



GHANA AGRIBUSINESS PLAYBOOK SERIES

2026



# OIL PALM

## *Value Chain Analysis*

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

Center for Entrepreneurship  
Ashesi University



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<https://agribusinessplaybook.com/playbook/oilpalm>



# Executive summary

## THE THESIS

Ghana grows most of the fruit it needs, yet the value leaks along the chain: at low-extraction artisanal mills, at the refining Ghana barely does, and to imports.

## About this document

This Value Chain Analysis maps the Ghana oil palm chain from inputs and seed through production, aggregation, milling, refining and distribution to the end consumer. It sets out the two parallel chains that define the sector, shows how value and profit are shared between the nodes, and identifies where a Ghanaian business

can climb from the low-value chain into the high-value one.

It follows Pillar 6 of the Oil Palm Playbook (Ghana Agribusiness Playbook Series, Commodity 6). Full source citations are in the References at the end.

*Figures are as reported between July and September 2026 and may have changed since. Conversions use about GH¢11.20 to the US dollar (the Bank of Ghana interbank rate in mid-June 2026) unless stated; the cedi weakened about 9.5 percent in January to September 2026.*



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# Glossary

## **Fresh fruit bunch (FFB)**

The raw bunch of oil palm fruit the farmer harvests and sells to a mill.

## **Palm kernel oil (PKO)**

The oil extracted from the nut inside the fruit; a higher-value product.

## **Oil extraction rate (OER)**

The share of a fresh fruit bunch's weight that comes out as oil; about 11 percent at an artisanal mill, 20 percent or more at an industrial one.

## **Dura and Pisifera**

The two parent types; Dura has a thick shell and thin oil layer, Pisifera is largely sterile.

## **Ganoderma basal stem rot**

An incurable fungal disease that rots the base of the palm; the crop's most serious threat.

## **EUDR**

The European Union deforestation regulation, which requires palm oil sold into the EU to be traceable and deforestation-free.

## **TCDA**

The Tree Crops Development Authority, which regulates oil palm and sets the monthly minimum fresh-fruit-bunch price.

## **Crude palm oil (CPO)**

The oil pressed from the fleshy outer part of the fruit; the main product.

## **Palm kernel cake**

The solid left after the kernel is crushed; used as animal feed.

## **Tenera**

The improved Dura-by-Pisifera hybrid palm, with a thin shell and thick oil layer; the only type worth planting for oil.

## **Free fatty acid (FFA)**

A measure of oil quality that rises as harvested fruit ages; past about 5 percent the oil is downgraded.

## **Outgrower and nucleus estate**

A model where smallholders (outgrowers) supply a central estate (the nucleus) and its mill.

## **RSPO**

The Roundtable on Sustainable Palm Oil, whose standard certifies sustainable production.

## **CSIR-OPRI**

The CSIR Oil Palm Research Institute at Kade, which breeds and supplies certified planting material.

WHERE THE MONEY IS MADE, AND LOST, ALONG GHANA'S OIL PALM CHAIN

# Oil Palm Value Chain Analysis

## The chain, from seed to shelf

The oil palm value chain runs through six stages: inputs and seed, production, aggregation, milling, refining, and the end market. What makes Ghana's chain unusual is that at the milling stage it does not carry on as one chain. It splits in two, and everything about the economics follows from that split<sup>1</sup>.



The Ghana oil palm value chain: one crop, two very different chains

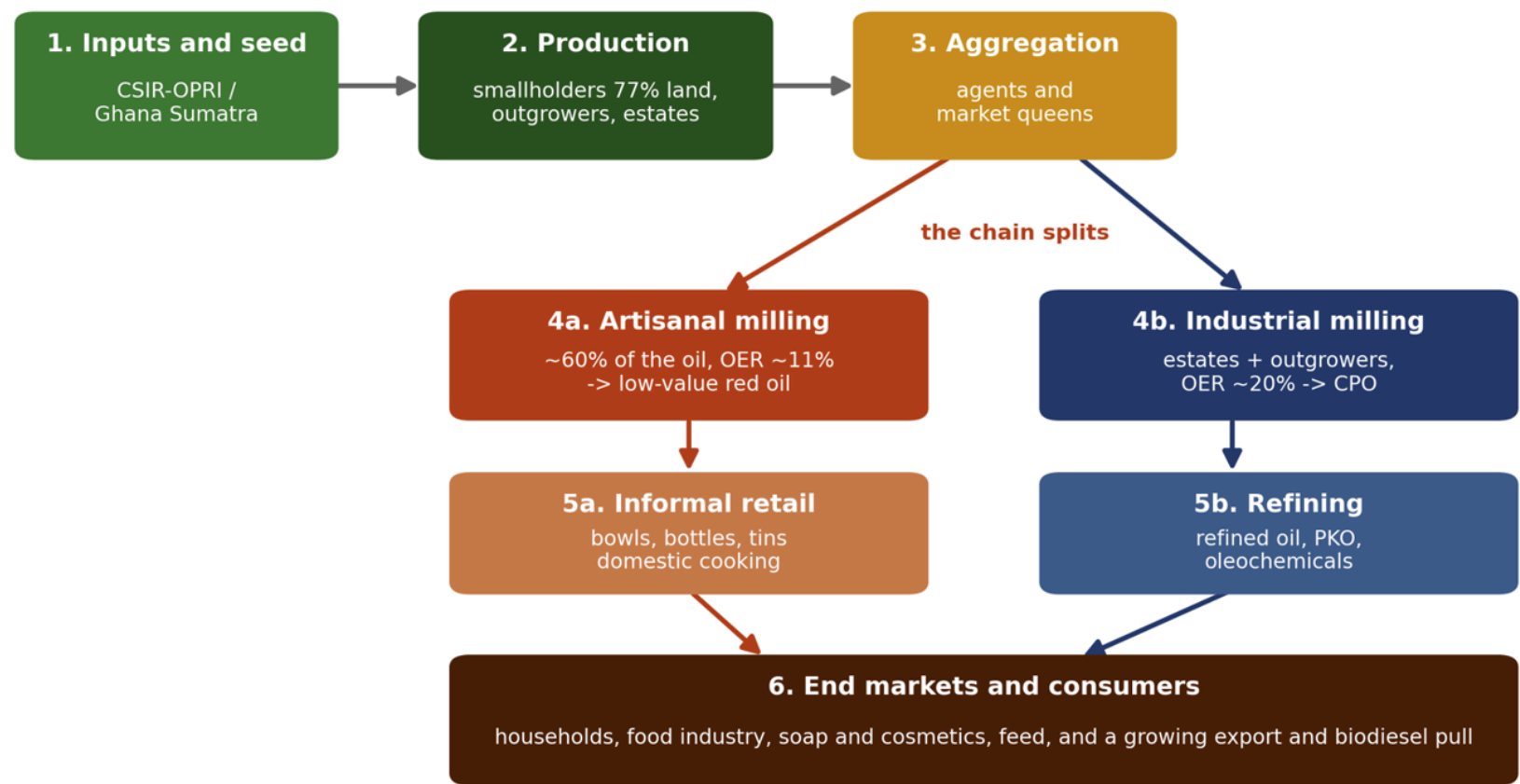


**FIGURE 20** The Ghana oil palm value chain, from inputs to consumers, splitting at milling into an artisanal and a formal chain

Source: After Ofosu-Budu and Sarpong (2013) and Asante (2021).



## ① One crop, two chains ①

The single most important fact about Ghana's palm oil is that it moves through two parallel chains. The first is an artisanal red-oil chain: artisanal farms grow about three-quarters of the fresh fruit bunches and artisanal mills make about 60 percent of the oil, almost all of it low-value red oil, with some artisanal fruit sold through aggregators to industrial mills<sup>2</sup>. It is run largely by women, it is informal, and it serves the domestic cooking market. The second is a formal, refined chain: estates and outgrowers feeding industrial mills at about 20 percent extraction, then refiners turning crude oil into the branded cooking oil, palm kernel oil and oleochemicals that earn the money, and that



Ghana still imports<sup>3</sup>. The wedge between the two is extraction: an artisanal mill pulls out only about 11 percent oil against an industrial mill's 20, so the same fruit yields far less in the low chain<sup>4</sup>.



<sup>2</sup> Rumli, A., Chrisendo, D., Iddrisu, A. M., Karakara, A. A., Nuryartono, N., Osabuohien, E., & Lay, J. (2022). Smallholders in agro-industrial production: Lessons for rural development from a comparative analysis of Ghana's and Indonesia's oil palm sectors. *Land Use Policy*, 119, Article 106196. <https://doi.org/10.1016/j.landusepol.2022.106196>

<sup>3</sup> Ofosu-Budu, K., & Sarpong, D. B. (2013). Oil palm industry growth in Africa: A value chain and smallholders' study for Ghana. In A. Elbehri (Ed.), *Rebuilding West Africa's food potential: Policies and market incentives for smallholder-oriented agriculture* (pp. 347-390). Food and Agriculture Organization of the United Nations; International Fund for Agricultural Development. <https://www.fao.org/4/i3222e/i3222e11.pdf>

<sup>4</sup> Ofosu-Budu, K., & Sarpong, D. B. (2013). Oil palm industry growth in Africa: A value chain and smallholders' study for Ghana. In A. Elbehri (Ed.), *Rebuilding West Africa's food potential: Policies and market incentives for smallholder-oriented agriculture* (pp. 347-390). Food and Agriculture Organization of the United Nations; International Fund for Agricultural Development. <https://www.fao.org/4/i3222e/i3222e11.pdf>

## Two chains, one crop: where the value splits

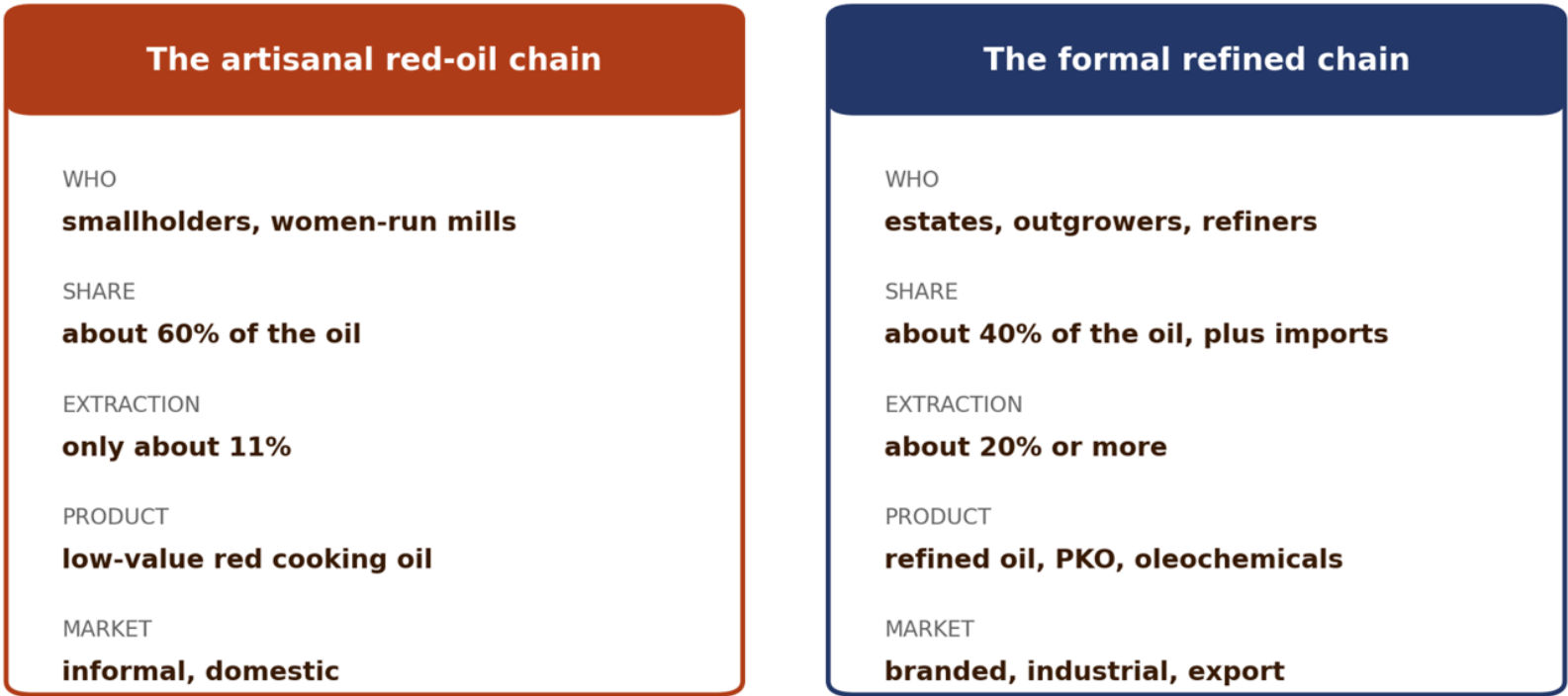


**FIGURE 21** The two value chains compared, from who runs them to the market they serve

Source: Ruml et al. (2022); Ofoosu-Budu and Sarpong (2013); "Reviving the Oil Palm Sector" (2025).

The artisanal chain makes most of the oil, but low-value oil; the formal chain makes the refined product that earns the money, and that Ghana still imports.

### WHAT THIS MEANS

Hold these two chains in mind and the whole sector makes sense. The artisanal chain moves most of the fruit but makes a low-value product it cannot sell to the branded market. The formal chain makes the valuable product, but there is not enough of it, so Ghana imports the difference. Almost every opportunity in oil palm is a way of moving fruit, or a business, from the first chain into the second.





**Plate 1** The two chains side by side: cloudy artisanal red oil the branded market will not buy (left), and the industrial estate mill that makes the refined oil Ghana still imports (right).

## ⑤ The land paradox ⑤

The two chains produce a striking imbalance in the land: the large plantations use about 20 percent of the land but make about 55 percent of the crude palm oil, while smallholders on about 77 percent of the land make about 39 percent (using data for about 2010)<sup>5</sup>. A fifth of the land, in

the hands of the estates, makes more than half the oil; three-quarters of the land, in the hands of smallholders, makes well under half. The gap is the yield and extraction story of Pillars 4 and 5, written across the whole country<sup>6</sup>.



<sup>5</sup> Ofosu-Budu, K., & Sarpong, D. B. (2013). Oil palm industry growth in Africa: A value chain and smallholders' study for Ghana. In A. Elbehri (Ed.), *Rebuilding West Africa's food potential: Policies and market incentives for smallholder-oriented agriculture* (pp. 347-390). Food and Agriculture Organization of the United Nations; International Fund for Agricultural Development. <https://www.fao.org/4/i3222e/i3222e11.pdf>

<sup>6</sup> Ofosu-Budu, K., & Sarpong, D. B. (2013). Oil palm industry growth in Africa: A value chain and smallholders' study for Ghana. In A. Elbehri (Ed.), *Rebuilding West Africa's food potential: Policies and market incentives for smallholder-oriented agriculture* (pp. 347-390). Food and Agriculture Organization of the United Nations; International Fund for Agricultural Development. <https://www.fao.org/4/i3222e/i3222e11.pdf>

The land paradox: smallholders hold most of the land but make least of the oil

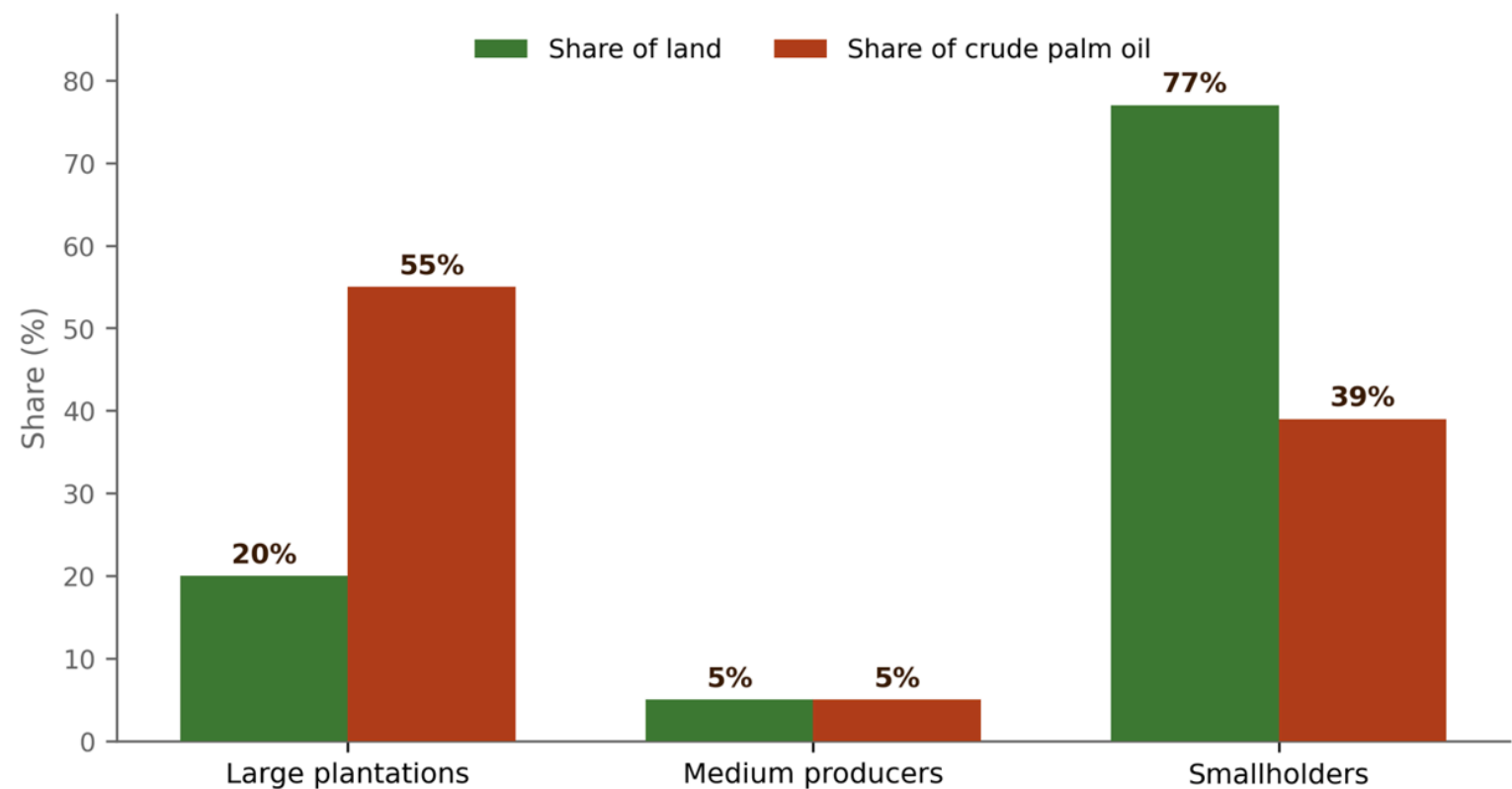


**FIGURE 22** Share of land against share of crude palm oil, by producer type

Source: Ofosu-Budu and Sarpong (2013).

Estates turn a fifth of the land into over half the oil, while smallholders work three-quarters of the land for well under half. The gap is yield and extraction.

## Who earns what

Follow the money along the global palm oil chain and the picture is stark. Measured by value, of the roughly US\$282 billion world chain, smallholders keep about 6 percent, plantations about 14 percent, refiners about 23 percent and brand owners and retailers about 54 percent<sup>7</sup>. But measured by profit, the split is sharper still: brand

owners and retailers take about 66 percent of the chain's gross profit, refiners about 16 percent, plantations about 13 percent and smallholders almost none<sup>8</sup>, a pattern IISD's own review confirms<sup>9</sup>. The people who grow the crop capture the least; the brand owners and retailers at the far end capture the most.

<sup>7</sup> Rijk, G., Wiggs, C., & Piotrowski, M. (2021, June 15). FMCGs, retail earn 66% of gross profits in palm oil value chain. Chain Reaction Research. <https://chainreactionresearch.com/report/palm-oil-value-chain-deforestation/>

<sup>8</sup> Rijk, G., Wiggs, C., & Piotrowski, M. (2021, June 15). FMCGs, retail earn 66% of gross profits in palm oil value chain. Chain Reaction Research. <https://chainreactionresearch.com/report/palm-oil-value-chain-deforestation/>

<sup>9</sup> Voora, V., Bermúdez, S., Farrell, J. J., Larrea, C., & Luna, E. (2023). Global market report: Palm oil prices and sustainability. International Institute for Sustainable Development. <https://www.iisd.org/system/files/2023-06/2023-global-market-report-palm-oil.pdf>

Who earns what along the global palm oil chain (2020/21)



**FIGURE 23** How value and gross profit are shared between the nodes of the global palm oil chain, 2020/21

Source: Rijk et al. (2021), global palm oil chain, 2020/21; corroborated by Voora et al. (2023).

 MARKET SIGNAL: THE MONEY IS AT THE TOP

The chart describes the world chain rather than Ghana's, but it points the same way as the Ghana evidence on extraction and imports. The value sits in the refining, branding and speciality products at the top of the chain, and least in growing the fruit, where the return is thinnest. For Ghana, that means the prize is climbing the chain toward the nodes that keep the profit.

## The value ladder

The same story reads as a ladder of prices. A tonne of fresh fruit bunches is worth only about US\$150 at the Authority's September 2026 minimum of GH¢1,714.40<sup>10</sup>. Crude palm oil sells for about US\$1,117 a tonne<sup>11</sup>, but a tonne of

bunches yields only about 200 kilograms of it at industrial extraction, worth about US\$223, so milling adds about half again to the fruit's value. Refining and branding add more again. Palm kernel oil, pressed from the kernel rather than

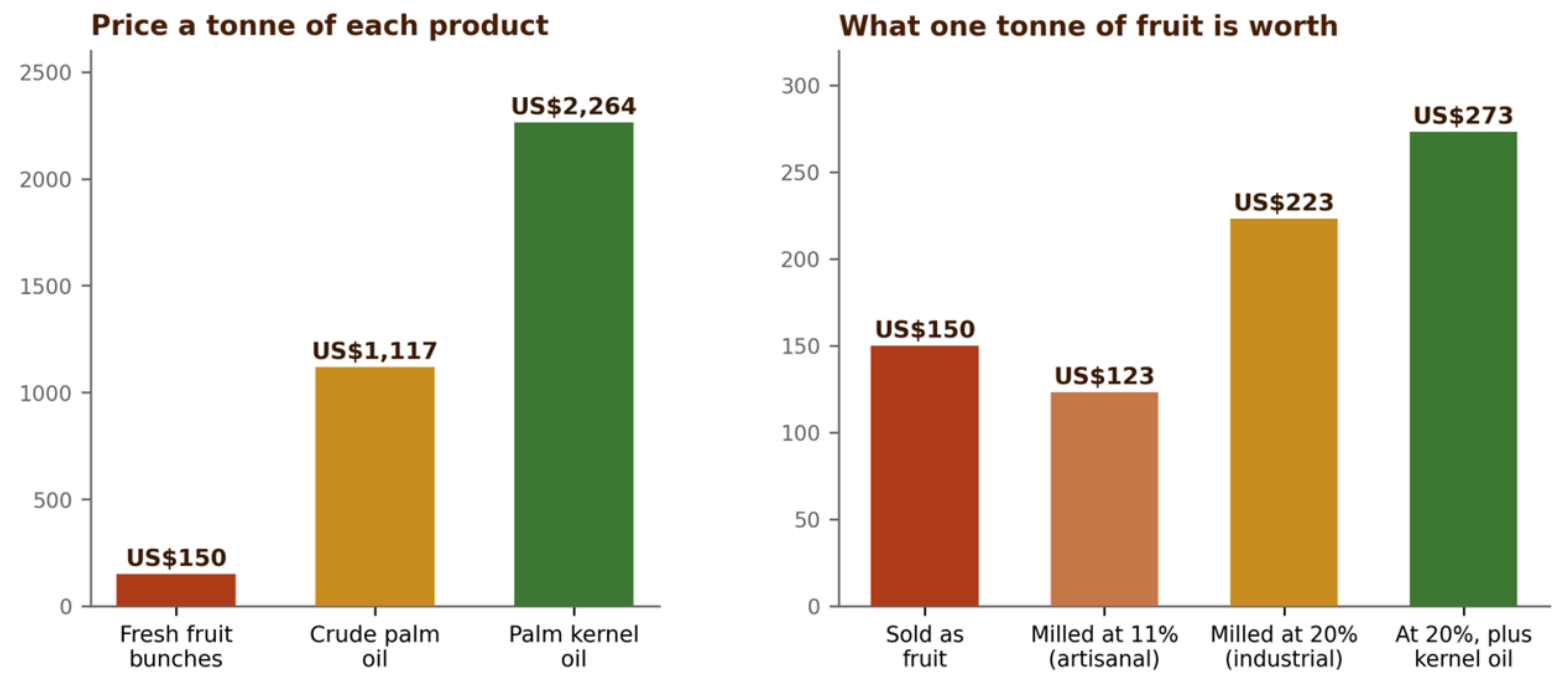
<sup>10</sup> Tree Crops Development Authority. (2026a, September 1). TCDA announces minimum producer price of fresh fruit bunches of oil palm and raw rubber cup-lumps (September 2026) [Price notice]. <https://tcda.gov.gh/tcda-announces-minimum-producer-price-of-fresh-fruit-bunches-of-oil-palm-and-raw-rubber-cup-lumps-september-2026/>

<sup>11</sup> World Bank. (2026b, September 2). World Bank commodities price data (The Pink Sheet), September 2026. <https://thedocs.worldbank.org/en/doc/74e8be41ceb20fa0da750cda2f6b9e4e-0050012026/related/CMO-Pink-Sheet-September-2026.pdf>

made from crude oil, fetched about US\$2,264 a tonne in August 2026, roughly twice the crude-palm-oil price<sup>12</sup>, and oleochemicals are worth

more again. Each rung multiplies the money, and Ghana mostly sells from the bottom two.

The value ladder: extraction decides whether milling adds value at all



World prices, August 2026; fruit at the September 2026 minimum of GH¢1,714.40 (about US\$150); kernel oil about 22 kg a tonne of fruit.

FIGURE 24 The value ladder: the price of a tonne of each product, and what one tonne of fruit is worth at each step

Source: World Bank (2026b), August 2026 prices; fruit at the September 2026 minimum of GH¢1,714.40 a tonne (Tree Crops Development Authority, 2026a) at GH¢11.43 to the dollar.

Per tonne of product, crude palm oil is worth about seven times, and palm kernel oil about fifteen times, a tonne of fresh fruit bunches (about US\$150). But a tonne of bunches makes only about 110 to 200 kilograms of oil and 20 to 30 kilograms of kernel oil, so at artisanal extraction the oil is worth less than the fruit sold at the minimum price. Ghana mostly sells at the bottom of this ladder.

① Aggregation and the missing middle ①



<sup>12</sup> World Bank. (2026b, September 2). World Bank commodities price data (The Pink Sheet), September 2026. <https://thedocs.worldbank.org/en/doc/74e8be41ceb20fa0da750cda2f6b9e4e-0050012026/related/CMO-Pink-Sheet-September-2026.pdf>

Between the smallholder and the mill sits the weakest link in the chain: tens of thousands of smallholders farm the belt (about 119,724 households harvested oil palm in the 2016/17 living standards survey), yet fewer than 5,000 are reported to be formally tied to a large mill<sup>13,14</sup>. Most growers are independent, selling loose fruit to agents and market queens rather than to a mill on contract: about 70 percent are independent,

28 percent outgrowers and only 2 percent tied to a nucleus estate<sup>15</sup>. In the early 1990s the industry association set a formula that priced fresh fruit bunches at 10 percent of the factory-gate crude-palm-oil price<sup>16</sup>. The Authority's monthly minimum now sits well above it: the September 2026 minimum of GH¢1,714.40 a tonne is about 14 percent of the reference crude-oil price<sup>17</sup>.

### OPPORTUNITY

Aggregation and outgrower schemes that give smallholders a reliable, priced route to an industrial mill, and give the mill a secured supply, increasingly run through a mobile platform that matches fruit to the nearest mill and routes collection. This missing middle is the clearest structural gap in the chain.

Quality-based buying, paying more for fresh, clean, promptly delivered fruit, which pulls the whole smallholder base toward the formal chain. New nucleus-and-outgrower projects are also looking for suppliers: Onesta Ghana's Redgold Oil Palm Plantation project, a public-private partnership launched in July 2025, plans an initial 10,000 hectares with processing and an outgrower scheme, and seeks US\$50 million for its first phase<sup>18</sup>.



<sup>13</sup> Asante, K. T. (2021). Political economy of the oil palm value chain in Ghana (APRA Working Paper 54). Future Agricultures Consortium. <https://doi.org/10.19088/APRA.2021.008>

<sup>14</sup> Reviving the oil palm sector: Empowering smallholders through outgrower schemes for poverty alleviation. (2025, October 27). The Business & Financial Times. <https://thebftonline.com/article/reviving-the-oil-palm-sector-empowering-smallholders-through-outgrower-schemes-for-poverty-alleviation>

<sup>15</sup> Ofosu-Budu, K., & Sarpong, D. B. (2013). Oil palm industry growth in Africa: A value chain and smallholders' study for Ghana. In A. Elbehri (Ed.), *Rebuilding West Africa's food potential: Policies and market incentives for smallholder-oriented agriculture* (pp. 347-390). Food and Agriculture Organization of the United Nations; International Fund for Agricultural Development. <https://www.fao.org/4/i3222e/i3222e11.pdf>

<sup>16</sup> Asante, K. T. (2021). Political economy of the oil palm value chain in Ghana (APRA Working Paper 54). Future Agricultures Consortium. <https://doi.org/10.19088/APRA.2021.008>

<sup>17</sup> Tree Crops Development Authority. (2026a, September 1). TCDA announces minimum producer price of fresh fruit bunches of oil palm and raw rubber cup-lumps (September 2026) [Price notice]. <https://tcda.gov.gh/tcda-announces-minimum-producer-price-of-fresh-fruit-bunches-of-oil-palm-and-raw-rubber-cup-lumps-september-2026/>

<sup>18</sup> Dadzie, E. A. (2025a, July 9). Onesta Ghana launches Redgold Oil Palm Plantation project to boost local production and cut imports. MyJoyOnline. <https://www.myjoyonline.com/onesta-ghana-launches-redgold-oil-palm-plantation-project-to-boost-local-production-and-cut-imports/>



**Plate 2** *The missing middle: fruit aggregated and trucked to a mill. This weak link between farm and mill is itself a low-capital opening.*

## 🕒 Downstream: where Ghana can climb 🕒

The top of the chain is wide open, and the higher-value uses are where the growth is: about three-quarters of palm oil goes to food, and oleochemicals take about 8 percent of palm oil and about 70 percent of all palm kernel oil for soap and detergents, all global shares<sup>19</sup>, and biodiesel takes a growing share globally. Ghana already has the raw materials, crude palm oil and palm kernel, for a soap and oleochemical industry it largely imports the inputs for. World supply is

also tightening: Indonesia, the world's largest palm oil producer, raised its mandatory biodiesel blend to 50 percent from 1 July 2026, which keeps more of its oil at home<sup>20</sup>. And the mills throw off energy: Ghana's palm oil sector generates about one million tonnes of solid residue and 1.4 million tonnes of mill effluent a year, and GOPDC already runs a biogas plant on it at Kwae<sup>21</sup>.



<sup>19</sup> Rijk, G., Wiggs, C., & Piotrowski, M. (2021, June 15). FMCGs, retail earn 66% of gross profits in palm oil value chain. Chain Reaction Research. <https://chainreactionresearch.com/report/palm-oil-value-chain-deforestation/>

<sup>20</sup> Indonesia locks in 2026 B50 biodiesel quotas, clearing the way for nationwide rollout. (2026, July 30). Palm Oil Magazine. <https://www.palmoilmagazine.com/biodiesel/2026/07/30/indonesia-locks-in-2026-b50-biodiesel-quotas-clearing-the-way-for-nationwide-rollout/>

<sup>21</sup> Carbon Trust. (2021). Bioenergy in the palm oil processing sector in Ghana [Policy briefing paper, BSEAA2]. Transforming Energy Access. [https://tea.carbontrust.com/wp-content/uploads/2021/09/BSEAA2\\_Bioenergy-in-palm-oil-processing-sector\\_Policy-Brief.pdf](https://tea.carbontrust.com/wp-content/uploads/2021/09/BSEAA2_Bioenergy-in-palm-oil-processing-sector_Policy-Brief.pdf)



**Plate 3** Downstream value: palm kernel oil at about twice the crude price, from kernels Ghana now crushes mostly into low-grade oil (left), and the refined and branded oil Ghana imports (right).

## ⑤ The estates, and who owns them ⑤

The formal chain runs through a handful of large estates, most of them foreign-owned. GOPDC, at about 21,000 hectares, a 60-tonne-an-hour mill and a 100-tonne-a-day refinery, bought from its Belgian parent SIAT by Presco for about US\$124.9 million in a deal announced in 2024, approved by Presco's shareholders in August 2025 and concluded in January 2026<sup>22,23,24</sup>, is the largest and is now wholly owned by the Nigerian-listed Presco Plc. BOPP runs a 30-tonne-an-hour mill that processed about 121,787

tonnes of fresh fruit bunches in 2025 for revenue of about GH¢369 million<sup>25</sup>, with a profit of about GH¢84.5 million, and is majority-owned by Wilmar Africa; in 2026 it reported spending about GH¢107 million on 3,030 hectares and kept its RSPO certification<sup>26</sup>. Twifo Oil Palm Plantations is a state joint venture in which Unilever took a 40 percent stake in 1995; Unilever was once described as the country's largest buyer of crude palm oil, but its Frytol cooking-oil brand passed to Wilmar Africa in 2010<sup>27,28</sup>; NORPALM,

<sup>22</sup> Olujinmi, D. (2024, June 4). Presco Nigeria to acquire Ghanaian oil palm company for \$125 million. Nairametrics. <https://nairametrics.com/2024/06/04/presco-nigeria-to-acquire-ghanaian-oil-palm-company-for-125-million/>

<sup>23</sup> Eze, E. (2025, August 14). Presco completes acquisition of 100% equity stake in Ghana Oil Palm Development Company Limited. Arbitrizer. <https://arbitrizer.com/presco-completes-acquisition-of-100-equity-stake-in-ghana-oil-palm-development-company-limited/>

<sup>24</sup> Anudu, O. (2026, February 3). How Presco earned N331.2bn from 4 countries in 2025. Economy Post. <https://economypost.ng/business/real-sector-and-manufacturing/how-presco-earned-n331-2bn-from-4-countries-in-2025/2026/02/03/>

<sup>25</sup> Benso Oil Palm Plantation PLC. (2026). 2025 annual report and financial statements. Ghana Stock Exchange. <https://gse.com.gh/wp-content/uploads/2026/04/PR-149-BENSO-OIL-PALM-PLANTATION-PLC-2025-ANNUAL-REPORT-AND-FINANCIAL-STATEMENTS2-1-compressed-1-1-1.pdf>

<sup>26</sup> Bortey, F. (2026, June 5). BOPP spends GH¢107mi on 3,030 hectares, retains RSPO certification. The Business & Financial Times. <https://thebftonline.com/article/bopp-spends-gh%C2%A2107mi-on-3030-hectares-retains-rspo-certification>

<sup>27</sup> Asante, K. T. (2021). Political economy of the oil palm value chain in Ghana (APRA Working Paper 54). Future Agricultures Consortium. <https://doi.org/10.19088/APRA.2021.008>

<sup>28</sup> Ghana Export Promotion Authority. (2018, February 13). WilMar Africa Limited [Exporter profile]. GEPA Buyer Portal. <https://www.gepaghana.org/import/ghana-exporter/wilmar-africa-limited/>

Plantations Socfinaf Ghana and Juaben Oil Mills make up much of the rest<sup>29</sup>. That Ghana is a net

importer of the very oil these estates produce suggests the constraint is capacity and refining.

## ⑤ The people on the chain ⑤

The chain is also a very large employer: over 1.2 million people depend on the industry for their livelihood<sup>30</sup>, about 119,724 households harvested oil palm in the 2016/17 living standards survey<sup>31</sup>, and the new policy aims to add about 250,000 direct and indirect jobs<sup>32</sup>. Women dominate the artisanal processing end, where a

red-oil crew may be twenty or more women, and made up as much as 60 percent of workers on large estates in a 2010 ministry estimate, though about 40 percent at GOPDC<sup>33</sup>. Any change to how the chain works lands, first and hardest, on them.

## ⑤ The regional mirror: why Ghana's chain stalled ⑤

Ghana and Malaysia planted oil palm at similar times, yet Malaysia built a world-leading, fully integrated chain while Ghana's stalled at low-value milling. The difference was decades of investment in milling, refining and scale, and the institutions to support them<sup>34</sup>. Next door, Cote

d'Ivoire invested in milling and refining where Ghana did not, and now exports a surplus (Pillar 2). The lesson is direct: the value chain is where the sector is won or lost, and it is the part Ghana has most neglected.



<sup>29</sup> Asante, K. T. (2021). Political economy of the oil palm value chain in Ghana (APRA Working Paper 54). Future Agricultures Consortium. <https://doi.org/10.19088/APRA.2021.008>

<sup>30</sup> Acquah, E. (2025, October 23). OPDAG warns of job losses over illegal vegetable oil imports. Ghana News Agency. <https://gna.org.gh/2025/10/opdag-warns-of-job-losses-over-illegal-vegetable-oil-imports/>

<sup>31</sup> Asante, K. T. (2021). Political economy of the oil palm value chain in Ghana (APRA Working Paper 54). Future Agricultures Consortium. <https://doi.org/10.19088/APRA.2021.008>

<sup>32</sup> Welsing, K. (2025, November 13). 2026 Budget: Govt targets 100,000 hectares and 250,000 jobs in new oil palm policy. Citi Newsroom. <https://www.citinewsroom.com/2025/11/2026-budget-govt-targets-100000-hectares-and-250000-jobs-in-new-oil-palm-policy/>

<sup>33</sup> Ofosu-Budu, K., & Sarpong, D. B. (2013). Oil palm industry growth in Africa: A value chain and smallholders' study for Ghana. In A. Elbehri (Ed.), *Rebuilding West Africa's food potential: Policies and market incentives for smallholder-oriented agriculture* (pp. 347-390). Food and Agriculture Organization of the United Nations; International Fund for Agricultural Development. <https://www.fao.org/4/i3222e/i3222e11.pdf>

<sup>34</sup> Fold, N., & Whitfield, L. (2012). Developing a palm oil sector: The experiences of Malaysia and Ghana compared (DIIS Working Paper 2012:08). Danish Institute for International Studies. <https://www.files.ethz.ch/isn/140713/WP2012-08-Palm-Oil-Malaysia-Ghana-Whitfield-Fold-web.pdf>

### Q WHAT THIS MEANS

The European deforestation rules of Pillar 3 land squarely on this chain. To sell refined oil into Europe, the chain must become traceable from the plot up, which the fragmented smallholder base makes hard. But the estates and outgrower schemes that solve it first turn a compliance burden into a defensible, premium export position. Traceability is now part of the value chain.



## 🕒 The risks that sit inside the value chain 🕒



### Being trapped in the low-value chain

**HIGH**

#### WHAT IT IS

A grower who sells loose fruit, or an artisanal miller who makes red oil, sits at the node that, in the global chain, captures about 6 percent of the value and almost none of the profit. Staying there, however hard you work, means the money is always made by someone further up.

#### EVIDENCE

Across the global chain, smallholders keep about 6 percent of value and almost nothing of gross profit, while brand owners and retailers take about 66 percent of the profit<sup>35</sup>.

#### WHO IT HITS

Smallholders selling raw fruit and artisanal millers selling red oil.

#### HOW TO MANAGE IT, AND THE OPENING

Move up the chain: lift extraction, aggregate, refine, brand, or supply an industrial mill on contract. Almost every opening in oil palm is a route from the low chain to the high one.



### The aggregation and offtake gap

**MEDIUM-HIGH**

#### WHAT IT IS

There is no reliable link between most smallholders and an industrial mill. Fewer than 5,000 are reported to be formally tied to one, prices are set by whoever buys the fruit, and the few nucleus schemes hold considerable power over the growers around them.

#### EVIDENCE

Tens of thousands of smallholders farm the belt, yet fewer than 5,000 are reported to be formally linked to a large mill; an industry formula of the early 1990s priced fresh fruit bunches at 10 percent of the crude-palm-oil price, below today's minimum of about 14 percent<sup>36,37</sup>.

#### WHO IT HITS

Independent smallholders without a mill contract, and mills without a secured supply.

#### HOW TO MANAGE IT, AND THE OPENING

Build the missing middle: aggregation businesses and fair outgrower schemes, backed by the Authority's minimum fresh-fruit-bunch price. This gap is also a structural opening.

<sup>35</sup> Rijk, G., Wiggs, C., & Piotrowski, M. (2021, June 15). FMCGs, retail earn 66% of gross profits in palm oil value chain. Chain Reaction Research. <https://chainreactionresearch.com/report/palm-oil-value-chain-deforestation/>

<sup>36</sup> Asante, K. T. (2021). Political economy of the oil palm value chain in Ghana (APRA Working Paper 54). Future Agricultures Consortium. <https://doi.org/10.19088/APRA.2021.008>

<sup>37</sup> Tree Crops Development Authority. (2026a, September 1). TCDA announces minimum producer price of fresh fruit bunches of oil palm and raw rubber cup-lumps (September 2026) [Price notice]. <https://tcda.gov.gh/tcda-announces-minimum-producer-price-of-fresh-fruit-bunches-of-oil-palm-and-raw-rubber-cup-lumps-september-2026/>

### KEY TAKEAWAYS

- Ghana has two palm oil chains: a large artisanal red-oil chain that makes low-value oil, and a smaller formal chain that makes the refined product the country imports. The whole game is moving fruit and businesses from the first into the second.
- The value is at the top. Across the global chain, growers capture about 6 percent of the value and almost none of the profit; refining, branding and speciality products keep the rest. The prize is climbing the chain.
- A fifth of the land makes over half the oil, and three-quarters of the land makes well under half. The chain's biggest inefficiency is the low-yield, low-extraction smallholder base, which is also its biggest opportunity.
- The missing middle, the weak link between smallholders and industrial mills, is the clearest structural gap and a real aggregation business.
- Downstream is wide open: soap and oleochemicals, palm kernel oil, biodiesel and mill-waste energy are high-value uses Ghana barely touches, on raw materials it already has.



## 🕒 Practitioner intelligence 🕒

### 📅 FOR STUDENTS

The value chain is the best map of where the jobs and ventures are, and most of them are not on a farm. The value sits in milling, aggregation, refining, quality and branding. Learn how fruit moves from a smallholder to a mill, where the price is set and where the quality is lost, and you can work in aggregation, mill sourcing, or quality management, or start a small aggregation business yourself. The mistake first-timers make is fixing on production because it is visible; the money is one or two steps downstream, where fewer people are looking.

### 🔍 FOR ENTREPRENEURS

First move: position yourself between the two chains. The highest-value, lowest-capital entry is aggregation, buying fresh, clean fruit from smallholders and delivering it fast to an industrial mill, or bulking clean red oil up to a refiner's standard. Secure both ends, the fruit supply and the mill or refiner offtake, before you build anything. The trap is competing with the artisanal chain on its own low-value terms; the money is in feeding the formal chain. Use the minimum-price floor to make supply reliable.

### 📈 FOR INVESTORS

The thesis is simple: in palm oil the return climbs as you move up the chain, from grower to miller to refiner to brand. Diligence asks: which node does the deal sit in, and can it move up; is a fresh-fruit-bunch or crude-palm-oil supply secured, close and to quality; and does the business capture kernel and by-product value as well as oil. Underwrite integration and offtake. The dominant risk is a business locked into the low-value chain with no path up; the dominant opportunity is the refining and aggregation nodes that Ghana under-serves while importing the product they would make.

### 🔗 FOR ECOSYSTEM ACTORS

The lever: invest in the middle and the top of the chain as well as the bottom. Shared industrial milling, refining capacity, aggregation infrastructure and a national traceability system do more for the sector than more planting, because they move fruit into the high-value chain and open the export premium. The measurable outcome is the share of national fruit milled industrially, the share of demand met by refined local oil, and export volume verified deforestation-free. The failure to avoid is funding production while the milling, refining and aggregation bottlenecks that trap value in the low chain are left in place.



**Where this connects.** It builds on the planting material and yield of Pillars 1 and 4, the demand and prices of Pillar 2, the disease, quality and regulatory risks of Pillar 3, and the cost and returns of Pillar 5. Pillar 7 turns the whole chain into a practitioner's action plan, and Pillar 8 into a strategic outlook.



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