



GHANA AGRIBUSINESS PLAYBOOK SERIES

2026



MAIZE

Value Chain Analysis

A mapped breakdown of the value chain, from farmgate to feed mill, and who captures what along the way.

Center for Entrepreneurship
Ashesi University



VISIT WEBSITE
<https://agribusinessplaybook.com/playbook/maize>

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This value chain analysis is the standalone version of the value chain pillar of the Ghana Maize Playbook. It maps the eight stages of the maize value chain, shows who captures value at each stage and where value leaks, and sets out the openings for a new business. The analysis and figures are the same as those in the playbook, presented here as a self-contained document. Figures are as reported between June and August 2026 and may have changed since.

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Executive summary

THE THESIS

Maize in Ghana is plentiful and cheap in 2026, and most of its value is added after the farm gate, in storage, aggregation and processing. The farmer earns the least for the effort, so the openings for a new business sit downstream of the farm, where the chain is informal, ungraded and under-served.

Key summaries



The evidence

About 15 percent of the grain farmers keep is lost after harvest. Wholesale prices rise about 33 percent between October and July, but storage and loan interest can cost about 28 percent of the grain's value over nine months, so holding grain pays only when storage is safe, cheap and financed. In a 2016 study of two major growing regions, about 93 percent of farmers sold to informal women traders, the market queens, while the state bought under 5 percent. At the far end, the retail markup over wholesale rose from about 20 percent to over 40 percent between 2008 and 2019, while real wholesale prices fell about a fifth.



The structure

The chain runs through eight stages: input supply, production, post-harvest handling, storage, aggregation, processing, distribution and retail, and the consumer. About 85 percent of all maize goes to food, seed and industrial use and about 15 percent to feed, but of the maize that is actually marketed, the feed sector takes about 42 percent, households about 33 percent and industrial processors about 25 percent.



The opportunity

Five interventions carry the most value: certified warehousing with warehouse receipts at hubs such as Techiman or Ejura; professional aggregation with pre-finance, where selling through aggregators was linked to about 128 kg more sold per selling farmer; integrated maize-to-feed milling for the poultry sector; branded, fortified food such as Tom Brown; and drying and aflatoxin control at the point of aggregation.



The finance behind it

The Development Bank Ghana puts the five-year financing need across the rice, maize, soya and poultry chains at about US\$1.04 billion, with about US\$354 million still unfilled, and is committing around US\$450 million of its own, including US\$50 million to expand the commodity exchange. GIRSAL guarantees and warehouse-receipt credit make grain a bankable asset.



Who this is for

Students, entrepreneurs, investors and ecosystem actors each get their own reading of the evidence in the practitioner intelligence block at the end of the document.





Glossary

The terms a reader meets most often in this analysis, in plain language. Institutions are Ghanaian unless stated otherwise.

Value chain

The stages a product passes through from inputs to the final buyer, with the cost, value and loss added at each one.

Agro-dealer

A shop or trader that sells seed, fertiliser and agrochemicals to farmers; the last point at which input quality can be assured.

Hermetic storage

Airtight bags or containers that starve storage pests of oxygen and keep grain dry, sharply cutting storage loss.

Grading

Sorting grain by quality to a standard. Ghana's maize standard (GSS 211:2013) runs from grade 1, the cleanest, to grade 5.

Warehouse receipt

A document issued when grain is deposited in a certified warehouse, proving ownership; it can be sold or used as collateral for a loan.

Farm gate

The point where the farmer sells the harvest; the farm-gate price is the price the farmer receives.

Post-harvest loss

Grain lost after harvest during drying, shelling, handling and storage, estimated at about 15 percent of the maize farmers keep.

Aflatoxin

A poison produced by a mould on maize in the field and in poor storage; feed mills and institutional buyers test for it and reject contaminated grain.

Lean season

The months before the next harvest when stocks are low and prices are highest, roughly the opposite of harvest time.

Ghana Commodity Exchange (GCX)

The national exchange that runs certified warehouses, issues electronic warehouse receipts and trades grain and other commodities.

Ghana Grains Council

An industry body that certifies grain warehouses and promotes grain grading and standards.

Market queens

The informal networks of women traders who buy most of Ghana's maize from farmers and move it to market.

Offtake

An agreement by a buyer to purchase a set volume of produce, often at an agreed price or grade.

GIRSAL

The Ghana Incentive-Based Risk-Sharing System for Agricultural Lending, which guarantees part of a bank's loan to an agribusiness so that the bank will lend.

Feed milling

Processing maize, the main ingredient, with other inputs into feed for poultry, fish and livestock.

Aggregator

A trader or business that buys small lots from many farmers, bulks them and sells them on to mills, processors or wholesalers.

Pre-finance

Cash or inputs advanced to farmers before harvest, repaid in grain or from the sale; it ties the farmer to the buyer.

NAFCO

The National Food Buffer Stock Company, the state buyer that purchases grain to hold reserves and support a floor price.

DBG

The Development Bank Ghana, a state development bank financing agricultural value chains, including maize.

Tom Brown

A popular Ghanaian roasted-maize weaning and breakfast flour, often fortified, sold in branded and unbranded forms.

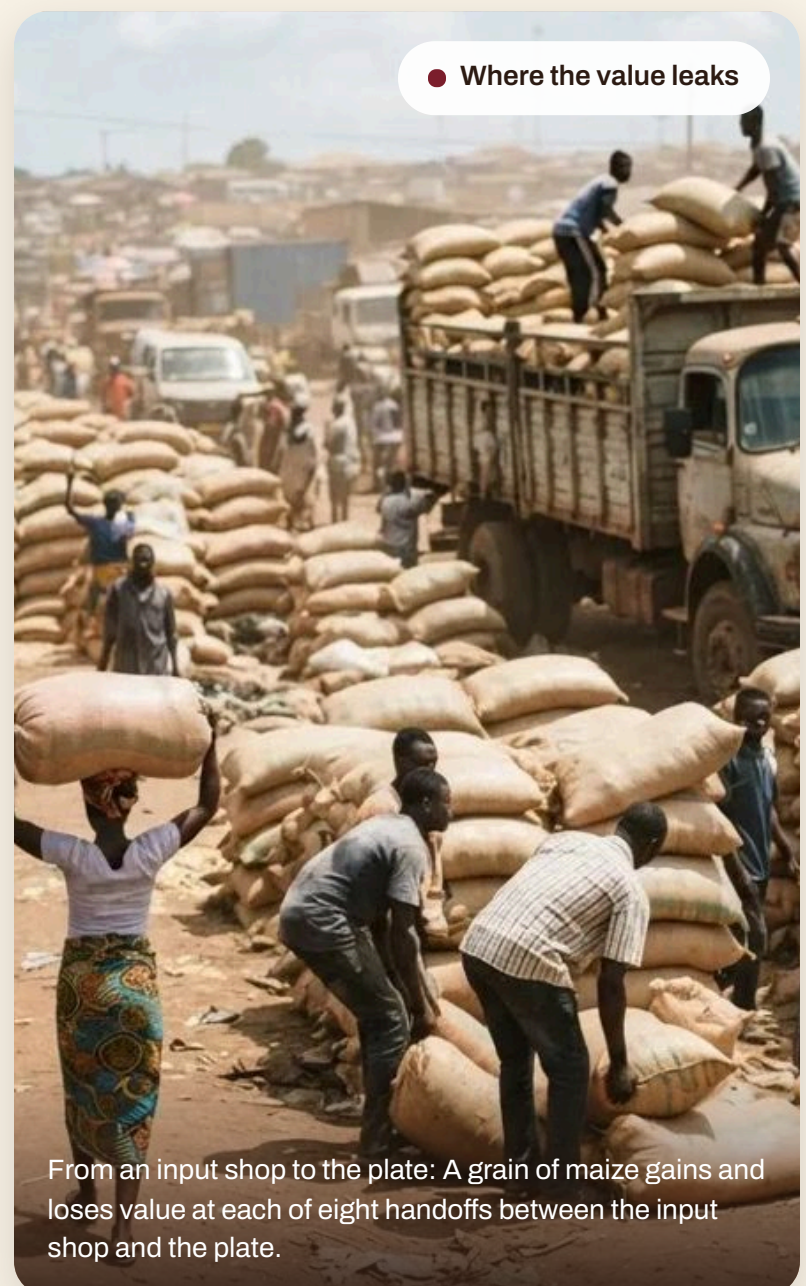


Maize Value Chain Analysis

Where value is made and where it leaks

This is the most important pillar in the playbook, and it is deliberately the most detailed, because the value chain is where the real money in maize is decided. A grain of maize passes through eight stages between the input shop and the plate, and at every stage someone adds cost, someone adds value, and value leaks away. Much of the value added after the farm gate is captured downstream by aggregators, processors and retailers, and the farmer earns the least for the effort. Understanding who captures what, and where the value leaks, is the whole map of where a business should stand in maize.

This pillar walks the chain stage by stage, and it is written to stand on its own as a complete value chain analysis. It draws the earlier pillars together rather than repeating them: the variety and seed detail sits in the first pillar, the demand and feed pull in the market pillar, and the cost and finance detail in the cost and finance pillars. Here the point is simpler, that a grain of maize gains and loses value at each handoff, and that the openings for a new business are mostly downstream of the farm.



8 stages

from the input shop to the plate, each a place value is made or lost

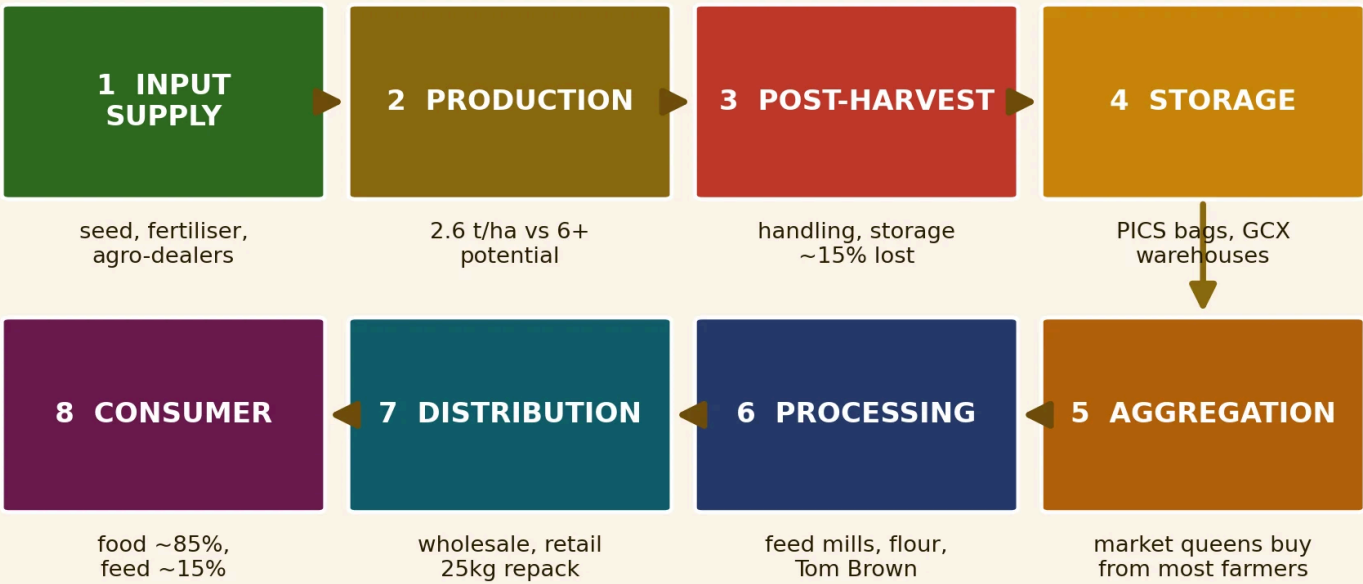
Downstream

is where most of the value is added, after the farm gate

Aggregation

most farmers sell into it, and it is the biggest opening

Ghana Maize Value Chain: Where Value Is Made and Lost



Red = biggest physical leak (post-harvest loss). Most value is added after the farm gate, in storage, aggregation and processing.

Source: author compilation from MoFA-IFPRI (2020), CUTS International (2016), USDA FAS (2026). See Pillar 6.

FIGURE 1 The Ghana maize value chain, where value is made and lost

WHAT THIS SHOWS

Eight stages from input supply to the consumer. The biggest single value leak is post-harvest loss; the biggest value pools are storage, aggregation and processing. Much of the value is added after the farm gate, so the openings for a new business are mostly downstream of the farm.



The farmer earns least per unit of effort



The roughly one million smallholders who grow the crop capture the least per unit of effort, which is why the openings sit downstream.



INPUT



FARM



AGGREGATE



PROCESS



CONSUMER



TABLE 1 The eight stages of Ghana's maize value chain

STAGE	MAIN ACTORS	WHAT HAPPENS	WHERE THE VALUE SITS
1. Input supply	Agro-dealers, seed and fertiliser firms	Seed, fertiliser and agrochemicals are sold to farmers	Sets the yield ceiling for everything after
2. Production	About a million mostly smallholder farmers	The crop is grown	Farmer sells raw grain and captures the least value added
3. Post-harvest	Farmers and hired labour	Drying, shelling and bagging	About 15% is lost across handling and storage
4. Storage	Farmers, community and certified warehouses	Grain is held or sold immediately	Prices rise about 33% by July, but storage and interest cost about 28%
5. Aggregation	Market queens, aggregators, farmer groups	Grain is bulked and moved to market	Most farmers sell to informal women traders (93% in a 2016 two-region study)
6. Processing	Feed mills, grain millers, food processors	Grain becomes feed, flour or fortified food	Highest margins, and the most under-served stage
7. Distribution	Wholesalers and retailers	Repackaging into 25 kg and smaller units, selling on	The retail markup is quietly widening
8. Consumer	Households, poultry industry, food makers	Final use	Food about 85%, feed about 15%

The eight stages read left to right from the input shop to the plate; the value pools are downstream, at storage, aggregation and processing.
Source: Author compilation from MoFA-IFPRI (2020), CUTS International (2016), Andam et al. (2017), USDA FAS (2026).



Who shapes the chain: the players and the referees

Before walking the stages, it helps to know who holds power in this chain, because a new business has to work with, around or against them. The map below lists the actors who make the market and the institutions that referee it. The market queens and aggregator networks buy from most farmers, the Ghana Standards Authority and Ghana Grains Council referee quality and storage, the Ghana Commodity Exchange gives a formal market and a credit rail, and the development banks are where the money to build comes from.



TABLE 2 The maize value chain stakeholder map

PLAYER	ROLE IN THE CHAIN	WHY THEY MATTER TO A NEW BUSINESS
Smallholder farmers	Grow most of the crop, largely unorganised	Your supply base; organising them is most of the work
Market queens and aggregators	Buy from most farmers (93 percent in a 2016 two-region study)	The incumbents to partner with or out-service, not fight on price
Feed millers and food processors	Buy for feed, flour and food	The best-paying buyers, and under-served
Ghana Standards Authority	Sets and tests the grain grades	The referee on quality; its testing is a bottleneck
Ghana Grains Council	Certifies warehouses, runs warehouse receipts	The storage and quality backbone
Ghana Commodity Exchange	Trades graded grain and issues e-receipts	Your formal market and a credit rail

PLAYER	ROLE IN THE CHAIN	WHY THEY MATTER TO A NEW BUSINESS
NAFCO (buffer stock)	Buys at the floor price	A state offtaker, but funding is patchy
MoFA and Feed Ghana	Policy, inputs, extension	Sets the rules, subsidies and free inputs
GIRSAL, DBG and banks	Guarantees and value-chain finance	Where the money to build comes from

Sources: Development Bank Ghana (2023); author synthesis. Detail on the finance players is in Pillar 7.

Walking the chain, stage by stage

Stage 1 · Input supply, the node that sets the ceiling

Everything downstream is capped by what happens here. A 2009 census counted about 3,389 agro-dealers, of whom about 80 percent sold fertiliser and about 59 percent sold seed, and they are the last point at which quality can be assured before the grain is even planted¹. Because certified seed reaches only about a third of farmers (Pillar 1), this stage is both a bottleneck and an opening: the agro-dealer who stocks certified seed and genuine inputs, and pairs them with advice, sells into a market that policy is actively expanding.



¹ Krausova & Banful (2010), unpublished GSSP draft.

— Stage 2 · Production, where the farmer earns least per unit of effort



The roughly one million, mostly smallholder, farmers who grow the crop capture the least of the value added along the chain, and in 2026 growing is loss-making at the average yield and price (Pillars 4 and 5). The lesson of the chain is that standing only at this stage is the hardest place to make money, which is why the opportunities below sit mostly downstream, and why the farmer's best move is to reach further down the chain through storage and aggregation rather than sell raw grain at the farm gate.



① Post-harvest and storage: the two biggest leaks ①

— Stage 3 · Post-harvest handling



~15%

of retained grain lost across post-harvest handling and storage

~4 weeks

the wet August to September drying window that breeds aflatoxin

An estimated 15 percent of the maize farmers retain is lost during post-harvest handling and storage, more where handling is poor² (Pillar 3). The physical root of this is timing: in the middle

belt the major-season crop must be dried in a window of only about four weeks in August and September, when the weather is still wet, which is why grain moulds and picks up aflatoxin³. The north can field-dry into November and December but then loses grain to insects instead. For a business, that lost 15 percent is the raw material of a post-harvest service: mobile shelling, drying floors and quality grading all sell into a real, measured loss.

Grading is the quiet key to the whole chain. Ghanaian maize can be graded to the Ghana Standards Authority standard (GSS 211:2013), from grade 1 with under 11 percent blemished grain to grade 5, but aflatoxin and heavy-metal testing is available mainly at the Standards Authority head office in Accra, which is a real bottleneck⁴. A grading and testing service closer to the farm would let ordinary grain reach the buyers who pay for quality.



² Ministry of Food & Agriculture and International Food Policy Research Institute (2020).

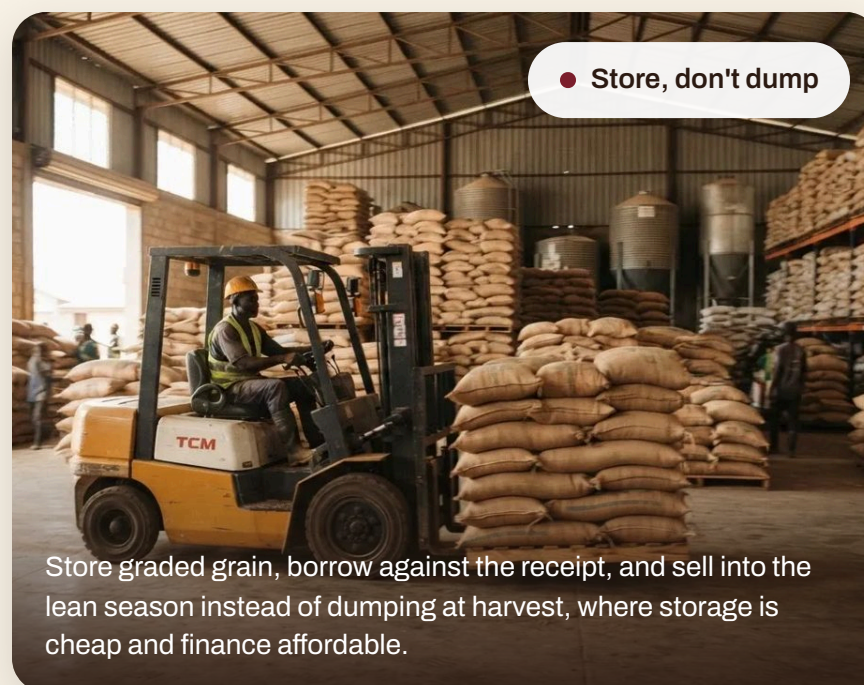
³ Development Bank Ghana (2023).

⁴ Safo et al. (2023).

— Stage 4 · Storage, the leak that is not physical

The second leak is timing. Farmers who sell at harvest, when everyone sells and the price is lowest, and buy back in the lean season lose value to the price swing: Ghana's wholesale price rises on average about 33 percent between October and July, although storage and loan interest cost about 28 percent of the grain's value over nine months². Storage fixes this, and the infrastructure is arriving: the Ghana Commodity Exchange runs up to nine certified warehouses, six of them core maize sites, the Ghana Grains Council reports around 28 certified warehouses, some overlapping with the exchange's, and a warehouse receipt against stored grain can now be used as collateral for a loan⁵.

The field evidence for this is strong. A study of 400 northern maize farmers found that those who used the warehouse-receipt system sold about 12 more bags and earned about GH¢34 more per 110 kg bag, at the GH¢120 to 150 a bag prices of the time, than those who did not, and that access to a loan, membership of a farmer group, and participation⁴. Yet only about a third of farmers used it, and just 2.5 percent had ever sold to a formal private buying company such as Premium Foods, which shows how thin the formal channel still is. The mechanism and its finance are



~33%

average wholesale price rise from October to July, against about 28% storage and interest cost

+GH¢34/bag

more per 110 kg bag earned by warehouse-receipt users in a northern study

~9 and ~28

certified warehouses run by the Ghana Commodity Exchange and reported by the Ghana Grains Council, some overlapping

having an established buyer were what drove developed in Pillar 7; the point here is that whoever helps a farmer hold grain, a community warehouse, a hermetic-bag supplier, or a receipt-backed lender, captures a share of that seasonal price rise.

² Ministry of Food & Agriculture and International Food Policy Research Institute (2020).

⁵ Anyetei (2026).

⁴ Safo et al. (2023).

① Aggregation: where a newcomer can do the most ①



~93%

of maize farmers sold to market queens and women-trader networks, 2016 two-region study

+128 kg

more sold per selling farmer where aggregators are used

This is the stage that moves the most maize and, for a new business, offers the most room to make. Their associations are estimated to hold maize prices around 31 percent above what open competition would give, and they act as a barrier to new entrants⁸. The state's attempt to counter this through the buffer-stock company had an unintended effect: after it began buying, the

a difference. In a 2016 study of two major growing regions, about 93 percent of maize farmers sold to market queens and women-trader networks, while the state buys less than 5 percent⁶. These traders re-bag grain, move it from farm to city, and often pre-finance farmers. Their dominance is also the opening: selling to an aggregator rather than directly to consumers was associated with about 128 kg more maize sold by farmers who sell at all, or about 43 kg averaged across all farmers⁷. The main assembly hub is Techiman in the middle belt, with Ejura, Wenchi, Kumasi and Tamale as feeder markets, and the wholesale price markup from Techiman to Bolgatanga is about 22 percent (and to Accra about 62 percent), gaps that mostly reflect transport costs but have widened over time².

The traders' grip is real and has a price attached.

Kumasi market became less efficient, passing price falls on to consumers quickly but price rises only slowly⁹. The lesson for a new aggregator is that you cannot beat the market queens on price alone; you win by offering grading, credit and a link to a premium buyer that they do not.

⁶ CUTS International (2016).

⁷ Mzyece et al. (2023).

² Ministry of Food & Agriculture and International Food Policy Research Institute (2020).

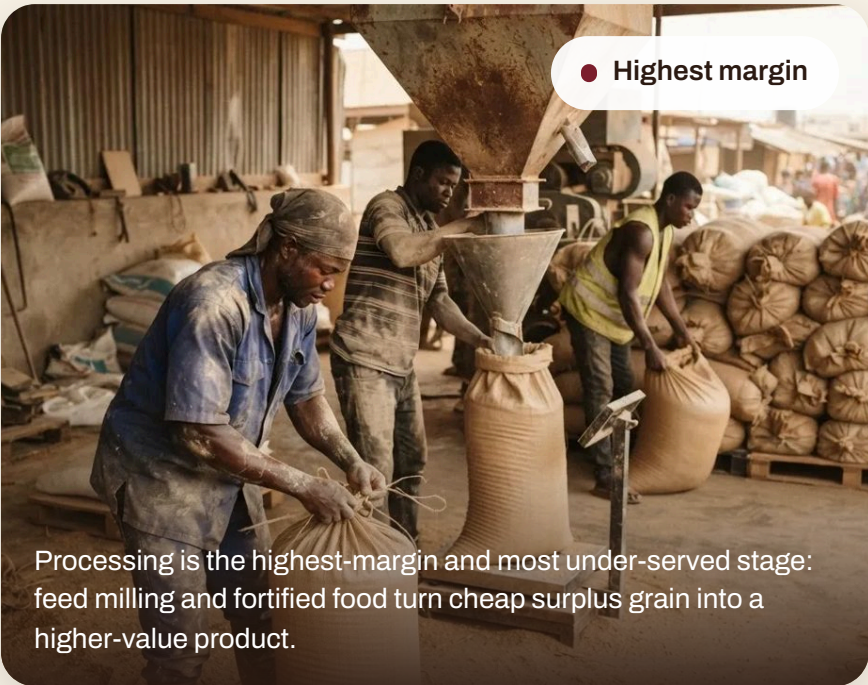
⁸ Armah et al. (2019), citing Langyintuo (2010).

⁹ Armah et al. (2019).

⑤ Processing, distribution and the consumer ⑤

— Stage 6 · Processing, the highest margin and most under-served

Processing is where the margins are highest and the field is thinnest. Feed milling is the fastest-growing pull, since maize is about 60 percent of a poultry ration and feed demand rose about 10 percent in 2025/26, with a further 3 percent forecast for 2026/27, yet mills have been reported running well below capacity (Pillar 2). Food processing into flour, grits and fortified weaning food such as Tom Brown is dominated by micro-scale operators, with only a few branded players such as the reported example Believe Foods. Maize is Ghana's largest grain crop, at about 3.5 million tonnes in 2025/26, so the raw material base is large¹⁰. The opening is an integrated, mid-scale processor, a feed mill with a poultry offtake, or a branded fortified-food line, that turns cheap surplus grain into a higher-value product.



Processing is the highest-margin and most under-served stage: feed milling and fortified food turn cheap surplus grain into a higher-value product.

Below capacity

where feed mills have been reported running, while feed demand rose about 10% in 2025/26

~3.5 M t

maize is Ghana's largest grain crop (2025/26), a large raw-material base



¹⁰ United States Department of Agriculture (2026).

Stage 7 · Distribution and retail, where the spread is widening



At the end of the chain, wholesalers and retailers repackage the 100 kg and 50 kg bags into the 25 kg and smaller units households buy, and this repackaging step is where the retail margin is booked. Notably, real wholesale prices have fallen about a fifth since 2012 while real retail prices have stayed flat, so the retail markup has been widening rather than being passed to consumers². A business that grades, brands and packs maize into standardised retail units can capture part of that widening spread instead of leaving it to informal traders.

Stage 8 · The consumer, the demand that pulls the chain

The chain ends with three buyers: about 85 percent of all maize goes to food, seed and industrial use and about 15 percent to feed (Pillar 2), but of the maize that is actually marketed, households were estimated to take about 33 percent, the feed sector about 42 percent and industrial processors about 25 percent². Which of these a business chooses to serve should set every decision upstream, from the variety grown to the grade and the packaging, because the consumer is what pulls value back up the chain.



² Ministry of Food & Agriculture and International Food Policy Research Institute (2020).

Who earns what: a bag of maize from farm to buyer



The exact margin at every step is not published for Ghanaian maize, but the anchors that are known let us sketch how the value builds, and where the farmer sits in it.



TABLE 3 How the value of a 100 kg bag builds along the chain

AS THE BAG PASSES THROUGH	INDICATIVE VALUE PER 100 KG	BASIS
Farm gate (early 2026)	about GH¢360	Sourced ¹⁰
Sold through a warehouse receipt (per 110 kg bag, about 2020 prices)	about GH¢34 per bag more	Sourced ⁴
Wholesale, Techiman corridor	Bolgatanga about 22 percent above Techiman wholesale	Sourced ²
Retail, repacked into 25 kg units	retail markup over wholesale rose from about 20% to over 40% (2008 to 2019)	Sourced ²

The figures above are the sourced anchors, not a complete step-by-step margin accounting.
Sources: USDA FAS (2026); Safo et al. (2023); MoFA-IFPRI (2020).

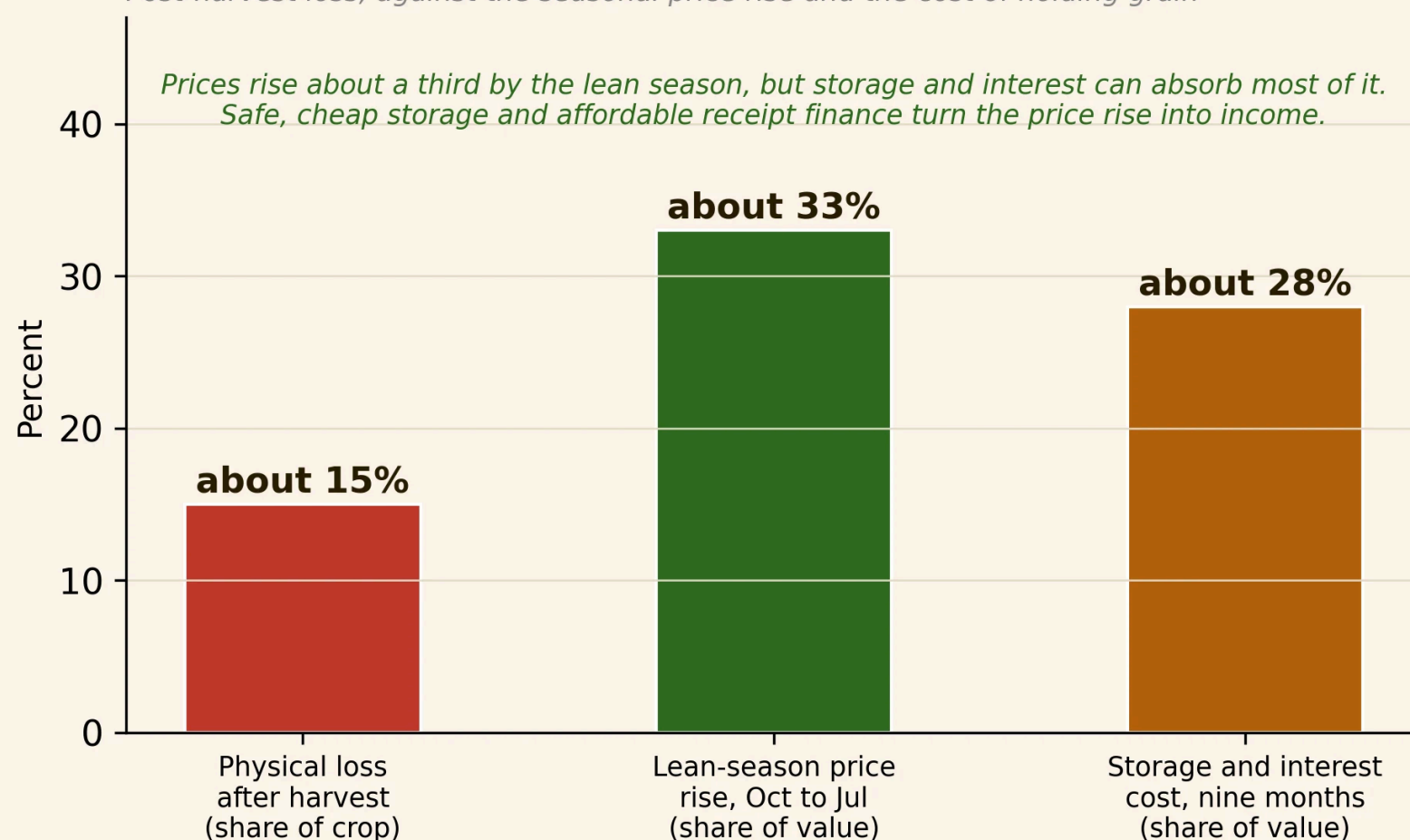
¹⁰ United States Department of Agriculture (2026).
⁴ Safo et al. (2023).
² Ministry of Food & Agriculture and International Food Policy Research Institute (2020).

① Where value leaks, and the opening at each point ①

Every leak in the chain is also an opening, because the value that drains away is value a well-run business can recover. The largest drains are the roughly 15 percent physical post-harvest loss and the value given up by selling at the harvest-time price low, both of which storage, drying and warehouse receipts turn into a service. The mid-chain margin taken by informal traders, the 22 percent corridor markup, and the under-served feed and food processing are each a place a new entrant can stand.

Where Maize Value Leaks, and Why Storage Must Be Cheap

Post-harvest loss, against the seasonal price rise and the cost of holding grain



Source: MoFA-IFPRI Ghana Maize Market Brief (2020). See Pillars 3 and 6.

FIGURE 2 Where maize value leaks, and why storage must be cheap

||| WHAT THIS SHOWS

Read stage by stage, the chain shows where value drains away and where a business can recover it. The two largest drains, physical post-harvest loss and selling at the harvest-time price low, sit at and just after the farm; the largest pools of recoverable value sit in storage, aggregation and processing.

TABLE 4 The maize value chain read as a map of openings

STAGE	WHERE VALUE LEAKS	THE OPENING
Farm and post-harvest	About 15% physical loss plus selling at the harvest-time price low	Hermetic storage, community or certified warehouse, and receipt-backed credit cut physical loss and let farmers sell later
Aggregation	Informal traders capture the mid-chain margin; most farmers sell outside any formal system	Selling through aggregators was linked to about 128 kg more sold per selling farmer; adding pre-finance and grading can deliver cleaner grain to mills
Logistics	About 22% wholesale markup along the Bolgatanga to Techiman corridor	Corridor logistics and graded 25 kg branded retail packs capture the spread
Storage and finance	Thin certified capacity; grain sold cheap for lack of credit	A certified warehouse with drying and grading, plus receipt finance to farmer groups
Processing and feed	Growing feed demand is under-served; food processing is micro-scale	An integrated maize-to-feed mill with poultry offtake; a branded, fortified food line
Retail	The real retail markup is widening, not reaching the farmer	Graded, branded, standardised retail packaging

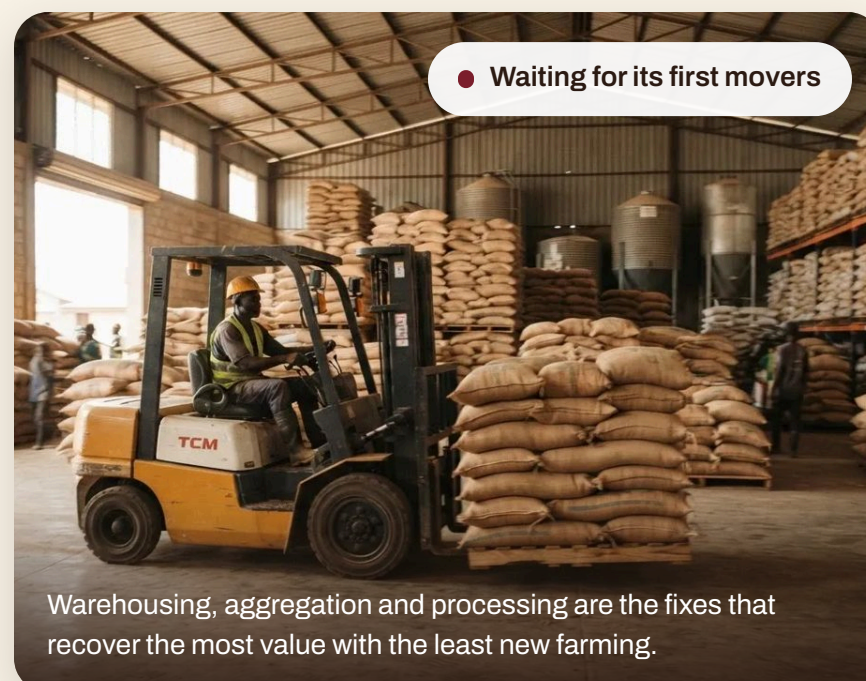
Source: Author compilation from MoFA-IFPRI (2020), CUTS International (2016), Mzyece et al. (2023), USDA FAS (2026).



⑤ The three fixes that matter most ⑤

Three fixes matter most, and all of them sit downstream of the farm. Certified warehousing with warehouse receipts, professional aggregation with pre-financing, and integrated processing into feed and fortified food are the interventions that recover the most value with the least new farming.

The money to do this is being lined up. The Development Bank Ghana puts the five-year financing need across the rice, maize, soya and poultry chains at about US\$1.04 billion, of which roughly US\$354 million is still an unfilled gap, and it is itself committing around US\$450 million, including US\$50 million to expand the commodity exchange³. A proposed exchange subsidiary would pre-finance certified aggregators to grade grain at the farm gate, dry it, store it and export it, which is exactly the model this pillar points to. Tellingly, the same report names large foreign investors for rice but, for



US\$1.04bn

five-year financing need across rice, maize, soya and poultry

US\$354m

of it still an unfilled gap; the maize chain awaits its first large private movers

maize, only six small aggregation and production SMEs, which suggests the maize value chain is still waiting for its first large private movers.



³ Development Bank Ghana (2023).

TABLE 5 Priority interventions along the maize chain

INTERVENTION	WHO LEADS IT	THE MEASURABLE WIN
Certified warehousing plus warehouse receipts at Techiman or Ejura	Aggregators, Ghana Grains Council, banks	Cut the roughly 15% post-harvest loss, sell after the harvest-time low, and unlock credit against stored grain
Professional aggregation with pre-financing	Agri-SMEs and farmer groups	About 128 kg more sold per selling farmer where aggregators are used; cleaner, graded grain reaches mills
Integrated maize-to-feed milling	Processors and investors	Displace feed-maize imports; give farmers a steady, quality-paying offtake
Branded, fortified food processing	Food SMEs	Capture the retail and nutrition premium above raw grain
Drying and aflatoxin control at aggregation	Aggregators and service providers	Meet the standards of feed mills and institutional buyers

Sources: Author synthesis of the value-chain evidence in this pillar; Development Bank Ghana (2023).



① The Opening: the value chain as a whole ①

01 Stand downstream of the farm.

The farmer earns least per unit of effort, and the openings, where value is added, are in storage, aggregation and processing.



02 Own the aggregation stage.

Most farmers sell into it, it is almost entirely informal, and formalising it with pre-finance and grading lifts farmer volumes and feeds clean grain to the best buyers.



03 Build the missing processing.

Feed milling and fortified food are under-served and high-margin, and the 2026 grain glut makes the raw material cheap. An integrated maize-to-feed mill or a branded fortified-food line captures the value the informal chain cannot.



04 Recover the leaks.

Post-harvest loss and selling at the harvest low both drain a smallholder's crop value; storage, drying and warehouse receipts turn that leak into a business.



⑤ The risks that sit inside the value chain ⑤



A chain dominated by informal, hard-to-displace traders

MEDIUM

WHAT IT IS

The market-queen networks that most farmers sell to are efficient, entrenched and often pre-finance farmers, so a new formal aggregator cannot simply undercut them; it must offer something they do not, such as guaranteed grading, a premium buyer, or cheaper credit.

EVIDENCE

About 93 percent of maize farmers in a 2016 two-region study sold to informal women traders, while the state bought under 5 percent⁶, and trader associations are estimated to hold prices about 31 percent above open competition⁸.

WHO IT HITS

New aggregators and off-takers who assume farmers will switch on price alone.

HOW TO MANAGE IT, AND THE OPENING

Compete on what the informal chain cannot offer: a guaranteed quality premium, warehouse-receipt credit, and a link to a feed mill or institutional buyer, and win farmers on service. The opening: an aggregator that out-services the incumbents rather than fighting them on price.



Post-harvest loss and aflatoxin at the drying window

HIGH

WHAT IT IS

An estimated 15 percent of retained grain is lost across post-harvest handling and storage, and the middle belt must dry the major-season crop in a wet four-week window, which is why grain moulds and picks up aflatoxin and then fails the grade that feed mills and institutional buyers require.

EVIDENCE

About 15 percent physical loss across handling and storage², with aflatoxin driven by the four-week August to September drying window in the middle belt³.

WHO IT HITS

Every farmer whose grain is discounted or rejected, and any processor relying on local grain to meet a quality standard.

HOW TO MANAGE IT, AND THE OPENING

Build drying floors, mobile shelling and grading close to the farm, and add aflatoxin control at aggregation. The opening: a post-harvest service that sells into a real, measured 15 percent loss and lets ordinary grain reach the buyers who pay for quality.

⁶ CUTS International (2016).

⁸ Armah et al. (2019), citing Langyintuo (2010).

² Ministry of Food & Agriculture and International Food Policy Research Institute (2020).

³ Development Bank Ghana (2023).



Distress selling and the thin formal channel

MEDIUM-HIGH

WHAT IT IS

Farmers who sell at harvest, when everyone sells and the price is lowest, and buy back in the lean season give up much of the seasonal price rise, yet only about a third use warehouse receipts and just 2.5 percent have ever sold to a formal buyer.

EVIDENCE

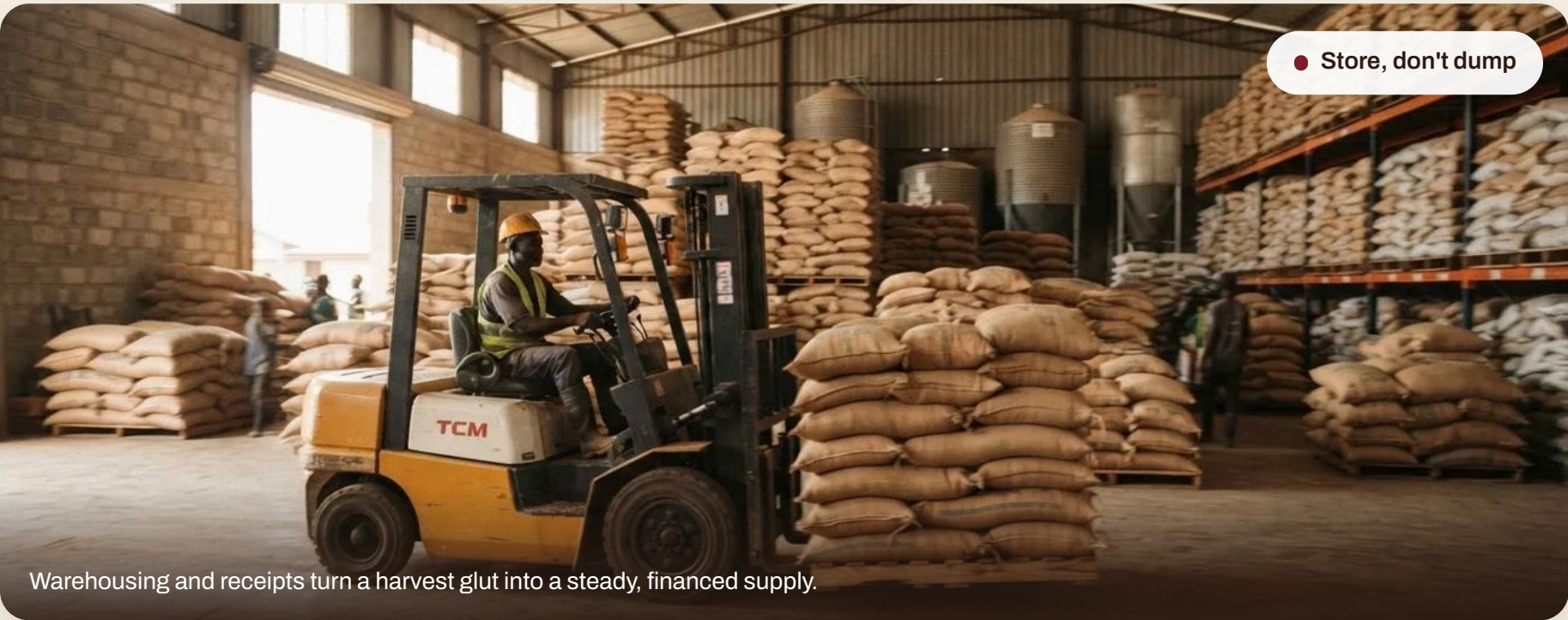
Wholesale prices rise about 33 percent on average between October and July, though storage and loan interest can cost about 28 percent of the grain's value over nine months²; warehouse-receipt users sold about 12 more bags at about GH¢34 more per 110 kg bag⁴.

WHO IT HITS

Smallholders without storage or credit, and any brand or mill needing a steady, year-round local supply.

HOW TO MANAGE IT, AND THE OPENING

Use certified warehousing and the warehouse-receipt system to store and release grain steadily, and finance farmer groups against stored grain. The opening: a certified warehouse with drying and grading, plus receipt finance cheap enough that the seasonal price rise is not eaten by storage and interest costs.



Warehousing and receipts turn a harvest glut into a steady, financed supply.



² Ministry of Food & Agriculture and International Food Policy Research Institute (2020).

⁴ Safo et al. (2023).

① Key takeaways ①

- 01 Most of the value in maize is added after the farm gate, which is where most business openings sit.
- 02 The two biggest leaks are post-harvest loss (about 15 percent of retained grain) and selling at the harvest price low; storage and warehouse receipts reduce both.
- 03 Aggregation is the highest-impact stage: most farmers sell to informal women traders, and selling through aggregators was linked to about 128 kg more sold per selling farmer.
- 04 Processing, especially feed milling and fortified food, is the highest-margin and most under-served stage, and the 2026 glut makes its raw material cheap.
- 05 The winning strategy is to stand downstream of the farm, recover the leaks, and offer what the informal chain cannot: grading, credit and a link to the best-paying buyer.



Practitioner intelligence

FOR STUDENTS

The value chain is the single best map for a graduate deciding where to work or start. Do not default to farming; look at where value is captured and under-served, which is aggregation, storage and processing. You can start as an aggregation coordinator, a quality grader, a warehouse clerk, or by running a small drying or shelling service, all of which need skill more than capital. **The gap to fill:** the chain is informal and ungraded, so anyone who can bring quality control, record-keeping and a link to a serious buyer is valuable. The downside to avoid is entering as one more raw-grain trader competing with entrenched market queens; enter where you add something they do not.

FOR ENTREPRENEURS

Choose your stage deliberately. Your first move is to pick the stage where you can add value the informal chain cannot, most often aggregation with grading and pre-finance, or small-scale processing, and secure a buyer before you build. Secure the offtake (a feed mill, a processor, an institutional buyer) first, then organise the supply. **The trap:** buying and reselling raw grain on thin margins against traders who have done it for generations. The incentive to use is the cheap 2026 grain and the finance rails (warehouse receipts, GIRSAL) now being built for exactly these models.



↗ FOR INVESTORS

The thesis: value in Ghanaian maize is captured downstream of the farm, in stages that are informal, under-served and now backed by public finance. A business that formalises aggregation or builds missing processing capacity sits where most of the value is added after the farm gate.

Diligence asks: a defensible position (grading, credit or offtake the informal chain lacks), warehouse and processing capacity, and a signed offtake. **The risk:** displacing entrenched traders is hard, so back models that partner with or out-service them rather than assume they vanish.

🔗 FOR ECOSYSTEM ACTORS

The highest-return lever is formalising and de-risking the midstream. Fund certified warehousing, warehouse-receipt finance and grading infrastructure at the main hubs, and support aggregator-processor linkages. The measurable outcome is a rising share of maize passing through graded, receipted, formal channels, and feed mills sourcing more clean local grain. The failure to avoid is building warehouses without the finance and grading that make farmers actually use them, leaving the informal chain untouched.



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