



GHANA AGRIBUSINESS PLAYBOOK SERIES

2026



SERIES OVERVIEW

Crops and Animal Protein

A consolidated investment guide to eleven commodities

Center for Entrepreneurship
Ashesi University



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Crops and Animal Protein

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PROJECT

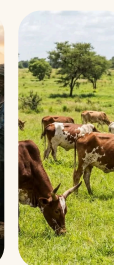
**Ghana Agribusiness
Playbook Series, Crops
and Animal Protein**

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**D7: Series Overview
Document**

DATE

September 2026



01



How to use *this overview*

This document is the capstone of the Ghana Agribusiness Playbook Series. The Series treats eleven of Ghana's most significant crops and animal-protein commodities as businesses, each with its own full-length playbook, value chain analysis, risk deck and market snapshot. This Overview does not repeat those entries. It reads across all eleven to show what they have in common, where the commodities differ, and how a student, entrepreneur or investor might choose between them.

Read it in three passes. The narrative sections (2, 4, 5, 10, 12 and 13) carry the argument that runs through the whole Series. The comparative sections (6, 7, 8 and 11) are the reference layer: eleven commodities set side by side on market size, value leakage, entry points, returns, incentives, cost exposure, risk and ease of entry. The appendix gives a one-paragraph synthesis of each commodity for quick recall.

How the figures were built. Figures are drawn from the individual playbooks, which combine primary data collection with secondary research from cited public sources.



02



Executive summary

Ghana produces far more agricultural value than it captures. Across all eleven commodities in this Series, the same pattern repeats: the country grows, rears or lands the raw material well, then hands the profitable part of the chain (processing, grading, branding, cold storage and the route to the final buyer) to someone else, at home or abroad. The binding constraint is almost never the field, the pond or the pasture. It is the missing middle of the chain and the policy gaps around it.

This has a direct consequence for anyone deciding where to put capital or effort. In nine of the eleven commodities, the safest and least crowded position is not primary production. It is downstream: a mill, a cold store, an aggregation round, a feed plant, a certified nursery, a grading and traceability service. Production itself is typically the crowded, thin-margin node that a newcomer should avoid entering cold.

Three facts make the timing unusually favourable. First, the home market is large and, in most cases, still served by imports (chicken, rice, fish, palm oil, cassava products, mostly ethanol), so import substitution meets demand that already exists. Second, the policy and finance rails are, for once, pulling the same way: guarantee schemes, warehouse-receipt finance, tax concessions and named priority chains under the 2026 AgriConnect Compact and the Feed Ghana Programme. Third, a layer of practical Ghanaian agri-technology already exists (flock monitoring, water-quality sensors, mobile vaccine delivery and muzzle-print traceability), so the tools to lift productivity and trust are local and cheap.



The Series also records where the country loses value and why, commodity by commodity, drawing on both primary data collection and secondary research.

Reading the eleven together also shows what a newcomer should do first. The easier ways in are services and asset-light roles, not owning land, cattle or a plant (section 11). Headline inflation eased to 3.2% in March 2026 and stood at 5.0% in August, but the cedi lost about 9.5% against the US dollar in 2026 and fertiliser is forecast to rise about 31%, so the cost sheet, not the inflation headline, is what to re-price every season (section 7). The same few mistakes recur across the chains, from building a plant before securing supply to growing into a glut (section 12), and the risks that decide a case differ sharply between crops and animals (section 8).





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03



The Series at *a glance*

Eleven commodities, six crops and five animal-protein, each a standalone playbook. The headline figure below is the single number that frames each case; the thesis is the one-line investment argument the playbook makes.

COMMODITY	SECTOR	HEADLINE FIGURE	THE ONE-LINE THESIS
Cocoa	Crop	Keeps ~18% of a bar's value	World's second-largest producer that captures almost none of the crop's final worth; the prize is domestic processing, the living-income differential, traceability and the farm record, not a bigger crop.
Maize	Crop	~3.5m t, in surplus	Self-sufficient to the point of glut behind an export ban; the money has moved off the field to storage, warehouse-receipt finance, feed-milling and food processing.
Cassava	Crop	A top-five world producer	A leading producer that imports far more cassava-related product, mostly ethanol, than it exports; the money is in beating the two-to-three-day spoilage clock with the missing middle of aggregation and processing.
Rice	Crop	GH¢3.6bn imports a year	Imports about half its rice yet could not sell a large 2025 paddy crop; mill, parboil, store, grade and brand to compete with cheaper imports on quality and cost.
Cashew	Crop	94%+ of the crop exported or traded raw (2025)	Ships more than nine in ten nuts unshelled; a kilogram of kernel sells for about seven times a kilogram of raw nuts but takes about 4.8 kg of nuts, so processing pays only with whole-kernel grades, low costs and by-products.
Oil palm	Crop	Imports >US\$200m of oil a year	Grows the fruit but imports the refined oil it could make; the return is in extraction, kernel oil and refining, newly backed by a US\$500m policy finance window.
Broiler chicken	Animal	~80% of chicken imported	A large, growing, import-dependent market; the key that unlocks import substitution is the missing middle (hygienic processing and cold chain), plus local feed and hatching.
Tilapia & catfish	Animal	~US\$209m fish imports (2025)	Tilapia imports are banned, yet local farms meet only part of demand because seed, disease and feed cost hold output back; the best openings are in inputs, fish health and the middle of the chain.
Beef cattle	Animal	2.41m head (projection), ~11% assumed offtake	A large herd held as savings rather than finished for meat; finish the animal, tan the hide, and secure the chain against rustling with cold storage and traceability.

COMMODITY	SECTOR	HEADLINE FIGURE	THE ONE-LINE THESIS
Marine fisheries	Animal	GH¢2.6bn lost after landing (2023)	The small pelagic stock is fished beyond its ceiling, so the value lies after landing: grade the fish, ice it and price it.
Goats & sheep	Animal	15.81m head; Burkina Faso live exports suspended 2026	Plenty of animals and demand but little value added after the farm gate; at 2026 prices breeding and festival fattening both pay, but only just, so buying well, keeping animals alive and selling on the right day decide the result.



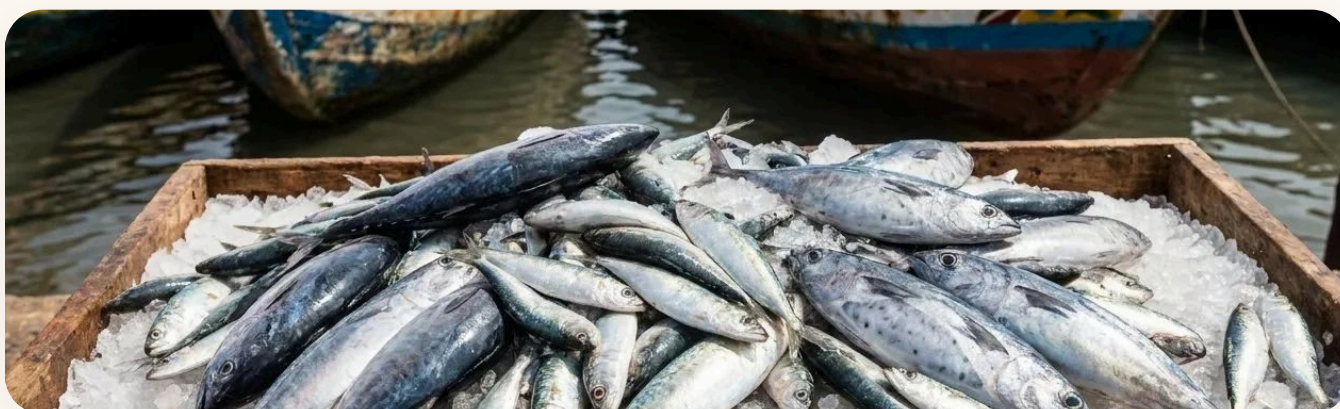
04



The agribusiness chain, and where Ghana *loses value*

Every commodity in this Series is read the same way: as a chain of eight linked stages that begins before a seed is planted or an animal enters production and ends when a final product reaches a consumer. Understanding all eight is how the Series locates where value is created, where it is lost, and where the real business openings sit.

#	STAGE	WHAT HAPPENS HERE
1	Input supply	Seeds, fertiliser, feed, vaccines, fingerlings, breeding stock, gear. Input quality sets the ceiling for every stage that follows.
2	Production	The farming, rearing, breeding or capture itself. This is where the farmer or fisher operates, and it is only one segment of the chain, usually the most crowded and thinnest-margin one.
3	Post-harvest handling	Sorting, grading, drying, cooling, smoking, slaughter, temporary storage. This is where Ghana loses the most physical value: 20–50% of a perishable crop or catch can be lost here.
4	Processing & value addition	Turning raw produce into a higher-value product: flour, oil, kernels, cut portions, smoked or canned fish. This stage holds the highest margins and is where Ghana loses the most value by exporting raw.
5	Storage & logistics	Warehousing, cold chain and the physical movement of produce. Weak cold storage and northern road access are recurring infrastructure gaps.
6	Marketing & trade	Connecting supply to demand through traders, aggregators, cooperatives and exchanges. Price discovery, contracts and certification happen here.
7	Retail & distribution	Getting the product to the end buyer: supermarkets, open markets, food manufacturers, institutions and exporters.
8	The consumer	The end point that sets the commercial logic of every upstream stage, from a household in Accra to a food manufacturer in Europe.



Where Ghana loses value today

Ghana is rich in production and captures a fraction of what its commodities could earn. Cocoa leaves as beans, not chocolate. Cashew leaves as raw nuts for processing in India and Vietnam. A quarter to a half of fish and perishable crops is lost before it reaches a buyer. Chicken, rice, palm oil and cassava products are imported to fill gaps that local businesses could serve. The opportunity across the Series is therefore not simply to produce more. It is to understand the full chain, find where value accumulates and where it leaks, and invest in the stages that convert raw production into economic returns.

05



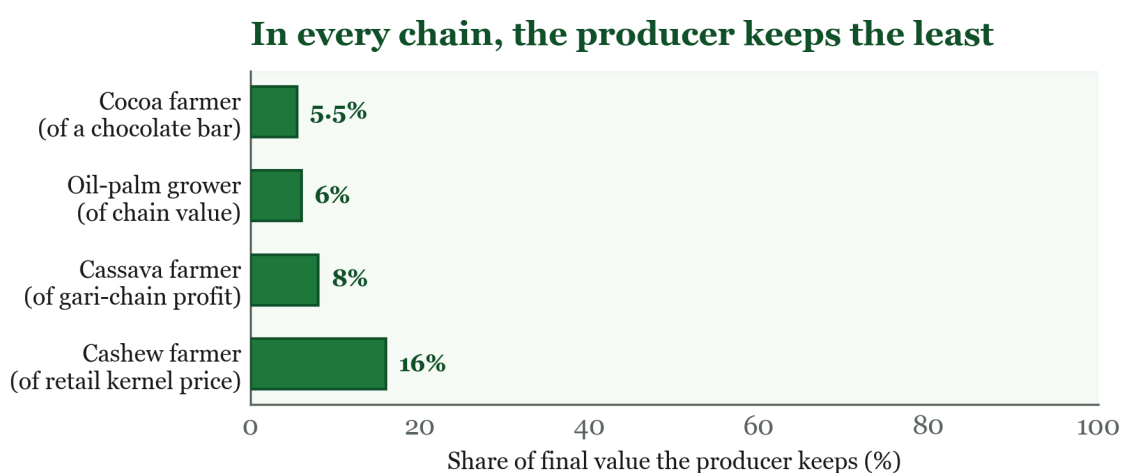
Six findings that run across *the Series*

Read together, the eleven playbooks tell one story in eleven forms. Six findings recur in almost every commodity, and they are the backbone of the investment case.



Finding 1: The value is not in the field

In nine of the eleven commodities, primary production captures the least value in the chain and is the most crowded place to enter. Growers keep about 5–6% of a chocolate bar's value in cocoa and about 6% of the value in oil palm; on the 2019 government figures the cassava farmer earns the least of the gari chain's profit and the exporter by far the most; the cashew farmer kept 65% of the free-on-board price on the raw channel (2019) but only 16% of the Accra retail kernel price (2022). The pattern holds across the Series: position as far up the chain as capital allows, and if already farming, share in the processing profit rather than sell raw at the bottom of it.



Source: Ghana Agribusiness Playbook Series, 2026. Denominators differ by chain; see §5.

FIGURE 1

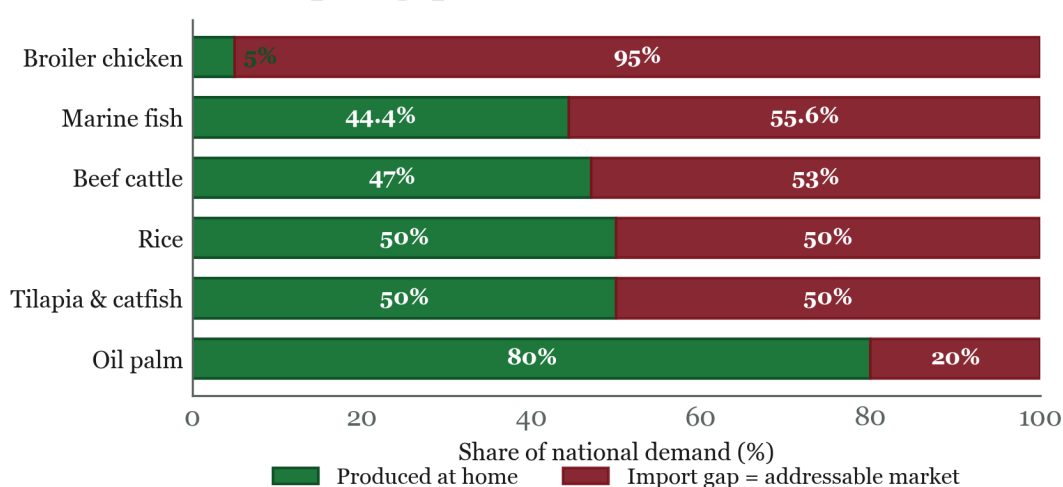
In every chain the producer keeps the least of the final value.



Finding 2: Import substitution is the biggest home market

Ghana imports the finished versions of things it produces in raw form. Poultry imports reached about US\$509m in 2025 and take about 80% of the chicken market; rice imports cost some GH¢3.6bn in 2025; fish imports cost about US\$209m in 2025; palm oil imports exceed US\$200m. In each case the imported share is the addressable local market, and it is backed by demand that already exists. Two commodities invert the pattern: cocoa and cashew are export earners whose opportunity is to keep more of the export value at home. For the rest, the home shelf is the prize.

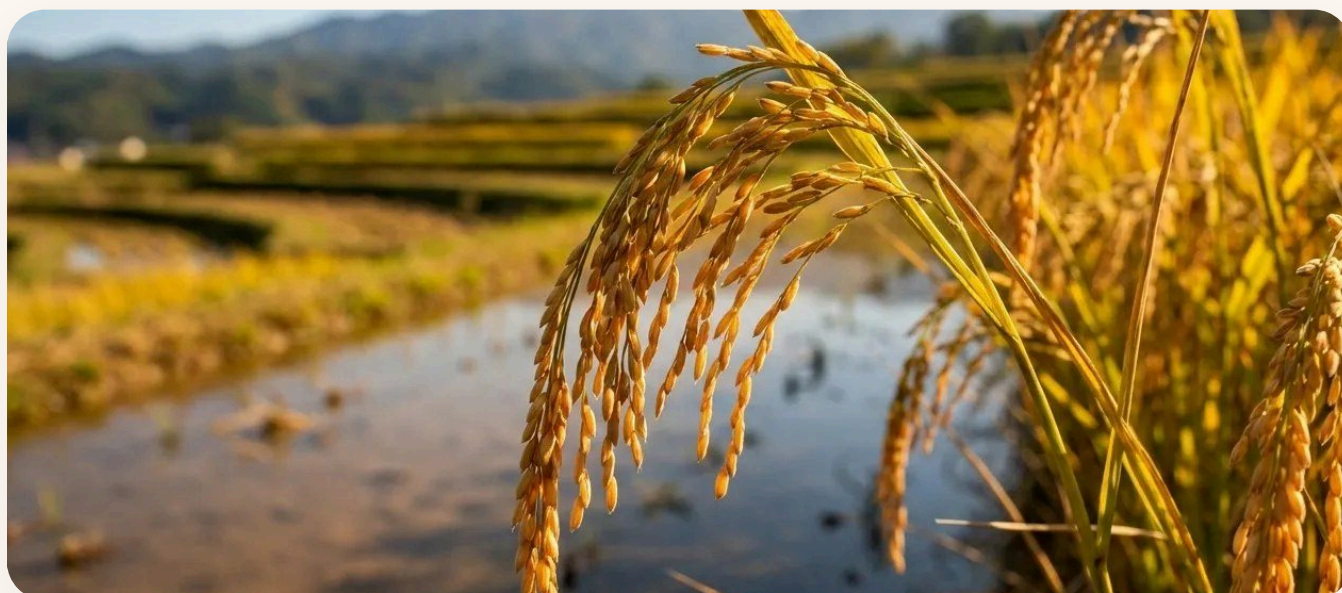
The import gap is the addressable market



Source: Ghana Agribusiness Playbook Series, 2026. Broiler = local broiler share; others = self-sufficiency.

FIGURE 2

For the import-facing commodities, the gap between home production and national demand is the market a local business can take.



Finding 3: The missing middle is the recurring opening

The single most common opening across the Series is the layer between the farm and the market: aggregation, storage, cold chain and mid-scale processing. It is missing in cassava, where about 12.5% of the crop is lost outright after harvest, 29% once roots sold at a discount are counted; in broiler chicken, where hygienic processing and cold chain are named the binding bottleneck; in tilapia and catfish, where little farmed fish is processed industrially; in marine fisheries, where GH¢2.6bn of fish is lost on shore each year; and in beef, where local fresh meat is sold uncooled against cold-stored imports. Building the middle is usually cheaper than building a factory and faces little private competition.

Finding 4: Policy and finance are aligned right now

The 2026 window is unusually supportive. The World Bank AgriConnect Compact (US\$3.5bn) names rice, maize and poultry among five priority chains; the Feed Ghana Programme backs grain and the poultry chain with committed budget; GIRSA guarantees cover up to 70% of an agricultural loan and count as bank collateral; the Ghana Commodity Exchange turns stored grain into working capital. Tax concessions are generous for animal protein in particular: poultry and other livestock except cattle pay a concessionary 5% income tax for their first five years, cattle ranching has a ten-year concession, and export cashew processing can use Free Zone rules. These incentives are worth more to an early entrant than a late one, and several are the reason a specific opening pays.

Finding 5: A digital layer is already live and local

The technology that lifts productivity and trust in these chains is practical, and Ghanaian ventures already offer it. Featherycare offers camera-based flock monitoring and a WhatsApp advisory service in poultry; AquaMet fields solar water-quality sensors on well over a hundred fish farms; Cowtribe says it delivers vaccines on demand to more than 20,000 livestock farmers a year in Ghana, Côte d'Ivoire and Kenya; muzzle-print identification matched 99% of 300 cattle in an Australian trial and is ready to pilot here. These are asset-light services that sell a capability rather than a crop, and they are among the lowest-capital entry points in the Series.



Finding 6: The cedi, not headline inflation, sets the cost sheet

Headline inflation fell from 23.5% in January 2025 to 3.2% in March 2026 and stood at 5.0% in August, with food inflation at 3.0%, but the cost sheets did not settle. The cedi lost about 9.5% against the US dollar in 2026, the World Bank expects fertiliser prices to rise about 31% in 2026, and feed, veterinary drugs, machinery and outboard motors follow the dollar. Prices move on their own clock: the maize price fell about 49% in a glut while its inputs cost far more than in 2020/21. The same currency move can help one side of a business and hurt the other. A stronger cedi cut Kumasi ram prices and the price of imported rice, while a weaker one lifts the minimum oil palm fruit price and the cedi value of cashew exports. Section 7 sets out the exposure commodity by commodity. The discipline in every playbook is the same: re-cost each season, hold a buffer against a price fall and a cost rise arriving together, and prefer contracts that fix the price or tie it to costs.

06



The comparative *investment landscape*

The six tables that follow set all eleven commodities side by side. They are the reference core of this Overview. Read the individual playbook for the evidence and the full citation behind any figure; every number here traces back to one.



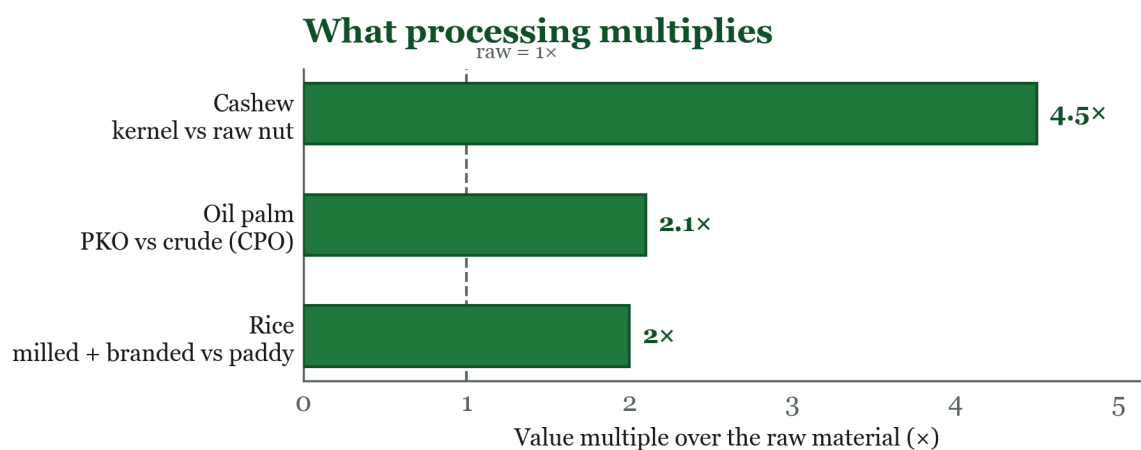
6.1 Market size and the home-market gap

COMMODITY	PRODUCTION / OUTPUT	IMPORT BILL OR GAP	SELF-SUFFICIENCY & 2028 SIGNAL
Cocoa	Crop ~650–750k t (2025/26), below the 1.047m t 2020/21 peak	Export earner: cocoa US\$2.3bn vs gold US\$12.5bn, H1 2026	Keeps ~18% of finished-bar value; at least 50% local processing required from 2026/27 under the Ghana Cocoa Board Act, 2026
Maize	~3.5m t (2025/26), a surplus	In glut behind a standing export ban	Self-sufficient; feed use up about 10% in 2025/26, poultry self-sufficiency 12% → 76% by 2028
Cassava	~28.5m t (2024), a top-five world producer	Imports US\$70m, mostly ethanol, vs cassava-product exports US\$0.9m (2020)	Only about 1m t of ~22m t reached industry (2023); planned deficit → surplus by 2028
Rice	~half of ~1.9m t eaten a year	GH¢3.6bn spent on imports (2025)	about 52% (2025/26); Feed Ghana targets 102% by 2028
Cashew	~255,000 t raw nuts (2025, official); 3rd raw-nut exporter by value, 2017–21	Value leaves raw: US\$297.6m now vs US\$660m potential	under 6% processed at home (2025); 50 to 60% processing target pledged
Oil palm	CPO 300–360k t vs consumption >400k t	Imports >US\$200m of oil a year	2032 self-sufficiency target
Broiler chicken	<5% local share of ~340,000 t eaten	~US\$509m import bill (2025); ~80% imported	12% → 75% self-sufficiency by 2028
Tilapia & catfish	~657,000 t produced vs ~1.3m t estimated requirement (2022)	~US\$209m fish imports (2025)	~50% self-sufficient; farmed output 121,809 t in 2024 against a plan of 238,655 t by 2028
Beef cattle	33,151 t beef (estimated); 2.41m-head herd (projection)	~11,295 t frozen beef (2024); ~70% of animals slaughtered foreign (2014 estimate)	~47% self-sufficient in 2018 (overstated; leaves out live Sahel cattle)
Marine fisheries	442,361 t landed (2024)	US\$209m fish imports (2025); GH¢2.6bn lost after landing (2023)	44.4% self-sufficient (2023), down from 52.0% (2022)
Goats & sheep	65,431 t; 15.81m head (2024)	Sheep/goat only ~1% of frozen-meat imports; Burkina Faso suspended live exports May 2026	About 31% of estimated domestic meat output; the import exposure is live festival rams



6.2 Where the value leaks, and the prime opening

The prime opening in most chains is to climb from the raw material to the processed product, because processing multiplies the price per unit. The clearest measured examples are below; the table that follows maps the leak and the opening for all eleven.



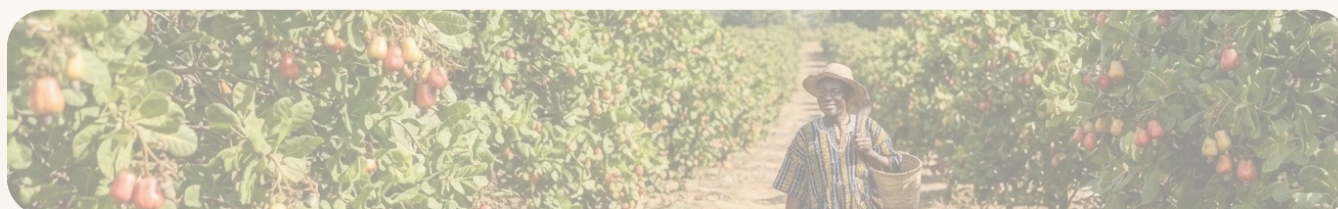
Source: Ghana Agribusiness Playbook Series, 2026 (World Bank; sector price data).

FIGURE 3

Processing multiplies the price per unit: the value of the finished product against its raw material.



COMMODITY	WHERE THE VALUE LEAKS	THE PRIME OPENING
Cocoa	Value added abroad; grinding plants run at half of capacity or less for want of beans and finance	Fill the idle grinding capacity, capture the living-income differential, and sell traceability as EU market access
Maize	Value has moved off the field; the pure grower loses money at the 2026 glut price	Storage and warehouse-receipt finance, professional aggregation, and maize-to-feed milling for poultry
Cassava	Under 5% reaches industry, about 12.5% lost outright after harvest (29% with discounted roots); the middle of the chain is missing	Aggregation and storage close to the field, then mid-scale processing built against a signed buyer
Rice	Value roughly doubles from the paddy floor to the shelf on a milled-rice basis, mostly captured at the mill and the brand	Own the milling, parboiling, grading and brand; take shelf share from imports into a policy-backed market
Cashew	Leaks at three joints: raw export, below-floor aggregation, and unrewarded quality	Home processing with a high whole-kernel share, certified nurseries, and grading/traceability the premium market pays for
Oil palm	Growers keep ~6% of value; brands and retail take ~66% of profit; artisanal mills extract 11% vs 20%	Lift extraction (mini-mill), crush kernels for palm kernel oil (~2x crude), and climb to refined, branded oil
Broiler chicken	Producers add the most value and earn the highest return; distributors hold the most bargaining power, and few birds reach processors	The missing middle: hygienic small-scale processing and cold chain, plus local feed and hatching
Tilapia & catfish	Feed (~77% of small-cage cost), poor seed and disease raise the local cost	Certified seed and nurseries, feed dealing and local milling, fish-health services, and processing with cold chain
Beef cattle	Value leaks to the Sahel, to offal importers, to southern dealers, and into untanned hide	Finishing/feedlots to add weight at home, a tannery for the wasted hide, and cold-chain processing
Marine fisheries	GH¢2.6bn lost after landing (2023); no grade at the landing, little cold storage at artisanal beaches, few buyers pay for quality	A landing-price and data service, cold-box aggregation, and clean grading/smoking, all on shore
Goats & sheep	Trader margins of ~25% on a goat (2015); little inspected slaughter; skins singed or exported raw	Buy breeding females from the slaughter queue, festival ram fattening, skin collection, and contracted aggregation



6.3 Entry points by capital level

Every commodity offers a ladder of entry points. The asset-light rung is usually a service or an aggregation round; the capital-heavy rung is usually processing or an integrated asset. The cheapest rungs are often the best risk-adjusted bet.

COMMODITY	ASSET-LIGHT ENTRY (LOW CAPITAL)	CAPITAL-HEAVY ENTRY (HIGH CAPITAL)
Cocoa	Own the farm-level record (mobile-money payment, traceability register); sell density- and-spraying advice	Fill idle grinding capacity with a contracted bean allocation and season-long working capital
Maize	Professional aggregation with pre-finance; mechanisation services; aflatoxin-safe grain testing	Maize-to-feed milling for the under-supplied poultry sector; new maize-processing capacity
Cassava	Aggregation and storage close to the field (the scarcest business); branded convenience gari	Mid-scale flour or starch processing, and import-substitution against ethanol and Nigerian starch
Rice	Seed and input dealing, aggregation, drying and small-scale parboiling services	An integrated mill with destoning, grading, a brand and outgrowers; irrigation rehabilitation
Cashew	Certified grafted-seedling nursery (legally protected demand); aggregation and grading with warehouse receipts	Industrial processing above 10,000 t with shell-oil (CNSL), under the Free Zone holiday
Oil palm	Certified nursery; FFB aggregation and logistics; EUDR traceability and agronomy services	Mini-mill and extraction upgrade; refining and branded oil; a 10 t/hr mill (benchmark IRR ~26%)
Broiler chicken	Chick brooding and vaccination services; aggregation and offtake; digital advisory	Local feed milling (feed is about half of cost); a local hatchery (parent stock is imported)
Tilapia & catfish	Digital advisory (solar sensors, feeding apps); catfish grow-out, which sidesteps the tilapia virus	A local feed mill (costed at ~US\$4.2m in 2015); certified hatcheries, with output of 382m fingerlings in 2024 against a 544m target; processing with cold chain
Beef cattle	Muzzle-print traceable aggregation; mobile vaccine and advisory services	A commercial feedlot under the 10-year cattle tax concession; hide collection for tanning; cold-chain processing
Marine fisheries	A landing-price and data service (near-zero capital); a cold-box aggregation round	A cannery stake or an industrial tuna vessel (very high capital, and the most exposed to the bait link and yellow card)
Goats & sheep	Buy breeding females from the slaughter queue; skin collection and grading	Producer aggregation with contracted offtake; festival fattening at scale

6.4 Indicative return signals

Every figure below is indicative, based on the primary and secondary data collected for the Series. Returns are quoted where a playbook records a specific, sourced figure.

Indicative returns, where a figure exists

Based on primary and secondary data. Gold bar is an IRR, not a single-cycle return.

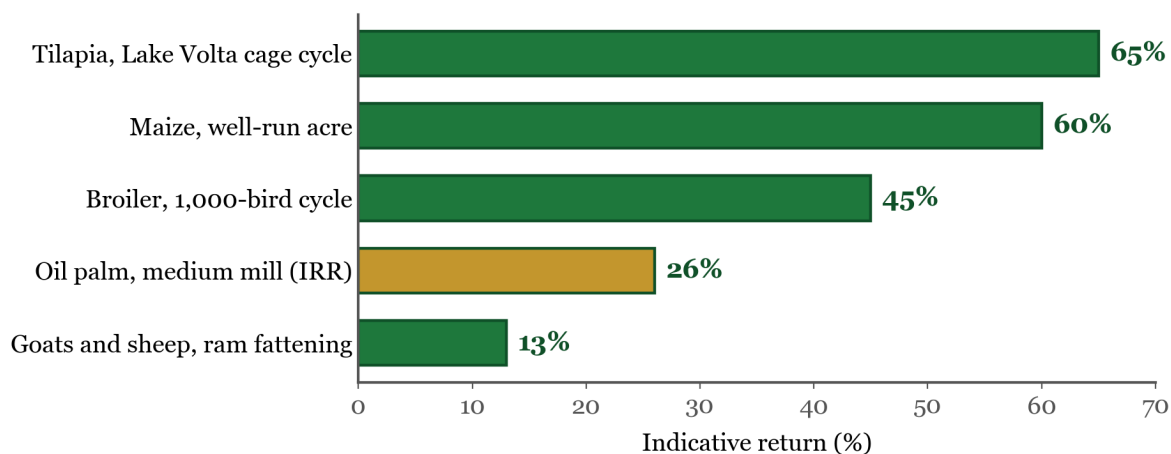
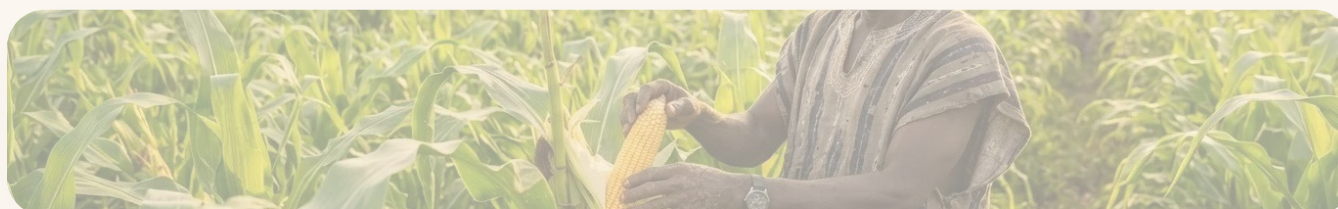


FIGURE 4 Indicative return signals where a playbook records one.



COMMODITY	INDICATIVE RETURN SIGNAL	BASIS AND CONTEXT
Cocoa	Farmer keeps ~5–6% of a bar's value; a legal floor of 70% of the FOB price applies from 2026	Revenue is the administered farm-gate price, so the farm return turns on yield and cost per hectare; the larger return sits in domestic processing
Maize	~60% return on a well-run acre (~GH¢5,400/acre at 20 bags, recovered price)	But at the 2026 average yield and glut price the pure grower loses money; downstream margins are higher
Cassava	Gari chain profit sits mostly with the exporter and least with the farmer (2019, mixed units)	Only an annual rural wholesale price (about GH¢5,045/t in 2024); buyer prices mix products and years
Rice	Irrigated farms earned about four times the rain-fed margin (2020 survey); value roughly doubles from paddy floor to shelf	Growing paddy alone was loss-making for many in the 2026 glut; the steadier return is at the mill, the store and the brand
Cashew	Kernel sells for about 7x raw nuts a kg but needs about 4.8 kg of nuts; farmer kept 65% of raw FOB (2019) but 16% of Accra retail (2022)	Latest farm budget uses 2009–10 prices; at 2026 prices processing margins are thin or negative on a normal grade mix
Oil palm	Medium mill (10 t/hr) benchmark IRR ~26%, payback ~3.7 yr, capex ~US\$3.6m	GSOPP benchmark; PKO sells ~2x crude (US\$2,416 vs US\$1,140 a tonne)
Broiler chicken	~45% on a 1,000-bird cycle at 2026 prices (net ~GH¢36,700 on ~GH¢118,800); ~18% at a GH¢45/kg live price	Turns on the live sale price (break-even ~GH¢38/kg live); chicks and feed follow the dollar through imported parent stock, soya and premix
Tilapia & catfish	One 5 x 5 x 5 m cage: cost ~GH¢44,600 and profit ~GH¢29,100 a cycle at September 2026 prices (80% survival); break-even GH¢30.60/kg gutted or 48% survival	Works for a disciplined operator when survival holds; the fish price and survival move profit most
Beef cattle	Finishing nets about GH¢1,140 a head at 2026 prices; fresh beef GH¢88 to 110/kg at butchers	A thin margin: break-even sale price about GH¢35.8/kg live against GH¢40
Marine fisheries	Purse seine canoe owner about GH¢112,000 a year at 2026 prices (58 trips; break-even about 131 kg a trip)	No continuous landing-price series and no cannery margin published since 2019; returns turn on catch, trips and the landing price
Goats & sheep	2026 budgets: 30-ram fattening cycle ratio 1.13 (GH¢7,174 margin); 20-doe flock ratio 1.18 (8% on capital)	Sale and buy prices move profit most; the animal is about two-thirds of a fattening cycle's cost



6.5 Policy incentives and finance rails

COMMODITY	TAX AND INCENTIVE	FINANCE AND PROGRAMME
Cocoa	No specific crop tax holiday; the Ghana Cocoa Board Act, 2026 (signed 26 August 2026) requires at least 50% local processing from 2026/27 and guarantees farmers at least 70% of the FOB price	Planned ~US\$1bn domestic cocoa bond; living-income differential payable on documented volumes
Maize	No tax concession for farming itself; agro-processing gets a five-year concessionary period (Income Tax Act, 2015, Act 896)	AgriConnect (priority chain); GIRSAL 70%; GCX warehouse receipts; Feed Ghana; free fertiliser for the 2026 season
Cassava	Anchor-industry designation (since 2019), 200,000 t starch target; 24-Hour Economy agro-processing enclaves	Left off the AgriConnect Compact and Food System Resilience Programme; GIRSAL publishes no data on how far it reaches cassava smallholders
Rice	Agro-processing tax break; buy-local directive for schools and public bodies	AgriConnect (priority chain); GIRSAL 70%; DBG/GIRSAL ~GH¢500m facility; new AfDB grant ~US\$18.8m
Cashew	10-year Free Zone holiday for export processors; GIPA agro-processing concessions; 24-Hour Economy	GIRSAL 70%; World Bank US\$200m Tree Crop Diversification Project; GCB up to GH¢2.5bn agribusiness framework
Oil palm	Agro-processing incentives; GIRSAL guarantee	US\$500m 2026–2032 policy window (up to 70% of project cost, 5-year moratorium)
Broiler chicken	Concessionary 5% income tax for the first five years; GIPA (formerly GIPC) investment incentives	Nkoko Nkitinkiti (~GH¢244.99m); AgriConnect (priority chain); Feed Ghana (~GH¢200m) for local grain
Tilapia & catfish	Aquaculture investment incentives; Act 1146 sets licence, insurance and biosecurity requirements	AgDevCo (Tropo US\$10m, 2024); Olam Agri US\$200m pledge (pasta, poultry feed and aquafeed, 2025); Blue Food Innovation Hub (2026); national plan ~GH¢1.03bn
Beef cattle	Cattle businesses taxed at a concessionary 5% for 10 years; processing local livestock into packaged meat at 5% for 5 years	GIRSAL had guaranteed about GH¢1.85bn by July 2026; Feed Ghana's only cattle input line is GH¢2.84m for dairy against GH¢26bn for poultry, and ruminant support had not started by August 2026
Marine fisheries	The GIPA Act 2026 (Act 1173) removes the minimum foreign capital for a cannery or cold store; fish canning qualifies for the agro-processing tax concession	Act 1146 licensing Regulations still in draft after their August 2026 deadline, so licence fees cannot yet be budgeted

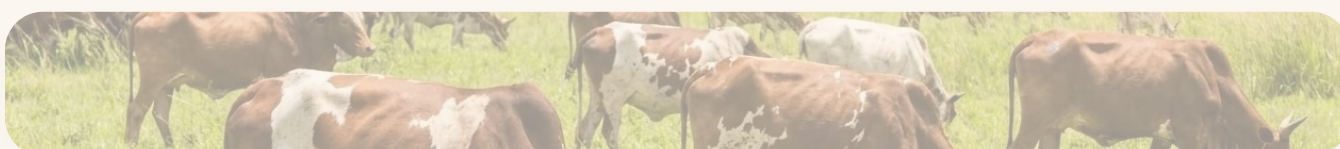


COMMODITY	TAX AND INCENTIVE	FINANCE AND PROGRAMME
Goats & sheep	5-year income-tax concession (livestock other than cattle), taxed at 5%, confirm with GRA in writing	GIPA incentives; Feed Ghana names sheep and goats, but its ruminant component had not started by August 2026



6.6 The principal risk to price in

COMMODITY	THE PRINCIPAL RISK TO PRICE IN
Cocoa	Cocoa swollen shoot virus disease has a national prevalence above 30%, cuts dry-bean yield by about 21% on infected trees, and no variety on sale resists it; around it sit a world price the country cannot control, an EU market that can close on a traceability failure, and illegal mining removing cocoa land.
Maize	Market and policy risk before agronomy: the price can move by half in a year, the export ban traps the surplus at home, policy promises are not always funded, and the informal traders most farmers sell to are the incumbent competition.
Cassava	A root that spoils in two to three days; idle 1D1F plants built ahead of supply; no visible price series, so an entrant sells blind. Cassava brown streak disease, which would disqualify flour from badly affected roots, had not been reported in West Africa by early 2026 and must be kept out.
Rice	The 2026 glut is the standing warning that growing without milling and a market destroys value; imports are the trusted incumbent; local rice cost more than Vietnamese imports in 2026 (GH¢425 against GH¢325 a 25 kg bag), and few mills grade or colour-sort.
Cashew	Farm-gate prices swing (GH¢20 to GH¢7 a kg within 2025); ~46,000 t of capacity processed ~15,000 t of raw nuts in 2025; a blunt export ban or tax could cut farm prices and push nuts across borders; the EU aflatoxin limit is a pass-or-fail gate.
Oil palm	Ganoderma basal stem rot is incurable and the one un-hedgeable risk, audit incidence before buying land. Thin, volatile margins leave a low-extraction, single-product operator little cushion.
Broiler chicken	Cheap frozen imports cap the price; a weak cedi raises feed and chick costs together; avian influenza; and little cold chain serves the mature local bird, so an offtake must be secured before placing birds.
Tilapia & catfish	ISKNV outbreaks kill 10 to 80% of stocked fish on lake farms (2024 survey); feed is ~77% of small-cage cost; ~63% of 30 Lake Volta farms sampled had sourced seed from a virus-positive farm.
Beef cattle	Sahel insecurity, rustling and Burkina Faso's export suspension from May 2026 threaten the live-import supply behind much of the slaughter; foot-and-mouth is endemic (66% of cattle seropositive in 2024 outbreaks) and CBPP can kill 30 to 80% in a severe outbreak; transporters estimate about 15% of cattle die on the haul south.
Marine fisheries	The small pelagic stocks are overexploited (round sardinella landings in 2019 were about a tenth of the 1992 peak) and the pole-and-line tuna fleet's bait is drawn from them, so the two fisheries carry one linked risk; the EU yellow card, still in force in September 2026, sits behind the export licence.
Goats & sheep	Peste des petits ruminants costs keepers every year (median 13.2% mortality in an affected flock); the Burkina Faso export suspension is reshaping supply; and festival prices moved differently by market in 2026, so price the market you sell into.



07



Inflation, the cedi and your *cost sheet*

Inflation is no longer the headline problem, yet the cost sheet moved anyway. Headline inflation fell from 23.5% in January 2025 to 3.2% in March 2026, the lowest reading since the consumer price index was rebased in 2021, and stood at 5.0% in August 2026, with food inflation at 3.0%. The Bank of Ghana held its policy rate at 14%, and the average bank lending rate fell to about 15.9% in August 2026 from 24.2% a year earlier. The cedi, which strengthened through 2025, then lost about 9.5% against the US dollar in 2026: the Bank of Ghana rate was about GH¢10.45 at the end of 2025 and about GH¢11.66 on 28 September 2026. The World Bank expects fertiliser prices to rise about 31% in 2026, with urea ending the year about 60% above 2025. Ten of the eleven playbooks carry a section on this, most of them headed “Inflation and a moving market”, and its lesson is the same in every chain.

Three ways 2026 squeezed the cost sheet

- **Imported inputs follow the dollar.** Fertiliser, feed ingredients, veterinary drugs and vaccines, mill machinery, outboard motors and parent stock are priced in or off dollars, so a weaker cedi raises the cedi cost of the cycle at once.
- **Prices and costs move separately.** Maize is the clearest case: an acre cost about GH¢1,200 to grow in 2020/21 and about GH¢8,100 in 2024, while the farm-gate price fell about 49% to about GH¢360 per 100 kg by March 2026. The playbooks warn that a price fall can arrive in the same season as a cost rise.
- **Money is cheaper but not cheap.** At 15.9%, borrowing the whole GH¢44,623 cost of a tilapia cage cycle for six months costs about GH¢3,550. Cashew processors borrowed at about 20% in 2026 against about 9% in Vietnam.



How each commodity's cost sheet is exposed

The table sets out what follows the dollar in each chain, what actually moved in 2025 and 2026, and whether the cedi works for or against the business.

COMMODITY	WHAT FOLLOWS THE DOLLAR	WHAT MOVED IN 2025-26	WHICH SIDE THE CEDI HITS
Cocoa	Dollar debt and dollar-priced inputs. The farm-gate price itself is fixed in cedis by circular.	Farm-gate price GH¢41,392 a tonne from 18 June 2026, against GH¢58,000 before (about 29% lower). World price about US\$5,018 a tonne in January 2026 and US\$3,241 in March.	Revenue is administered in cedis, so the exposure is dollar cost or debt against cedi income. Model in cedis and stress the dollar separately.
Maize	Seed and fertiliser (imported). Fertiliser forecast up about 31% in 2026, urea about 60%.	Acre cost about GH¢1,200 (2020/21) to about GH¢8,100 (2024). Farm-gate price down about 49% to about GH¢360 per 100 kg by March 2026. Free 2026 fertiliser shields growers this season.	Costs. The price fall came from the glut and the export ban, not the currency.
Cassava	Fertiliser and agrochemicals only; few bought inputs.	Rural wholesale price rose from about GH¢527 a tonne (2015) to GH¢5,045 (2024), but the 2024 jump was inflation, not a real gain.	Small on the cost side. The planned surplus can pull the farm-gate price down in the same season that input costs rise.
Rice	Fertiliser, herbicides, tractors, combine harvesters and milling machinery.	A 25 kg bag of Vietnamese rice averaged GH¢325 in March 2026, down from GH¢490 a year earlier, against GH¢425 for local fragrant rice.	Both, in opposite directions: a weaker cedi raises a miller's costs and makes imports dearer; a stronger one cheapens imports and pulls local prices down.
Cashew	Fertiliser, fungicides, shelling and grading machinery, packaging and fuel. Nuts and kernels are priced in dollars.	The farm-gate floor is set from a dollar reference price at a six-month average exchange rate. Processors borrowed at about 20% against about 9% in Vietnam.	Both: dearer imported inputs, but a higher cedi value for export sales. The floor follows the cedi with a lag.
Oil palm	Fertiliser (above all potash), agrochemicals, mill machinery and spare parts.	The minimum fruit price is set monthly from the dollar price of crude palm oil: GH¢1,586.66 a tonne in April 2026 and GH¢1,714.40 in September. Fertiliser is about GH¢8,000 a hectare at 2025 retail prices.	Both: the same move lifts revenue and costs. A stronger cedi makes imported refined oil cheaper against local oil.

COMMODITY	WHAT FOLLOWS THE DOLLAR	WHAT MOVED IN 2025-26	WHICH SIDE THE CEDI HITS
Broiler chicken	Parent stock (about 786,091 parent birds in 2023), soybean meal and feed concentrates. Maize is mostly local.	Cedi about GH¢10.45 (end-2025) to GH¢11.66 (28 September 2026). A 50 kg bag of maize fell from GH¢350 (March 2025) to about GH¢180 (March 2026); starter feed fell from GH¢462 to GH¢433 while soya-rich concentrate rose from GH¢575 to GH¢590.	Costs. Chicks and feed carry the dollar together, and cheap imports cap the live price.
Tilapia & catfish	Fishmeal, soya meal and premix in feed; imported feed costs about 30% more than local feed.	A 4 mm grower feed fell from GH¢226 a bag in January to GH¢210 in September (Kumasi) while the farm-gate price of gutted tilapia rose about 16%. The playbook warns this could reverse.	Costs. The import ban, not the cedi, protects the fish price.
Beef cattle	Soybean meal, most veterinary drugs and vaccines, lick minerals; Sahel cattle are bought partly in CFA francs.	A Kumasi cow fell from about GH¢30,000 in 2025 to GH¢20,000-25,000 before Eid 2026, which traders put down largely to the stronger cedi.	Both: a firming cedi cuts local live-cattle prices and cheapens imports; a falling one lifts feed and drug costs.
Marine fisheries	Premix (refined from imported crude), outboard motors, nets and spare parts.	Premix was cut about 16% from January 2026 and set at GH¢5.51 a litre from September. A new 40 hp outboard listed at GH¢35,000-45,000 in 2026, about three times its 2016 price.	Both: imported gear costs more when the cedi weakens, while a stronger cedi cheapens imported fish (about US\$0.66 a kg in 2025) and pulls local prices down.
Goats & sheep	Soybean meal, wheat bran (from imported wheat) and veterinary drugs, including the PPR vaccine.	A 50 kg bag of maize was about GH¢180 in March 2026 against GH¢350 a year earlier. Kumasi rams started at GH¢1,500 before Eid 2026 against GH¢2,000-2,500, while prices rose in Accra.	Both: a stronger cedi cut ram prices and the cost of imported animals; a weaker one raises feed and drug costs.

Source: the "Inflation and a moving market" sections and Pillar 5 economics of the individual playbooks. Cocoa is drawn from the playbook's currency and price sections.



What the playbooks tell you to do about it

- **Re-cost before every cycle.** Price feed, drugs, fertiliser, fuel and the buy price from current quotes before each placement, stocking, intake or season, not from last season's sheet.
- **Hold a buffer for both moves at once.** The buffer has to cover a fall in the selling price and a rise in costs arriving together, because that is what 2026 delivered in maize, feed and cattle.
- **Prefer contracts that fix the price or tie it to costs.** Where a supplier will hold the price, buy forward: broiler feed is the example. In goats and sheep, buy feed at harvest or in a strong-cedi month.
- **Do not borrow in a currency you do not earn.** The cocoa playbook's trap is a dollar-priced input or loan against cedi revenue, and the beef playbook says to stress the model against both a firming and a falling cedi.
- **Treat a local input as a hedge.** Local feed milling and local hatching in broilers, and a local feed mill in fish farming, take part of the dollar out of the cost sheet.

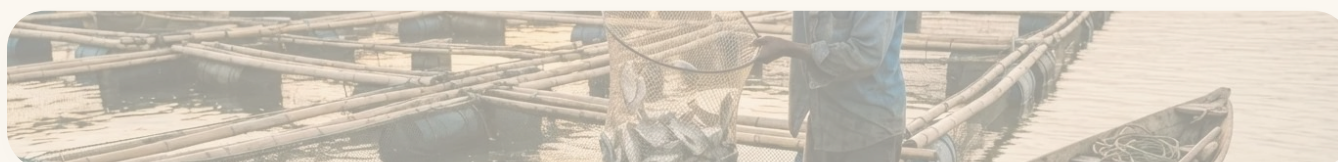




Risks that cut across *the Series*

Section 6.6 gives the principal risk to price in for each commodity. This section reads across all eleven risk decks and groups what they rate into eight families, with the evidence each playbook gives for how hard the risk bites. The severity ratings cluster differently by sector: the VERY HIGH ratings sit mostly in animal protein (avian influenza, Newcastle disease, feed shocks and cheap imports in broilers; seed disease and feed cost in fish; foot-and-mouth disease, anthrax and rustling in cattle; PPR in goats and sheep), with a handful in crops (the maize glut, fall armyworm and aflatoxin; the rice glut and drought; Ganoderma and uncertified seed in oil palm).

RISK FAMILY	WHERE IT BITES, AND HOW HARD	WHAT THE PLAYBOOKS ADVISE
Disease and pests	Broilers: Newcastle disease kills up to 100% of an unvaccinated flock, and only 55% of 60 farmers surveyed gave all eight vaccinations. Tilapia: ISKNV outbreaks kill 10–80% of stocked fish, and about 63% of 30 Lake Volta farms had sourced seed from a virus-positive farm. Goats and sheep: about half the animals in a herd catch PPR in a year. Crops: swollen shoot cuts cocoa yield about 21%; Ganoderma has no cure (about 11% of 3,000 palms sampled were infected); fall armyworm takes 22–67% of maize yield; cassava mosaic cuts yield over 20%; cashew anthracnose takes 70–100% if uncontrolled.	Vaccinate on a calendar and keep biosecurity up. Buy screened seed and certified planting material. Audit for Ganoderma before buying land. Treat vaccine handling as a skill: about 180 of 400 cattle died at Dissah in September 2025 after two vaccines were mixed.
Price collapse and glut	Maize fell about 49% to about GH¢360 per 100 kg by March 2026, below the GH¢450 floor and the roughly GH¢675 break-even at 12 bags an acre. An estimated 700,000 tonnes to 1 million tonnes of local paddy went unsold. About 50,000 tonnes of cocoa sat unsold in early 2026 when the fixed farm-gate price put Ghana above competing origins. The cashew farm-gate price fell from about GH¢20 a kg in February 2025 to about GH¢7 by May. The cassava plan moves the country from 95% self-sufficiency in 2024 to a planned 153% by 2028.	Contract the buyer or offtake before planting. Store, process or feed rather than sell raw into a glut. Do not size a farm or a plant on today's price.
Currency and input costs	Fertiliser is forecast up about 31% in 2026 and the cedi lost about 9.5%. In broilers a cedi slide raises the feed and chick bill together and can turn a modest profit into a loss. Feed is about three-quarters of tilapia cost.	Re-cost each cycle, hold a buffer, and prefer fixed-price or cost-linked contracts (section 7).
Policy and promises	Export bans stand behind the glut (maize since 2022; Niger and Burkina Faso suspended livestock exports in March and May 2026). The cashew raw-export ban was pledged in February 2026 but is not law. The rice import quota had no published rules by September 2026. NAFCO had GH¢100 million against the GH¢770 million it said it needed to clear the rice glut. Fisheries licensing regulations were still in draft in September 2026, so fees cannot be budgeted.	Do not bet a venture on a ban date. Model the business twice, once with every incentive and once with none. Carry unset fees as a range.



RISK FAMILY	WHERE IT BITES, AND HOW HARD	WHAT THE PLAYBOOKS ADVISE
Cash flow and working capital	A 1,000-bird cycle commits about GH¢82,100 before the first bird is sold. A beef finisher's outlay is about GH¢9,740 a head for four months. A hectare of oil palm gives no fruit income for about two and a half years and takes about GH¢36,800 over years 0 to 3 with hired labour. A cashew orchard earns nothing for two years, and a cashew processor must buy a year's nuts in a three-to-four-month window. In tilapia, variable costs are about 98.9% of total cost.	Size the runway to the whole cycle plus a bad month. Intercrop the immature years. Use GIRSAL guarantees (up to 70% of principal). Start on a service rung that turns cash faster.
Buyer power and import competition	Imported leg quarters (GH¢35 a kg against GH¢52 local in 2023) cap the broiler price, and imports supply about four-fifths of chicken eaten. Frozen beef, frozen fish (about US\$0.66 a kg) and cheaper Vietnamese rice do the same in their chains. About 93% of surveyed maize farmers sold to market queens. The fishmonger's advance leaves the fisher a margin of about 7.4% against 45% for the processor. Licensed cocoa buyers are owed roughly US\$185 million by COCOBOD.	Sell fresh, festive or on contract rather than compete on price. Release finance against a signed offtake. Underwrite the specific counterparty.
Theft, safety and compliance	Dealers report GH¢4,000–12,000 profit a head on stolen cattle. All 91 cage farmers surveyed used antibiotics, about 41% without a prescription. About 15% of maize samples were over the aflatoxin limit. The EU deforestation rule applies to large cocoa and palm operators from 30 December 2026 and to small ones from 30 June 2027. The EU yellow card on fisheries, in force since 2 June 2021, was still in force in September 2026.	Buy from known herders with origin records. Build the farm-to-first-buyer record early. Carry compliance status as a covenant-level item.
Weather and water	The 2024 drought cut maize output about 28% and rice area 16% and milled output 21%. Weather cut the 2024 cashew crop about 30%. Floods, including Bagre spillage, can destroy a rice crop, and the Bank of Ghana warns that a strong El Niño later in 2026 could raise food prices.	Drought-tolerant varieties, irrigation and index insurance. Irrigated rice farms earned about four times the rain-fed margin.

Source: the disease and risk decks and Pillar 5 economics of the individual playbooks. Severity words are those printed in the decks.



09



Crops versus animal protein: the *structural contrast*

The Series covers two sectors with genuinely different structures, and the content pillars differ to reflect it. For crops the pillars run varieties, demand structure, disease and risk, planting regime, cost and returns, and value chain analysis. For animal protein, species and breed profiles replace varieties, and a production-system pillar replaces the planting regime, with disease, health and biosecurity carrying more weight. Beyond the pillar structure, four contrasts matter to an investor.

Incentives are stronger for animal protein.

Ghana's tax code gives livestock farming other than cattle, and cash crops, a concessionary 5% income-tax rate for their first five years, and cattle ranching a ten-year concession, so an animal-protein case can lean on a reduced tax rate in its early years.

Foreign-exchange exposure is sharper in animal protein.

Broiler and farmed-fish economics carry the exchange rate twice over, because breeding stock and key feed ingredients are largely imported. A weak cedi squeezes every producer at once. Crops carry the currency mainly through fertiliser, agrochemicals and machinery, and are more exposed to weather, disease and price volatility than to the import bill for feed and stock (section 7).

Disease is the deciding cost in animal protein.

Avian influenza, ISKNV in tilapia, foot-and-mouth and CBPP in cattle, and PPR in small ruminants are each capable of erasing a season. The crop diseases in the Series, swollen shoot, Ganoderma, cassava mosaic, rice blast, are serious but generally slower-moving. Biosecurity and vaccine access are therefore central to every animal-protein case.

Both sectors share the same core lesson.

Whether the commodity is a bean or a beast, the value sits downstream of primary production, the missing middle is the recurring opening, and import substitution or value capture at home is the prize. The sector changes the details; it does not change the thesis.



A decision framework: where should *you enter?*

The Series is written for three audiences, students, entrepreneurs and investors, and the right entry point depends on capital, appetite and horizon more than on which commodity is fashionable. The guidance below is the pattern that recurs across all eleven playbooks.

For the student or first venture

Start asset-light, at the service and identity end of the chain, where capital is low and a real problem is protected. Certified nurseries, grading and quality services, digital advisory, aggregation and traceability services, and record-keeping tools all qualify. These build a network and a track record fast, and several already work locally, flock monitoring, water-quality sensors, mobile vaccine delivery. The lowest rung in marine fisheries, a landing-price and data service, needs almost no capital and produces the continuous price record the chain lacks. The easier ways in, commodity by commodity, are ranked in section 11.

For the entrepreneur with capital

Take a processing or finishing position, but choose it deliberately and anchor it on a confirmed buyer before placing any asset. A mill upgrade in rice, cottage processing in cashew, a cold store and smoker in fish, a small feedlot in beef, festival fattening in small ruminants. The recurring discipline is to secure the offtake and the raw-material supply first, so the next plant is not the next idle one, a warning shown in several commodities by real stranded factories.



For the investor or institution

Back the nodes where returns compound across many producers at once and where the tax and finance levers bite hardest: feed mills, hatcheries, integrated mills, tanneries, cold-chain aggregation, industrial processing under a Free Zone or the cattle tax concession. Co-invest alongside the guarantee schemes and the anchors already in the water.

✓ THREE RULES THAT HOLD ACROSS EVERY COMMODITY

- **Do not enter cold as one more primary producer.** Production is the crowded, thin-margin node in nine of the eleven chains. Enter where value collects, not where it is created.
- **Secure the buyer and the supply before building.** Every processing case in the Series depends on a contracted offtake and a reliable raw-material flow; the ones that skipped this became idle assets.
- **Model your own numbers before committing capital.**

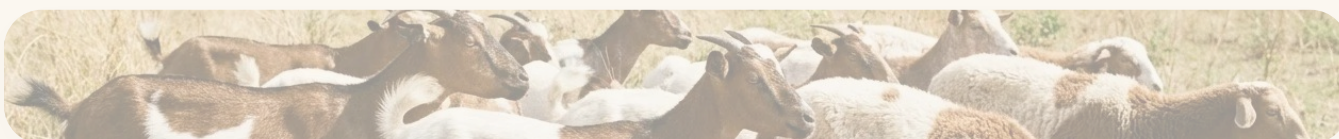




Where to start in 2026: the easier ways in

Every playbook ends with an entry ladder, and every ladder says the same thing: the easier ways in are services and asset-light roles, and the hardest is to own the animal, the land or the plant. This section ranks the eleven commodities by how easy they are to start in 2026, using six tests drawn from the playbooks: the capital needed, the time to first cash, how unforgiving the first step is, whether a buyer is within reach, whether the rules are clear, and how much room the 2026 numbers leave for error. The ranking is the Overview's own reading across the eleven playbooks; no single playbook states it, and the capital bands are the playbooks' own planning ranges.

COMMODITY	EASE OF ENTRY	EASIEST FIRST STEPS (CAPITAL AS STATED)	TIME TO FIRST CASH	WHAT MAKES IT HARDER
Goats & sheep	Easier	Buy breeding females from the slaughter queue; a paid vaccination and deworming round; skin collection. Or a 20-doe flock (about GH¢40,700) or a 30-ram festival fattening cycle (about GH¢49,300).	Fattening: about 84 days to Eid. Breeding: first kids at about 14 months, so cash is lower in years 1–2.	PPR and buying badly are the two VERY HIGH risks. The 2026 budgets return GH¢1.13 and GH¢1.18 per cedi of cost, which the playbook calls a business that pays, but only just.
Marine fisheries	Easier at the bottom rungs	A landing-price and data service (a notebook, a hanging scale and a season of early mornings), or a cold-box aggregation round (an insulated box, ice and transport). An improved smoking oven is about GH¢7,000.	A season of recording at one site is advised before investing.	A canoe (about GH¢222,000) is the riskiest first move: the catch is split with the crew and up to three owners, new canoe registration was closed until 30 September 2026, and licensing regulations are still in draft.
Maize	Easier, services only	Scouting and timed-spray service, aflatoxin testing, hermetic-bag resale, aggregation coordination, farm advisory (all in the low-capital band).	Storage plays a nine-month price window, October to July.	A pure grower loses money at the 2026 average yield and glut price. Grain trading is crowded: about 93% of surveyed farmers sell to market queens.
Broiler chicken	Moderate	A chick-brooding service (a business on a few square metres), a vaccination and vet service, or advisory and record-keeping (all low capital). Feed mixed from local maize is medium capital. A full 1,000-bird cycle commits about GH¢82,100.	One cycle: six to nine weeks, about eight in Ghana.	The cycle is short and unforgiving. Avian influenza and Newcastle disease are VERY HIGH, cheap imports cap the price, and the playbook says production is best not entered cold.



COMMODITY	EASE OF ENTRY	EASIEST FIRST STEPS (CAPITAL AS STATED)	TIME TO FIRST CASH	WHAT MAKES IT HARDER
Tilapia & catfish	Moderate	Phone advisory and records (under about GH¢5,000); fingerling nursing (about GH¢10,000–60,000); catfish in tarpaulin tanks (about GH¢18,000 of feed and seed per 1,000-fish batch). One cage cycle costs about GH¢44,623.	About five to six months for a grow-out cycle.	The cage is the rung where a beginner is most likely to lose everything: seed disease, feed at about three-quarters of cost, and Act 1146 permits with regulations still in draft.
Rice	Moderate	Input and seed dealing, aggregation, bird-scaring, weed and drying services, small-scale parboiling (one of the lowest-capital openings) or agronomy advice.	Rice matures in 90–125 days by variety: one crop a year rain-fed, two irrigated.	Paddy grown with no buyer or mill met a glut of 700,000 tonnes to 1 million tonnes unsold. The margin is at the mill, the store and the brand.
Cassava	Moderate	A clean-cutting nursery (land, clean starter material and a year) or aggregation (working capital and a relationship rather than equipment). One acre costs about GH¢1,850 in variable costs (2024).	Nursery material compounds about eightfold a year; starch plateaus around the tenth month.	Buyer access is the hardest gate, roots spoil in 24–72 hours, and two One District One Factory plants stand idle for want of roots and offtake.
Cashew	Moderate to harder	A certified grafted-seedling nursery (low capital; certified material is compulsory from 3 July 2026), a testing and grading service, or an aggregator with a processor's letter of intent.	Nursery: slow first cash. Orchard: nothing for two years, first nuts in years three to four.	At 2026 nut prices and a normal grade mix, processing loses about GH¢1,400 on every tonne of nuts. Ghana's largest processor secured nuts for only a fifth of its capacity.
Oil palm	Harder to grow; services are moderate	A certified seedling nursery (about a twelve-month cycle), fruit aggregation (low to medium capital; a 24-hour clock), Ganoderma surveillance or an EUDR traceability service.	First harvest at 30–36 months; about GH¢36,800 spent per hectare over years 0 to 3 with hired labour.	At Ghana's average yield of about 8 t/ha a hired-labour smallholder barely breaks even, and Ganoderma has no cure.
Beef cattle	Harder	A phone-based vaccine and advisory service (GH¢2,000–10,000), stock aggregation (GH¢15,000–50,000) or hide recovery (GH¢20,000–60,000). Small finishing of 10–30 head is GH¢120,000–350,000.	A 120-day finishing cycle; plan the sale months ahead for the festival.	Owning cattle is the slowest, most capital-hungry and most disease-exposed door. Net is about GH¢1,140 a head on an outlay of about GH¢9,740, and rustling, foot-and-mouth disease and anthrax are VERY HIGH risks.

COMMODITY	EASE OF ENTRY	EASIEST FIRST STEPS (CAPITAL AS STATED)	TIME TO FIRST CASH	WHAT MAKES IT HARDER
Cocoa	Harder	Origin-record and traceability services, or an agronomy and spraying service per hectare. There is no private input dealing because inputs are supplied by the state.	A new tree bears in about 3 years (hybrids) to at least 5.	Exporting needs licensed buying company status (10,000 tonnes a year over two years). The price is fixed by circular, the buying layer is concentrated, and the state grinder lost US\$12.06 million after tax in FY2022.

Ordered from easier to harder. Source: the entry ladders, Pillar 5 economics and risk decks of the individual playbooks; ratings are the Overview's reading.



Reading the ranking

- **Easier to enter.** Goats and sheep, the bottom rungs of marine fisheries, and services around maize need little cash and teach the chain quickly.
- **Moderate.** Broilers, fish, rice, cassava and cashew each have a low-capital service door, but the core production step is unforgiving, buyer-dependent or slow to pay.
- **Harder.** Oil palm growing, beef cattle and cocoa combine long payback, heavy working capital or regulated entry.
- **Ease of entry is a separate question from profit.** Goats and sheep return GH¢1.13 to GH¢1.18 per cedi of cost, a beef finisher nets about GH¢1,140 a head, and a maize grower loses money at the 2026 average yield. Even the higher returns leave little room: the tilapia cage return of about 65% breaks even at 48% survival, and the broiler return of about 45% breaks even at about GH¢38 a kilogram against a GH¢55 base price.
- **Cost every step at current quotes.** The capital bands are planning ranges.





Mistakes *to avoid*

The same ten mistakes recur across the eleven playbooks, drawn from their mistake lists, risk decks and entry ladders. Each has already cost someone money in Ghana, and the table shows where. The maize, rice and cashew playbooks each list five mistakes that sink ventures, and the oil palm and broiler playbooks list six ways ventures fail; read the list for the chosen commodity before committing.

MISTAKE	WHERE IT HAS ALREADY HAPPENED	THE RULE
Building capacity before securing supply and a buyer	The state cocoa grinder lost US\$12.06 million after tax in FY2022 with processors at half of installed capacity or less. Cassava plants at Assin South and Namasua stand idle for want of roots. Ghana's largest cashew processor secured nuts for about a fifth of its capacity. Subsidised smoking ovens stood idle when processors could not buy enough fish. Maize feed mills run below capacity.	Contract the supply and the offtake before the equipment.
Producing before there is a buyer	Paddy grown with no mill or buyer met an estimated 700,000 tonnes to 1 million tonnes of unsold paddy. About 50,000 tonnes of cocoa sat unsold in early 2026. A broiler flock placed with no confirmed buyer meets the import price wall at sale time.	Sell forward or on contract first, and size production to the outlet.
Buying the asset first	Cattle bought lean before a dry-season ration is secured. A canoe bought without checking who owns the catch. Oil palm land bought before auditing for Ganoderma. A cold box bought before a buyer. A founding goat flock bought from one market in one visit.	Start with a service or a small lot, and buy the asset last.
Entering the crowded end of the chain	Production is the crowded, thin-margin node in nine of the eleven chains. Raw-grain traders compete with market queens; a new aggregator competes with well-funded incumbents; oil palm newcomers enter through red-oil making because it is visible.	Enter where value collects, not where it is visible.
Cheap or unknown inputs	Roadside oil palm seedlings segregate to a quarter low-oil Dura and a quarter sterile Pisifera, locking a block into low yield for its thirty-year life. Saved cassava cuttings seed virus into your own field. Hybrid maize seed without fertiliser pays the extra seed cost and gains almost nothing. In broilers a weak chick is a lost cycle.	Buy certified or screened material, keep the receipt, and test a small batch first.
Competing on price with imports	Local rice lost to cheaper Vietnamese rice when the cedi strengthened. Frozen leg quarters cap the broiler price. Frozen offal and chicken undercut beef. Frozen mackerel sets the ceiling for everyday fish.	Compete on quality, freshness, brand and timing, not price.

MISTAKE	WHERE IT HAS ALREADY HAPPENED	THE RULE
Running out of cash	Broiler farms out of working capital mid-cycle dump birds early and cheap. The most common and most expensive mistake in beef, and in tilapia cages, is entering with just enough capital to build and nothing to survive a shock. Oil palm and cashew newcomers skip the immature years.	Size the runway to the whole cycle plus a bad month.
Trusting the wrong number	A cashew kernel sells for about seven times raw nuts per kilogram but takes about 4.8 kg of nuts, so a tonne of nuts made into kernel is worth only about 1.2 to 1.5 times its farm-gate value before costs. A GH¢625 rice price did not say whether it was paddy or milled rice. Cassava profit shares mix per-acre, per-batch and per-tonne units. A cocoa deal was quoted in dollars against cedi revenue. Breed-sheet weights (Cobb 500: 3.3 kg at 42 days) are a ceiling: about 2.2 kg at six weeks was recorded in Kumasi open pens.	State the basis (unit, year and currency) beside every figure, and use your own cycle records.
Betting on policy that is announced, not in force	The cashew raw-export ban was pledged but is not law; Benin's 2024 ban left about 70% of the crop moving informally and Ghana's 2016 ban was withdrawn within the season. The rice import quota had no published rules by September 2026. The ruminant part of Feed Ghana had not started by August 2026. Export plans for maize depend on a ban lifting.	Model the business twice, with every incentive and with none.
Treating disease and vaccine handling as an afterthought	Vaccination slips in the broiler ventures that fail. PPR vaccination in one region fell from 34.5% to 13.1% once farmers had to pay. A mishandled vaccine killed about 180 of 400 cattle at Dissah. Swollen shoot symptoms lag infection by up to two years, so a cocoa block bought on a walk-over may already be infected.	Budget vaccination, biosecurity and inspection before the first purchase.





Cross-cutting recommendations

Five recommendations follow from reading the Series whole, addressed to the ecosystem the Playbook is written for.

Direct public and development capital to the middle of the chain.

The recurring failure across commodities is money spent on production (planting drives, free inputs, idle factories) while aggregation, storage, cold chain and mid-scale processing go unbuilt. The most catalytic use of a public cedi is the missing middle, which unlocks many producers at once.

Start small and prove the model.

The easier entries in section 11 (a grading or price service, aggregation, vaccination, record-keeping, a single cage or a 1,000-bird cycle) need little capital and build the track record and buyer relationships that a later plant or farm depends on. Move to processing or finishing once a confirmed buyer and a reliable supply are in hand.

Treat policy incentives as time-limited windows.

The 2026 alignment of guarantees, priority-chain finance and tax holidays is unusually favourable and will not stay open indefinitely. Early entrants capture the concessions; the Series should be put in front of them while the window is open.



Plan for the risk that decides the case.

In animal protein that is disease and the cedi, because breeding stock and key feed ingredients are largely imported. In grains it is the price cycle and the glut, and in oil palm it is Ganoderma, to be audited before buying land. Build vaccination, biosecurity and storage into the operating plan from the first day rather than after the first loss (section 8).

Re-cost every input, every season, in cedis.

Headline inflation is low, but the cedi lost about 9.5% in 2026 and fertiliser is forecast to rise about 31%. Price feed, drugs, fertiliser and fuel from current quotes before each cycle, hold a buffer for a price fall and a cost rise together, and prefer contracts that fix the price or tie it to costs (section 7).





Method *and sources*

Each playbook in the Series was developed through a structured process: primary-data collection through practitioner engagement; secondary research across MoFA, the Fisheries Commission, the Ghana Statistical Service, COCOBOD, the FAO, USDA FAS and the relevant commodity bodies, with cost and yield figures cross-validated across at least two independent sources; content development around the six pillars in plain English; and review across up to two revision rounds. Every commodity ships with an evidence repository, a reference list and a validation report recording how claims were checked.

Figures, prices, policies and the exchange rate are as at June to September 2026, the reporting period, and may differ from current market conditions. The rate used across the Series is about GH¢11.2 to the US dollar, with individual playbooks noting where a different dated rate applies.



A



Appendix: eleven commodities in *one paragraph each*



Cocoa (Commodity 1)

Ghana is the world's second-largest cocoa producer and one of the smallest capturers of the value the crop carries. The price a farmer receives is not discovered in a market but fixed by a committee as a share of export value, now with a legal floor of 70% of the FOB price. Output has fallen from a 1.047m-tonne peak in 2020/21 to a 650–750k-tonne recovery, on swollen shoot disease, ageing trees and illegal mining. The country keeps about 18% of a finished bar's value and the farmer 5–6%; the one place value could be added at home, the grinding plants, runs at half of capacity or less for want of beans and finance. The openings sit in the chain and in policy (domestic processing, the living-income differential, EUDR traceability and the farm record), not in the field.



Maize (Commodity 2)

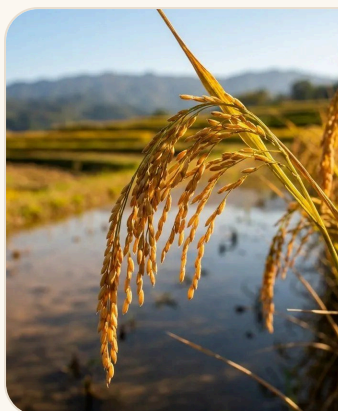
Ghana has closed its maize gap and, in 2026, overshot it: a bumper harvest behind a standing export ban pushed the country into surplus and roughly halved the farm-gate price, so growing grain at the average yield now loses money. Everything that makes money is downstream: storing grain through the price cycle, financing it, milling it into feed for a fast-growing poultry sector, and grading and branding it into safe food. The finance rails (guarantees, warehouse receipts, a commodity exchange) are unusually well built, and public money is already backing the maize-and-poultry chain. The opening is to build the downstream businesses the country is weak at.



Cassava (Commodity 3)

Ghana is a top-five world cassava producer and one of the smallest capturers of its value, because a lifted root spoils within two to three days and the aggregation, storage and reliable processing that would carry it to a paying market barely exist. Only about 1m of ~22m tonnes reached industry in 2023, and about 12.5% is lost outright after harvest, 29% once discounted roots are counted, so a leading producer imports far more cassava-related product, mostly ethanol, than it exports. The money is in finishing the root (beating the perishability clock, the disease and the missing middleman) to turn a cheap, perishable crop into a safe, branded, storable product sold at home and across the region first. Build the middle before building a factory.





Rice (Commodity 4)

Ghana eats about 1.9m tonnes of rice a year and grows only about half, importing the rest at some GH¢3.6bn in 2025, yet in 2026 local farmers could not sell a record paddy crop, because the export ban closed the Sahel market, state buying fell short, and local rice lost to Vietnamese imports that were cheaper and better presented. The value is at the mill, the store and the brand, where the value of a kilogram roughly doubles between the paddy floor and the shelf. The opening is import substitution by quality and cost, unusually well backed by policy and finance, and the discipline is to build the mill and secure the buyer before the paddy.



Cashew (Commodity 5)

Ghana grows a large cashew crop but exports more than nine in ten nuts raw and processed under 6 percent at home in 2025, and it also re-exports nuts brought in from its neighbours. A kilogram of kernel sells for about seven times a kilogram of raw nuts but takes about 4.8 kilograms of nuts, so at 2026 prices processing margins are thin, and they are won on whole-kernel grades, low costs and by-products. Value leaks at three joints: raw export, aggregation and unrewarded quality. Policy favours processing, with a February 2026 pledge to end raw exports (not yet law), a compulsory certified-seedling rule, Free Zone and 24-Hour Economy incentives and a finance stack. The openings are in testing, drying and storage, certified nurseries, aggregation for new local plants, by-products and processing with a high whole-kernel share.



Oil palm (Commodity 6)

Ghana has two palm-oil chains: a large artisanal red-oil chain that takes about three-quarters of the fruit and makes a low-value oil the branded market will not buy, and a smaller formal chain that makes the refined oil the country imports. It grows enough fruit but imports over US\$200m of refined oil a year. Growers keep ~6% of value while brands and retail take ~66% of profit, and an industrial mill pulls nearly twice the oil from the same fruit as an artisanal one. The return is in extraction, kernel oil and refining, backed for the first time by a US\$500m policy window, with Ganoderma basal stem rot the one un-hedgeable risk to audit before buying land.





Broiler chicken (Commodity 7)

Chicken is Ghana's largest consumer-food import: the country ate about 340,000 tonnes in 2024 and imported roughly four-fifths of it, the poultry import bill rose to about US\$509m in 2025, and local broiler meat was about 15,000 tonnes in 2023, under 5% of the chicken eaten. Imports win on price because frozen leg quarters are a low-priced by-product of foreign breast-meat markets, while local birds carry dear chicks, dear feed and poor feed conversion, and too little processing and cold chain reaches the modern shelf. A 1,000-bird cycle returns about 45% at 2026 prices but turns on the live sale price. The openings are the thin links that 2026 money is starting to fill: processing and cold chain, feed mixed from cheap local maize, contract brooding and vaccination for the Nkoko Nkitinkiti programme, and local hatching.



Tilapia & catfish (Commodity 8)

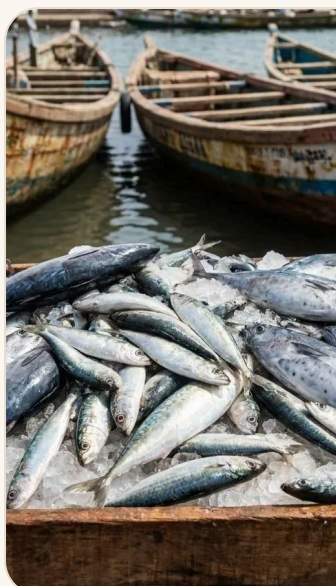
Ghana needs an estimated 1.3m tonnes of fish a year but produced about 657,000 t in 2022, and fish imports cost about US\$209m in 2025. Fish provides nearly 60% of the animal protein Ghanaians eat. Tilapia imports have been banned since 2014, so local farmers supply the fresh tilapia market, while cheap frozen mackerel and sardines set the price ceiling for everyday fish. Farmed output reached 121,809 t in 2024, below the plan's target, because seed quality, disease and feed cost hold farms back: ISKNV outbreaks still kill 10 to 80% of stocked fish on lake farms. At September 2026 prices one standard cage makes about GH¢29,100 a cycle when 80% of the fish survive. The openings are in certified seed and nurseries, feed dealing and milling, fish-health services, and processing with cold chain.



Beef cattle (Commodity 9)

Ghana keeps about 2.41m cattle on the ministry's projection, but the ministry assumes only ~11% leave the herd each year: the herd is held as a store of wealth rather than finished for meat. A 2014 estimate put about 70% of animals slaughtered in Ghana as foreign, most of them from the Sahel, and frozen beef and offal arrive behind a 35% tariff. Fresh beef sold for about GH¢88 to 110/kg at butchers in 2026, and at 2026 prices finishing a 200 kg animal for four months nets about GH¢1,140 a head, a thin margin that turns on the buy and sale prices per kilogram. Value leaks to the Sahel, to importers, to dealers (who report GH¢4,000 to 12,000 profit a head on stolen cattle) and into untanned hide: Ghana imported about 3,100 tonnes of raw hides in 2025 while exporting almost none. The opportunity is to finish the animal, capture the hide and offal, and secure the chain against rustling with cold storage and traceability, backed by a 5% concessionary tax rate for ten years.





Marine fisheries (Commodity 10)

Ghana landed about 442,000 tonnes of marine fish in 2024, most of it small pelagics that feed the country, but those stocks are overexploited: round sardinella landings in 2019 were under a tenth of the 1992 peak, and the 2022 regional assessment rated sardinella and anchovy overexploited. The business case starts after landing. Post-harvest loss was put at GH¢2.6bn in 2023, there is no grade at the landing, cold storage at artisanal beaches is limited, and few buyers pay for quality. Alongside sits a healthy tuna fishery, certified to the Marine Stewardship Council standard in January 2026 and earning about 93% of fish export value, but its pole-and-line fleet takes live bait from the same small pelagic stocks. At 2026 prices a purse seine canoe owner nets about GH¢112,000 a year and a fish smoker about GH¢42,900. Enter on shore and by capital, lowest rung first: a landing-price and data service, then ice and cold-box aggregation and clean grading, and the new openings in certified tuna supply, EU catch documentation and ice at the new landing sites.



Goats & sheep (Commodity 11)

Ghana keeps about 15.81m goats and sheep and produces an estimated 65,000 tonnes of goat and sheep meat, about 31% of domestic meat output, but little value is added after the farm gate. Burkina Faso supplied 97% of recorded live sheep and goat imports in 2023 and about half in 2025, and suspended livestock exports in May 2026 after Niger's ban. The import exposure is live festival rams; frozen meat imports are ~95% poultry. At 2026 prices a 30-ram festival fattening cycle clears about GH¢7,170 (revenue 1.13 times cost) and a 20-doe flock about GH¢3,250 a year (1.18 times cost), so buying well, keeping animals alive and selling in the right market decide the result. The openings are breeding females from the slaughter queue, festival fattening, skin collection and contracted aggregation, with PPR a yearly cost to budget on a vaccination calendar.



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