access in rural areas that impedes tech adoption, seed funding scarcity and a lack of clear regulations that promote innovation and safety. Another big gap is the lack of efficient storage and transport systems that can curb losses.

What keeps you up at night?

The desire to improve agricultural processes in order to transform the lives of African farmers. By boosting productivity, reducing costs and enhancing the quality of their produce, farmers can increase their income, provide better sustenance for their families and invest in their farms and communities.

DESMOND KONEY, FOUNDER AND CEO **OF GHANA'S AGRIFOODTECH COMPLETE FARMER** NOTE: COMPLETE FARMER IS A MERCY CORPS **VENTURES PORTFOLIO COMPANY**















Farm Management Software & Sensing IoT



2022 Funding by region (\$ USD)

••••

Smart farming solutions in Africa are scarce, in contrast to the global stage where this category is often one of the most active by number of deals closed each year. Just \$3m of funding went to this category in 2022, however that was a 150% increase in the number of deals compared to 2021.





Farm Management Software & Sensing lot

Viable deals in startups offering technologically-advanced solutions are hard to come by for investors in Africa. Of the top five fundraising deals during the year, Farm View took 59% of total funding. All deals were at the seed stage, highlighting the nascency of this category, again at odds with its trailblazing impact elsewhere in the world. 01

Farm View

Field monitoring using satellite images

\$1.2 million

02

Beekeeper Tech

Devices for beekeepers to monitor hive productivity and health

\$640 thousand

)3 :

Stable Foods

Integrated software for inputs and offtake contracts, Irrigation-as-a-Service (laaS), and training

\$600 thousand







Startup spotlight UjuziKilimo

......

FARM MANAGEMENT SOFTWARE, SENSING & IOT

In Kenya, the agricultural sector is 95% rainfed. As the pangs of climate change become severe, the need for sustainable farming has become paramount. UjuziKilimo, a Kenyan agrifoodtech, is leveraging data and technology to tackle these challenges and has empowered over 10,000 farmers to increase yields, reduce input costs and improve the overall efficiency of farming practices.





What are the biggest challenges facing the food and agriculture industries across Africa today?

There are a myriad of challenges. These cut across climate change and weather variability, limited access to technology, land degradation and soil health, global shocks, and lack of access to finance.

How do you hope to solve them with your technology?

We provide farmers with innovative technology driven solutions. These include access to real-time weather forecasts and climate information, helping them anticipate and adapt to changing conditions caused by climate change. We also help them with soil health monitoring, crop management,



irrigation, and pest control, thus enhancing productivity while minimizing input waste. Other solutions include access to markets and pricing information.

How does the African agrifoodtech ecosystem differ today compared to the past?

Key changes include increased investment and funding, tech adoption and general digital revolution, policy and regulatory reforms, and a growing sustainability and climate-resiliency focus.

What is missing from the African agrifoodtech ecosystem?

Despite the significant growth and evolution, there are still notable gaps. These include inadequate infrastructure like reliable transportation networks, cold storage facilities and efficient logistics. Other gaps include limited access to finance, unreliable connectivity, and digital illiteracy, among others.

What keeps you up at night?

The critical mission of eradicating hunger and establishing comprehensive food security. In a world dealing with a growing population, climate change, unpredictable weather patterns, and limited resources, it's crucial to come up with sustainable ways to provide food for everyone. That's why UjuziKilimo is dedicated to explore the complex issues by building technologies that truly create meaningful change for the African farmers and beyond.

BRIAN BOSIRE, FOUNDER AND CEO OF KENYA'S AGRIFOODTECH UJUZIKILIMO



Midstream Technologies

2022 Funding by region (\$ USD)



••••

Egypt has become a popular market for B2B startups aiming to solve fragmented supply chain bottlenecks across sectors, including agrifood. North Africa received 50 percent of total funding in Midstream technologies in 2022. An overcrowding of startups, including many targeting restaurants and food delivery, could see the market reach saturation in the coming years. East Africa could be a key beneficiary going forward.





Midstream Technologies

Top deals 2022 (\$ USD)

Across Africa, it's well known that making agricultural systems sustainable without tackling "the messy middle" of the supply chain is futile. Startups here offer tangible solutions like cold storage, logistics, last mile delivery, procurement, and traceability. Though overall midstream technologies funding declined year-over-year, the critical role of these startups is projected by the high value of the deals.






Startup spotlight Meridia

MIDSTREAM TECHNOLOGIES

Meridia is an agtech company specializing in high-quality field data solutions for smallholder-heavy supply chains in various (tropical) commodities and origins. With Meridia Verify, they are a first mover to offer field data quality analysis for achieving EU Deforestation-free Regulation (EUDR) compliance by quickly identifying risk levels of field data for verification and assurance.



meridia.land ••••



What are the biggest challenges facing the food and agriculture industries across Africa today?

One of the pressing issues is the need for accurate and up-to-date farm and farmer data to effectively monitor deforestation, especially in alignment with the new EUDR regulation. However, our analysis of field data quality on smallholder farms across various origins and commodities indicates that a significant portion of the current data is flawed, which would restrict these commodities from entering the European market and push farmers to sell to nonregulated markets.

How do you hope to solve them with your technology?

With <u>Meridia Verify</u>, we developed a method



for stress testing the field data quality of supply chains to segregate compliant and non-compliant datasets for verification and assurance. We help our clients quickly identify erroneous, fraudulent or noncompliant data, get recommendations for improvement and eventually sell their physical commodities with trusted data. Accurate data proving no deforestation has occurred on the plot of land and legality at origin are essential to ensure no smallholders are excluded from supply chains due to missing or erroneous data.

What is missing from the African Agrifoodtech ecosystem? Are there resources you wish you had (besides funding!) that don't really exist?

It is imperative to secure funding for technical assistance to support businesses in mapping farm plots and establishing traceability from farm to port. The acceleration and facilitation of these processes are crucial to ensure that no farmers are left behind and to prevent supply chain disruptions, penalties, and damage to the reputation of end-buyers.

What keeps you up at night?

Smallholder farmer prosperity has always been and remains at the core of our mission. We share the industry concern that some smallholder farmers may be unintentionally excluded from supply chains due to companies' need for EUDR compliance. We firmly believe there should be holistic, precompetitive industry efforts to avoid this from happening.

NOTE: MERIDIA IS A MERCY CORPS VENTURES **PORTFOLIO COMPANY**



Novel Farming Sytems 2022 Funding by region (\$ USD)

••••



A host of factors like population growth, expanding urban areas and climate change are exerting intense pressure on fertile arable land in most parts of Africa. Yet, the continent has been slow in adopting novel farming systems and diversifying staple foods. This category raised just \$13m across a few deals.







Novel Farming Sytems Top deals 2022 (\$ USD)

In countries like Kenya, producing food in hi-tech greenhouses has fizzled out after generating initial excitement a few years ago; this cooling phase is taking place across the globe too. With only a few startups championing novel systems, funding remains low. Last year, two deals accounted for 72.4% of the six top deals.

01

Inseco

Insect protein company that provides animal feed, pet food, and crop production

\$5.3 million

)2

Victory Farms

Aquaculture farm for tilapia fish comprising of hatcheries, nursery ponds and deep-water cages

\$5 million

03

WaterSpirit

A Tunisian Company operating in Biotechnologies

\$2.1 million







In-Store Retail & Restaurant Tech



2022 Funding by region (\$ USD)

......

Wasoko's \$125m Series B skewed the regional results in a category that has a thin line with fintech, as payments and other financial services are at the heart of efficiency for retailers and helpful for activities like last mile delivery. Mobile money, in particular, has been a game changer.





In-Store Retail & Restaurant Tech

Top deals 2022 (\$ USD)

Competition among in-store retail & restaurant tech startups is intense, especially as those who scale up their operations fastest are most likely to win-or at least endure. Kenya's Wasoko, now a 10-year old startup, clinched 67% of the category's total funding. In the future, investors will need to scrutinize the strategy of new startups in this category in the wake of increasing duplication of products and services.









Investments by theme



Investments by gender 2022

118 companies raised VC funding in Africa





companies had female founders/ cofounders/CEOs

(30% of companies with gender data)

\$78 MILLION

They raised a combined \$78 million, or 12.5% of the total raised by companies with gender data

companies had female-only leadership teams

(1.8% of companies with gender data)



They raised a combined \$429k, or 0.07% of the total raised by companies with gender data



Investments by gender 2022

women-led companies raised in 2022





Funding raised by female founders

(**\$ USD**)





Investments by gender 2022

36 companies with female leadership closed deals in 2022 from a total of







Number of deals by female founders

(**\$ USD**)





Climate tech investing

Upstream categories 2022

Some of the biggest contributions -but also potential solutions - to climate change occur upstream in the agricultural supply chain, on the farm, in the production of inputs, or in food manufacturing.

Categories like Innovative Food, which largely includes meat alternatives, and Novel Farming Systems – eg indoor ag, are very climate forward. Others like Farm Management Software, Farm Robotics and Ag Biotechnology can have startups with climate-forward applications but the link is less obvious.

But even when looking at just upstream deals, climate-relevant technologies represented just 10% of funding totals in 2022



Climate-related companies raised \$21 million



Non-climate-related companies raised \$186 million

••••



Upstream category deal activity in 2022









Investments by stage



Investments by stage 2018-2022

Five years ago, agrifoodtech funding in Africa was mostly directed towards early stage startups who attracted 79% of all funding. Gradually, the industry is witnessing a near balance between the early and growth stages. It is also telling that more firms have built rock solid operations with sound financials thus enabling them to take on debt financing. Many of these could be classed as "late" deals.







Investments by stage 2018-2022

A fundamental constant is the dominance of early stage deals and while the number of deals at seed and Series A did decline in 2022, it was still up on 2020 indicating a healthy pipeline overall and opportunities for the relatively consistent – if slow – growth and later stage investors.







Investments by stage 2018-2022

Wasoko, Apollo Agriculture and MaxAB all closed Series B rounds of \$40m and over, raising the median for growth stage deals. It's still well below the global median, which was around \$30m at the end of last year.







Early (Pre-Seed to Series A) Crowth (Series B to C) Late (Series D+) Debt



Top agrifoodtech investors by companies

301 venture investors backed African companies in 2022

INVESTOR

Katapult Accelerator

Y Combinator

Mercy Corps Ventures

Launch Africa

Acumen Resilient Agricultur

Techstars

Pitch AgriHack

Flat6Labs

LoftyInc Capital Manageme

4DX Ventures

Plug and Play

Quona Capital

Endeavor Catalyst

Tiger Global Management

Ventures Platform

Chandaria Capital

	NO. DEALS	COMPANIES FUNDED INCLUDE	
	8	Complete Farmer, MooMe	
	5	HeyFood, Chowdeck	
	4	Complete Farmer, Stable Foods	
	4	Kamioun, Zanifu	
ure Fund	4	Farmerline, SunCulture	
	4	Melanin Kapital, ORDA	
	4	Mozare3, Farmio	
	4	Kamioun, PacknSave	
nent	4	OmniBiz, Bamboo	
	4	Wasoko, MaxAB	
	3	De Novo Foodlabs, Trade Buza	
	3	ORDA, Wasoko	
	3	Apollo Agriculture, Chari	
	3	Wasoko, Bamboo	
	3	OmniBiz, Fluna	
	3	OmniBiz, Bamboo	





Appendix



Agrifoodtech category definitions

	Ag Biotechnology On-farm inputs for crop & animal ag including genetics, microbiome, breeding, animal health		Midstream Technologies Food safety & traceability tech, logistics & transport, processing tech
\$	Agribusiness Marketplaces & Fintech Commodities trading platforms, online input procurement, equipment leasing, farmer fintech	-\.	Miscellaneous All other agrifood-related tech
	Bioenergy & Biomaterials Non-food extraction & processing, feedstock technology, cannabis pharmaceuticals		In-Store Retail & Restaurant Tech Shelf-stacking robots, 3D food printers, payment systems, food waste monitoring IoT
	Farm Management Software, Sensing & IoT Ag data capturing devices, decision support software, big data analytics	Č	eGrocery Online stores + marketplaces for sale and delivery of processed and unprocessed ag products to consumer
	Farm Robotics, Mechanization & Equipment On-farm machinery, automation, drone manufacturers, grow equipment		Home & Cooking Tech Smart kitchen appliances, nutrition technologies, food testing devices & home grow kits
•••••	Novel Farming Systems Indoor farms, aquaculture, insect & algae production		Online Restaurants and Meal Marketplaces Online tech platforms delivering prepared food and meal kits from a wide range of vendors
	Innovative Food Cultured meat, novel ingredients, plant-based proteins		Cloud Retail Infrastructure On-demand enabling tech, ghost kitchens, last-mile delivery robots & services



Upstream

Midstream

Downstream



Sources & methodology

......

Data Sources & Curation

Utilizing new advanced machine-learning algorithms and artificial intelligence to help identify and categorize agrifoodtech startups, our knowledge base has grown to more than 30,000 companies, with new startups and historical data being added each day.

The raw data for our reports comes from Crunchbase, which gathers publicly-available information such as press releases and US Securities and Exchange Commission filings, as well as crowdsourcing directly from our local data partners; in this case, Africa: The Big Deal and Briter Bridges. AgFunder contributes data from its own collection methods, including private communications with investors and companies. We also collect data from partners across the globe to ensure we have the most comprehensive, accurate and curated dataset and knowledge base of agrifoodtech companies and investments.

The raw data is painstakingly curated by the AgFunder team, along with their data partners, to ensure they are relevant, accurate, up-to-date, and categorized according to AgFunder's proprietary tagging system.

We update and improve our dataset continuously throughout the year, meaning total figures from previous years' reports will shift as our dataset becomes more complete.

In 2022, we tightened our definitions of what constitutes an agrifoodtech venture to ensure that the emphasis on food and agriculture is core to the business.

That's had a recalibrating effect on this year's investment figures as well as some past data. Examples include logistics, drones, cloud and any other tech services that may have started in agrifood but have since added other sectors or pivoted away from agrifood. We've maintained historical rounds that were raised on an agrifood focus, where we could.

While we are happy to share our findings, we reserve all rights with respect to AgFunder research and this report and we require it to be fully and accurately cited when any of the data, charts, or commentary are used.

Undisclosed Financings

Of the 156 financings in this report's curated dataset, 40 were undisclosed and could not be determined through research or direct sources. We exclude undisclosed financings when computing averages and median values. In some cases, we're able to confidentially obtain financing figures directly from investors on the condition they're only included in aggregate.









Multiple Financings

In some cases, Crunchbase displays multiple financings for the same company in the same year. This can be because a company closes subsequent rounds in the same year, but it can also be the result of several closes of the same round. We keep them separate unless they are announced as one single round.

Categorization

AgFunder's categorization system is designed to capture broad themes across the complex agrifoodtech value chain. The agrifood sector has a wide supply chain spanning inputs and industrials, farming, logistics, wholesale distribution, processing, retail distribution, and the consumer. In many cases, technologies such as marketplaces connect different links in the supply chain and so in this report we've chosen to focus on high-level themes. To assist with the categorization and to avoid subjectivity, AgFunder first employs over 150 machine learning and artificial intelligence models to suggest category placement and to help tag the company according to the technology and its place in the supply chain. Finally, the AgFunder team manually reviews the suggestions for each company, often with significant research and debate among our team.

Starting with our 2023 Global Agrifoodtech Investment Report, we combined Agribusiness Marketplaces and Fintech into one category as there is often overlap between the two. We maintained any fintech tools for retailers or restaurants within the Retail Tech category. Given the reduction in funding to food delivery services, we have also now combined Online Restaurants & Meal Kits and Restaurant Marketplaces into one category.

We've also taken taken a stricter stance on cannabis and CBD-related startups; there needs to be clear proprietary technology involved. We will not include pure consumer packaged goods or pure production, as we wouldn't include pure production in any other crop. If we believe the growing facilities are particularly high tech or utilize proprietary technology, we will still include it in our Novel Farming Systems category. The same goes for processed products; if the extraction technique is particularly innovative, we'll include it as a Biomaterials or Midstream Tech startup. Large vertically-integrated cannabis companies are also excluded.

Special Acknowledgement

Tim Li and the rest of the Crunchbase team for their continued support and assistance. To Timothy Odinga for his tireless work with the data; John Njiraini, the main author of the report; Jyoti Shankar Nayak, for some last-minute data wrangling. Our designer Katie Lively, for her continued hardwork and support bringing our research to life-and patience with our various last minute additions!













Image credits





Cover Mercy Corps AgriFin



Page 2 Mercy Corps



Page 16 Mercy Corps AgriFin



Page 3 Mercy Corps



Page 17 Bill & Melinda Gates Foundation



Page 6 Bill & Melinda Gates Foundation



Page 20 Mercy Corps



Page 8 AgFunder



Page 9 Mercy Corps



Page 28 Mercy Corps AgriFin



Page 29 Mercy Corps AgriFin



Page 31 Complete Farmer



Page 38 Mercy Corps



Page 32 UjuziKilimono



Page 40 Stock image



Page 34 UjuziKilimono



Page 35 Stock image



Page 37 Meridia



Page 42 Mercy Corps



Page 46 Mercy Corps



Page 51 Bill & Melinda Gates Foundation









Subscribe to our must-read food+ag+climate newsletter and alerts about our funds at

agfundernews.com