MARKET INTELLIGENCE REPORT

Thailand Durian Supply Expansion and China Market Competition

A reproducible review of national capacity, realised output, regional divergence and post-access competitive change

2015-2025 supply evidence | 2023-2024 China competition test

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Employer-facing portfolio analysis | August 2026

Report scope

This report asks whether Thailand's rapidly expanding durian area is translating into dependable production growth, where the 2024 disruption and 2025 recovery occurred, and whether Vietnam's post-access growth in China is concentrated in Thailand's main supply window or represents a broader competitive shift.

> **Decision lens.** The analysis is designed for commercial interpretation and employer review. It identifies measurable capacity, concentration and competitive risks without converting descriptive evidence into unsupported causal claims.

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1. Executive result

+12.1%	-19.2%	70.7%	+13.43 pp
Bearing area, 2025	Output per bearing rai, 2024	Gross gains from top three provinces	Vietnam share, Apr-Aug 2023-24

Bottom line. Thailand's production base is expanding, but the data does not support a simple capacity-equals-output story. The 2024 decline was driven by a broad fall in output per bearing rai, while the 2025 recovery was positive but still partly dependent on additional bearing area. In China, Vietnam's share gain was commercially material during Thailand's main window but was not uniquely concentrated there.

Capacity is structural, not a passing wave. Standing area increased every year from 805,000 rai in 2015 to 1.887 million rai in 2025. Bearing area also doubled, yet the non-bearing gap grew to 607,326 rai. In 2025, new standing-area additions offset 91.7% of the net movement into bearing area, leaving the pipeline almost unchanged.

The 2024 break was an output-per-rai event in the accounting data. Bearing area rose 7.7%, but production fell 13.1% and calculated output per bearing rai fell 19.2%. All four OAE regions recorded negative output-per-rai effects even though bearing-area effects were positive.

The 2025 recovery was real but incomplete. Production increased 22.2% to 1.574 million tonnes. Output per bearing rai rose 9.0% from 2024, but remained 11.9% below the 2019-2023 average. The sign of the weakness is clearer than its exact size because no mix-clean mature-stock benchmark exists in the series.

Recovery was broad by count but concentrated by volume. Production increased in 61 of 67 matched provinces, while Chanthaburi, Rayong and Chumphon generated 70.7% of gross provincial gains. Five of the six declining provinces were in the South.

Vietnam's China gain was broad rather than selectively seasonal. Vietnam gained China import quantity share in nine of twelve months. Its April-August gain was 13.43 percentage points versus 12.62 points across the full year, a difference of only 0.81 points. Thailand's seasonal advantage therefore did not prevent share loss during the window representing 69.1% of China's 2024 import quantity.

2. Preliminary market context

Durian is a perennial orchard crop, so supply cannot respond like an annual field crop. Published technical references vary by propagation method and management, but typically place first bearing several years after planting. FAO guidance reports around five to six years for grafted trees and longer for seedlings, while Thai Department of Agriculture work records first cropping at around four years in an intensive trial. The relevant commercial point is the lag, not one universal biological age.[3][4]

That lag makes the distinction between standing and bearing area essential. Standing area describes planted orchard area. OAE defines fruit-tree bearing area to include land harvested during the

production year and land that has produced previously even when no crop is collected in the current year.[2] Bearing area is therefore an administrative area classification, not proof that every classified rai produced fruit.

Interpretive consequence. Production divided by bearing area is an observed output-per-classified-rai measure. A fall can reflect lower productivity on producing orchards, a larger share of classified bearing area producing little or nothing, maturity mix, or a combination. Aggregate OAE data cannot separate those mechanisms.

3. Data, definitions and analytical method

3.1 Evidence base

Module	Coverage	Primary source	Use
National supply	2015-2025	OAE Table 4.8 plus revised 2024 and 2025 releases	Standing area, bearing area, production and output per rai
Regional supply	2022-2025	OAE regional rows	Regional decomposition and concentration
Province recovery	2024-2025	Matched revised OAE province releases	67-province change and decomposition
China competition	Monthly, 2021-2024	UN Comtrade, China imports, HS 081060	Thailand/Vietnam quantity and CIF-value shares
Market access	Protocol issued July 2022	GACC Announcement No. 66 of 2022	Separates pre-access, transition and post-access periods

Source note: OAE is Thailand's Office of Agricultural Economics. Imports use China's reporter-side customs records. Quantities and CIF values are analysed separately.

3.2 Series construction and quality control

Publication vintages. The long national series uses the latest available OAE historical table for 2015-2023 and exact revised releases for 2024-2025. Older detailed country rows were reconciled against the selected national series rather than silently mixed.

Yield validation. Calculated output per bearing rai equals production tonnes multiplied by 1,000 and divided by bearing area. Differences from published yield stay within source rounding. The 2015-2023 source rounds area and production to the nearest thousand; 2024-2025 use exact published rai and tonnes.

Geographic validation. Regional totals reconcile exactly to the national source for 2024-2025 and within national source rounding for 2022-2023. The revised province comparison contains 67 matched provinces in each year. Province decompositions reconcile to their observed changes.

China validation. Each of 2021-2024 contains twelve monthly records and one classification per year. Quantity and CIF-value partner totals reconcile to the world record. The 2025 retrieval returned no China records and is labelled unavailable, not zero trade.

3.3 Accounting decomposition

Annual production change is split symmetrically between a bearing-area effect and an output-per-rai effect. The two components sum exactly to the observed production change. This is an accounting identity, not a causal model: it identifies where the arithmetic sits, not why output per rai changed.

> **Claim discipline.** Weather, tree health, disease, fertiliser, management, orchard age and the share of bearing area producing nothing are absent. They remain competing explanations, not measured causes.

4. Findings: capacity, output and the national pipeline

4.1 The pipeline is continuously replenished

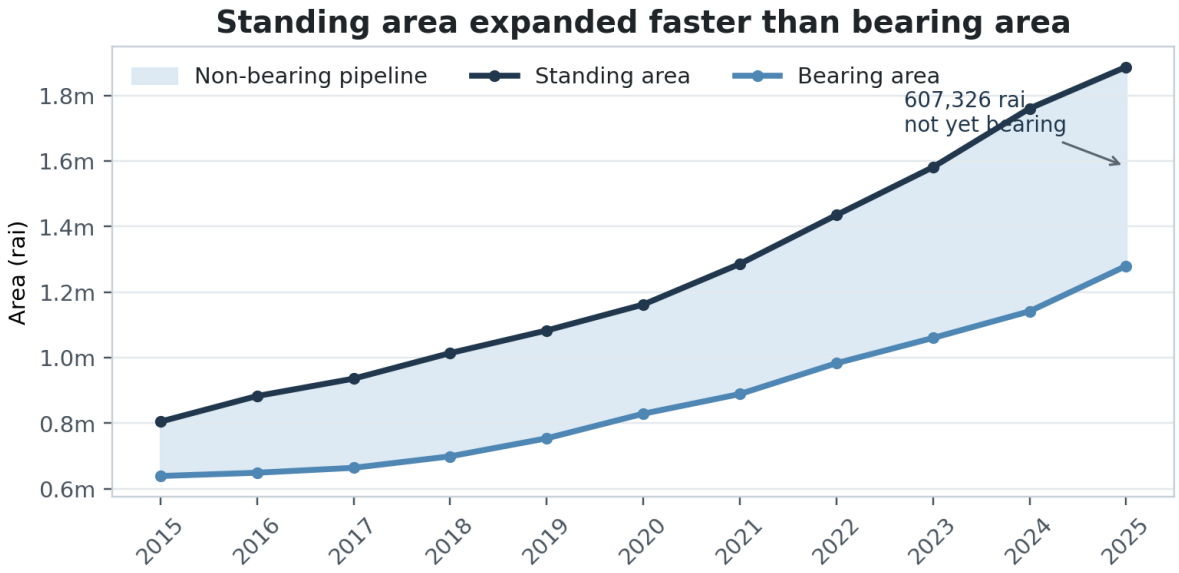

Figure 1. Thailand's standing and bearing durian area, 2015-2025

Source: OAE national series; author's calculations.

Standing area increased 134.4% between 2015 and 2025, while bearing area increased 100.2%. The gap between them expanded from 166,000 rai to 607,326 rai. Bearing area represented 79.4% of standing area in 2015 but 67.8% in 2025.

The 2025 flow is more informative than dividing the gap by gross bearing-area entry. Bearing area increased 138,160 rai, but standing area increased 126,753 rai. The gap therefore fell by only 11,407 rai, or 1.84%. New standing-area additions offset 91.7% of the apparent conversion into bearing area.

Mechanical assumption	Annual gap change	Years to close current gap	Interpretation
Observed 2025 net flows continue	-11,407 rai	53.2	Lead sensitivity: planting/reclassification nearly offsets bearing entry
Net standing additions halve	-74,784 rai	8.1	Requires a material slowdown in additions
Net standing additions stop	-138,160 rai	4.4	Zero-new-standing-area counterfactual

These are constant-flow sensitivities, not forecasts. Gross planting, orchard removals, abandonment and reclassification are not observed separately.

4.2 Output broke from the area trend in 2024

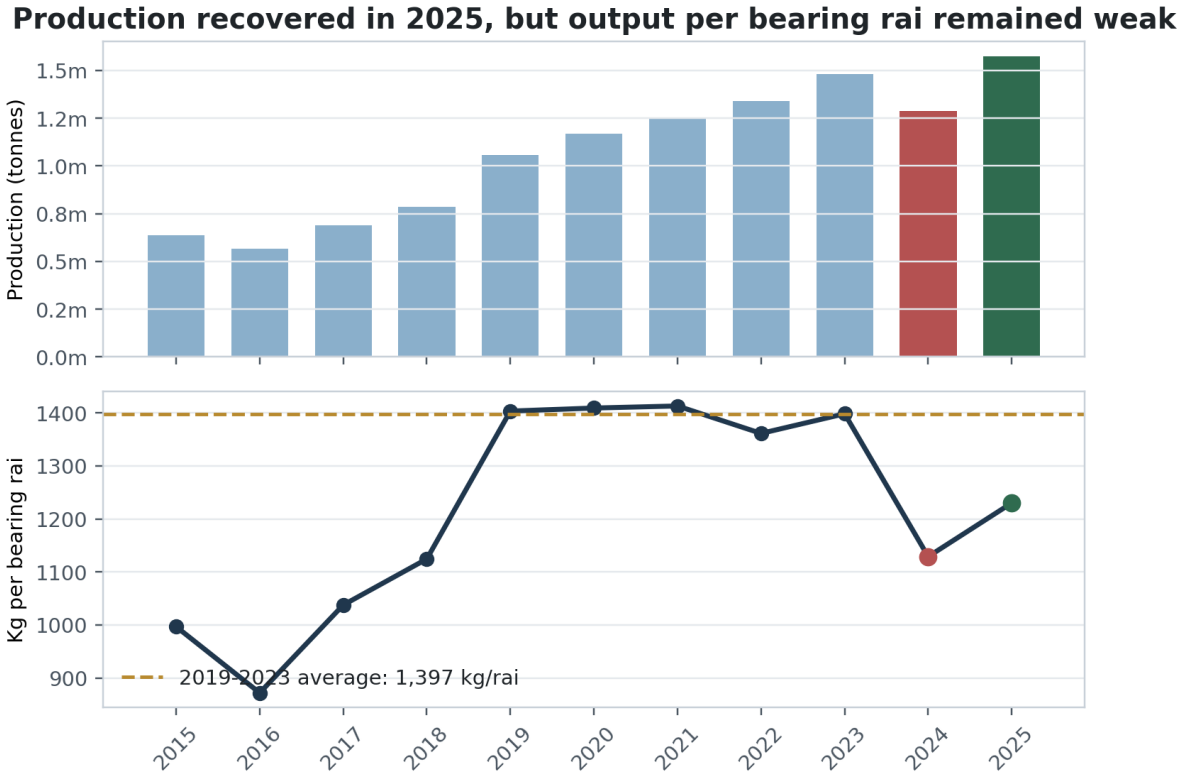

Figure 2. National production and calculated output per bearing rai

Source: OAE national series; author's calculations. Dashed benchmark is the 2019-2023 mean.

Production rose in each year from 2016 to 2023, then fell by 193,556 tonnes in 2024 despite an 81,339-rai increase in bearing area. Calculated output per bearing rai fell from 1,398.11 kg to 1,128.89 kg, a decline of 269.22 kg or 19.26%.

The direction is not unique in the 11-year history: 2016 also combined higher bearing area with lower production. The 2024 event is nevertheless the largest output-per-rai fall in the selected series and moved below the range of the five preceding observations.

4.3 The 2025 recovery was positive but not complete

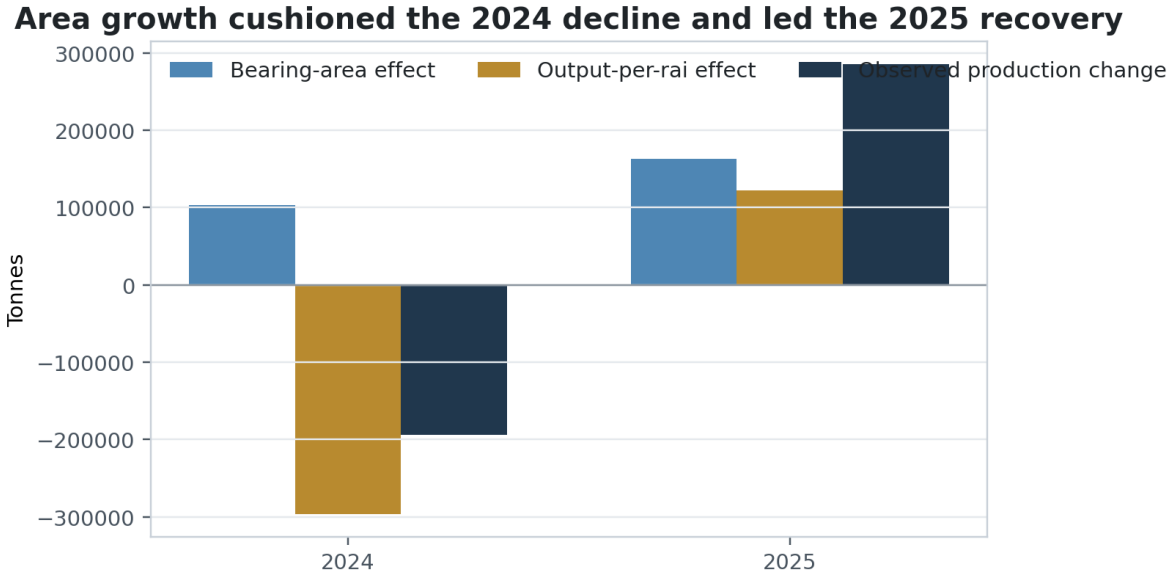

Figure 3. Accounting decomposition of national production change

Source: OAE national series; symmetric area/output-per-rai decomposition.

Production increased 285,408 tonnes in 2025. Approximately 162,956 tonnes of the accounting change came from additional bearing area and 122,452 tonnes from improved output per rai. Output per rai recovered 8.96% to 1,230.05 kg, but remained 11.94% below the fixed 2019-2023 average of 1,396.84 kg.

This benchmark is useful but not biologically clean. The entire 2015-2025 series occurs during expansion, and no orchard-age distribution is available. Earlier 2015-2017 published yields were lower, not higher, than the 2019-2023 benchmark, but that does not establish a pure mature-stock yield. The shortfall's sign is more secure than its exact magnitude.

A maturity sensitivity model can alter the benchmark only modestly because the benchmark years were also absorbing area expansion. Across the tested ramp family, the maturity-factor difference between 2025 and the benchmark was about 0.9 to 1.7 percentage points. The model is therefore structurally incapable of explaining more than a small part of the observed gap. That is a property of the comparison, not direct evidence about orchard biology.

5. Findings: regional and provincial concentration

5.1 The 2024 output-per-rai decline was geographically broad

Region	2024 area effect	2024 output-per-rai effect	Observed change	2025 output-per-rai effect
Central	+67,413	-180,842	-113,429	+95,747
North	+3,510	-3,938	-428	+7,393
Northeast	+4,705	-2,038	+2,667	+6,033
South	+31,830	-113,995	-82,165	-953

All four regions had positive bearing-area effects and negative output-per-rai effects in 2024. The Northeast still recorded a small net production increase because its area effect was larger than its output-per-rai loss. The national decline was driven mainly by OAE Central and the South.

All regions recorded positive production change in 2025, but the recovery mechanism differed. OAE Central accounted for 76.7% of the national increase and recovered through both additional bearing area and improved output per rai. Southern production increased 38,983 tonnes, but its output-per-rai effect remained slightly negative; almost all of its gain came from additional bearing area.

5.2 Provincial recovery was broad but concentrated

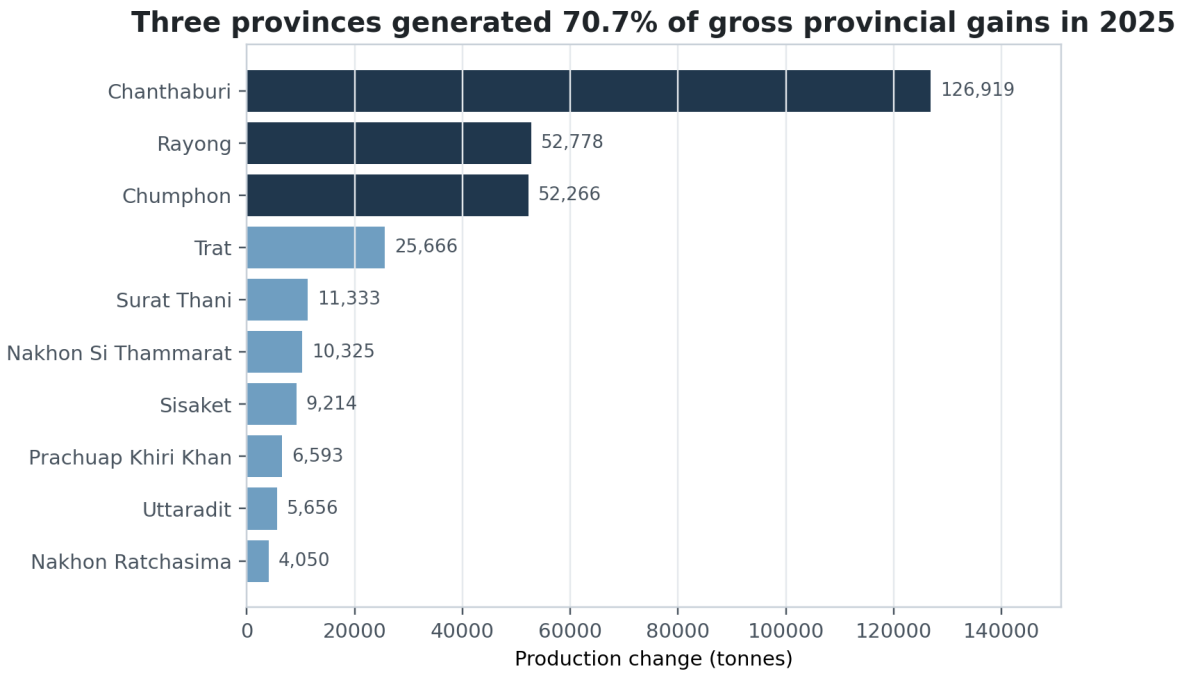

Figure 4. Largest provincial production gains, 2024-2025

Source: matched OAE revised province releases; gross gains basis.

Sixty-one of 67 matched provinces increased production. Gross gains totalled 328,098 tonnes, while gross declines totalled 42,689 tonnes. Chanthaburi alone generated 38.7% of gross gains. Chanthaburi, Rayong and Chumphon together generated 70.7%, rising to 78.5% when Trat is included.

Province	Region	Production change	Area effect	Output-per-rai effect
Chanthaburi	Central	+126,919	+65,652	+61,267
Rayong	Central	+52,778	+31,278	+21,500
Chumphon	South	+52,266	+13,004	+39,262
Trat	Central	+25,666	+23,136	+2,530
Yala	South	-25,784	+6,404	-32,188
Narathiwat	South	-12,952	+54	-13,006

Five of the six declining provinces were Southern: Yala, Narathiwat, Songkhla, Pattani and Phatthalung. Yala and Narathiwat accounted for 90.8% of gross Southern losses. Both had positive bearing-area effects but much larger negative output-per-rai effects.

Extreme observation. Narathiwat's 2025 source row reports 28,458 bearing rai, 527 tonnes and 19 kg per rai. Direct verification against the OAE release confirms this is not an extraction error. The aggregate data still cannot identify whether the figure reflects non-producing classified area, tree condition, weather, management, source methodology or another mechanism.

6. Findings: China competition after Vietnam's protocol access

6.1 Test design

China's customs authority issued the phytosanitary requirements for fresh durian from Vietnam in July 2022.[6] The 2021 observations and most of 2022 therefore represent pre-access or transition conditions. Their near-zero recorded Vietnamese shares are not treated as competitive change and do not establish zero physical trade, because unofficial border movements would not necessarily appear in formal customs records.

The defensible comparison is 2023 versus 2024, with both years fully post-protocol. The principal test compares Vietnam's quantity-share gain in April-August, Thailand's main supply window, with its full-year gain. A materially larger peak-window gain would support selective seasonal encroachment. A similar gain would indicate broader competitive expansion.

6.2 Vietnam's gain was commercially material but not selectively seasonal

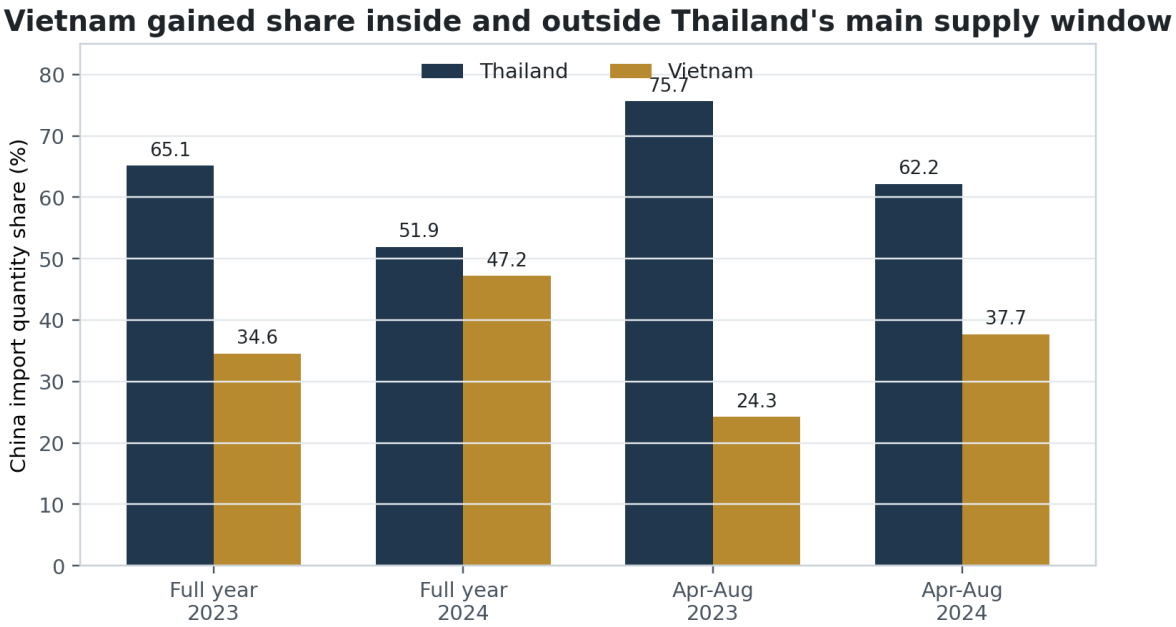

Figure 5. Thailand and Vietnam shares of China's fresh durian import quantity

Source: UN Comtrade, China reporter, imports, HS 081060; author's calculations.

Vietnam's full-year quantity share rose from 34.59% in 2023 to 47.21% in 2024, an increase of 12.62 percentage points. In April-August, it rose from 24.26% to 37.69%, an increase of 13.43 points. The peak-window gain exceeded the full-year gain by only 0.81 points.

This does not support the hypothesis that Vietnam was disproportionately attacking Thailand's season at the aggregate-window level. It is commercially important for the opposite reason: April-August accounted for 69.1% of China's 2024 import quantity, yet Thailand's seasonal supply advantage did not prevent substantial share loss in its core window.

The broader market expanded. China's recorded import quantity increased 9.39% between 2023 and 2024. Thailand's recorded quantity fell approximately 12.84%, while Vietnam's increased approximately 49.31%. This is descriptive displacement within an expanding market. It does not prove that Vietnam caused Thailand's volume decline.

6.3 Monthly change was broad but uneven

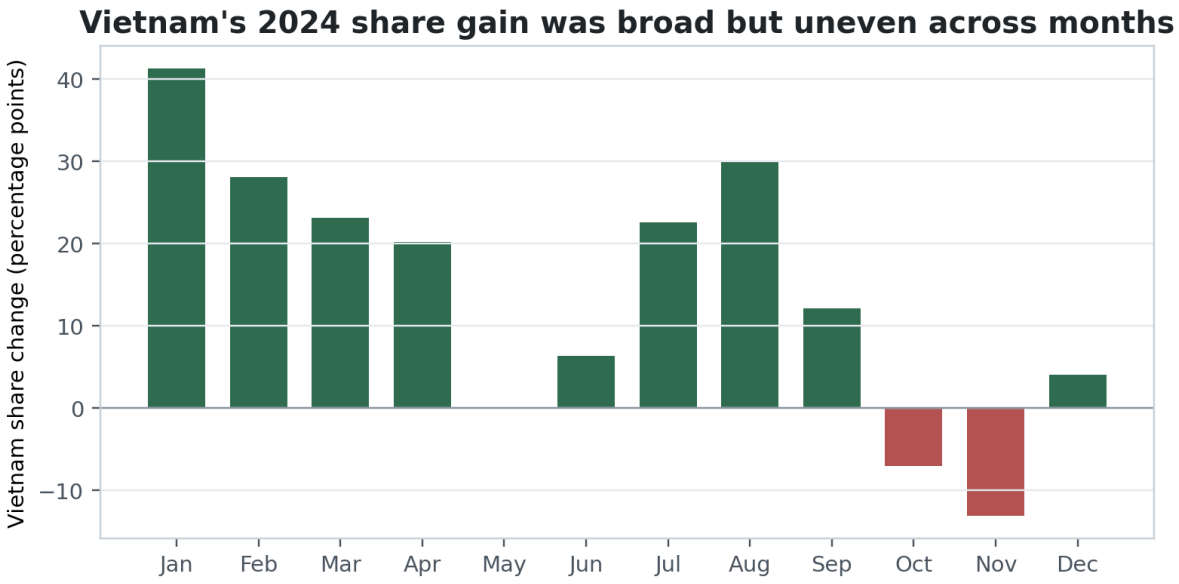

Figure 6. Change in Vietnam's China import quantity share by month, 2023-2024

Source: UN Comtrade; positive values show Vietnam gaining share.

Vietnam gained quantity share in nine of twelve months. The largest increases occurred in January, August, February, March, July and April. May was effectively unchanged, while share fell in October and November. The shift was therefore not a single-month artefact, but neither was it uniform across the calendar.

Thailand's 2024 customs unit value exceeded Vietnam's in each aggregated window, including USD 4.96 per kg versus USD 3.99 across the full year. This is consistent with a higher average customs value for recorded Thai imports, but it is not a controlled price premium. Product mix, grade, variety, timing and contract terms are not held constant.

> **Data boundary.** UN Comtrade returned no China records for the attempted 2025 monthly retrieval. The report ends the competition trend in 2024 and discloses the availability gap. Missing records are not converted to zero trade.

7. Commercial implications and monitoring priorities

Expect continued capacity pressure, not a one-off supply wave. The pipeline remains large and is being replenished close to the rate at which standing area becomes bearing area. Commercial planning should test multiple planting and conversion assumptions rather than assume the gap disappears in four years.

Separate capacity from realised output. Bearing-area growth provided a powerful cushion in both 2024 and 2025, but it did not prevent a national production fall when output per rai weakened. Procurement and sales plans should monitor both area entry and realised output per classified bearing rai.

Treat the recovery as geographically concentrated. High province counts can overstate diversification. The national recovery depended heavily on Chanthaburi, Rayong and Chumphon, while parts of the South continued to record negative output-per-rai effects.

Thailand's season remains an advantage, not a shield. Thailand still led China imports during April-August in 2024, but Vietnam's share gain during that window was almost the same as its annual gain. Competitor monitoring should cover year-round share and absolute quantities, not only seasonal leadership.

Use a monitoring dashboard rather than a false point forecast. The most decision-relevant indicators are standing-area additions, bearing-area entry, the non-bearing gap, national and regional output per rai, province contribution to change, China monthly shares, absolute quantities and customs unit values.

8. Forecast go/no-go decision

> **Decision: no forecast published.** The available national production and farm-gate price series contain only 11 annual observations. The monthly China import series contains a structural market-access break and only two fully post-protocol years. These data are adequate for descriptive monitoring but insufficient to show that a formal 12-to-18-month forecast consistently outperforms a credible benchmark.

This follows the project's pre-defined model-integrity rule: a more complex model must outperform a simple benchmark in a rolling-origin backtest before publication. No monthly Thai export-quantity or national Monthong-price history was present in the final database inventory. Generating a fitted line from the annual series would add apparent sophistication without reliable validation.

The forecast is therefore rejected rather than presented with false precision. Future forecasting becomes viable only after acquiring a sufficiently long, comparable monthly series and documenting revisions, missing periods and structural breaks.

9. Limitations and alternative explanations

Issue	Why it matters	How the report handles it
Bearing-area definition	Classified area may include rai producing little or nothing	Uses 'output per bearing rai' and avoids equating area with active harvest
No orchard-age structure	Maturity mix cannot be observed directly	Reports sensitivity bounds and states benchmark contamination
Omitted agronomic drivers	Weather, disease, tree health and management may affect output	Names them as competing explanations, not causes
Publication revisions	Historical values differ across OAE vintages	Selects a documented national series and reconciles overlaps
Customs unit values	Average values mix grades, varieties and terms	Does not claim a controlled price premium
Vietnam access break	Pre-2022 customs shares are not comparable competition observations	Uses 2023-2024 as the post-access comparison
Missing 2025 China data	The trend cannot yet be extended	Discloses unavailable retrieval and does not impute zero
Short forecast histories	Backtests would be unstable	Rejects forecast publication

10. Conclusion

Thailand's durian system entered 2026 with more capacity, higher 2025 production and a still-large pipeline. Those facts do not remove supply risk. The 2024 decline showed that additional bearing area can be outweighed by weaker realised output per classified rai. The 2025 recovery restored production but not the earlier output-per-rai benchmark, and the recovery depended heavily on a small number of provinces.

In China, Vietnam's post-access advance was not confined to Thailand's off-season or disproportionately concentrated in Thailand's main window. It was broad across the year and occurred while China's total import market expanded. Thailand retained seasonal leadership during April-August, but the calendar advantage did not prevent material share loss.

The most defensible commercial conclusion is therefore two-sided: Thailand has a deep and replenished capacity pipeline, but realised output and competitive position remain uncertain. The correct response is disciplined monitoring of the area-to-output conversion and China market shares, not a claim that expansion guarantees supply or that a short data series can forecast the next cycle precisely.

Appendix A. Selected national series

Year	Standing area	Bearing area	Non-bearing gap	Production	Output kg/bearing rai
2015	805,000	639,000	166,000	637,000	996.87
2016	883,000	649,000	234,000	566,000	872.11
2017	936,000	664,000	272,000	689,000	1,037.65
2018	1,014,000	699,000	315,000	786,000	1,124.46
2019	1,083,000	754,000	329,000	1,058,000	1,403.18
2020	1,162,000	829,000	333,000	1,168,000	1,408.93
2021	1,286,000	889,000	397,000	1,256,000	1,412.82
2022	1,435,000	983,000	452,000	1,338,000	1,361.14
2023	1,581,000	1,060,000	521,000	1,482,000	1,398.11
2024	1,760,072	1,141,339	618,733	1,288,444	1,128.89
2025	1,886,825	1,279,499	607,326	1,573,852	1,230.05

2015-2023 area and production are rounded to the nearest 1,000 in OAE Table 4.8. The 2024 and 2025 rows use exact published rai and tonnes from the revised releases.

Appendix B. Claim register

Defensible claim	Evidence supports	Evidence does not establish
The non-bearing pipeline remains large and was barely reduced in 2025	Observed standing and bearing net flows	Future planting, removals or exact absorption timing
Output per bearing rai remained below the selected benchmark in 2025	OAE area and production arithmetic	Whether lower orchard productivity or non-producing area caused the gap
The 2024 output-per-rai effect was negative in all regions	Accounting decomposition	A shared causal shock
The 2025 recovery was concentrated by volume	Matched province changes	Firm-level supply availability or quality
Vietnam gained share broadly after access	2023-2024 monthly China import records	Causal tonne-for-tonne displacement or a stable long-run trend
No forecast met the publication standard	Input inventory and sample-length review	That forecasting will remain impossible after better data are acquired

Appendix C. Reproducibility record

The analysis was executed in PostgreSQL. Each stage preserves source fields, creates calculated measures in an analytics layer and runs explicit reconciliation queries before interpretation.

SQL module	Purpose
17_durian_national_supply_diagnostics.sql	National 2020-2024 validation and measures
18_durian_long_run_national_supply.sql	2015-2025 national history, range tests and decomposition
19_durian_regional_supply_diagnostics.sql	Regional reconciliation and change decomposition
20_durian_province_supply_diagnostics.sql	Matched 2024-2025 province changes and concentration
21_durian_china_competition_diagnostics.sql	China monthly shares, access windows and 2025 availability audit
22_durian_forecast_input_audit.sql	Forecast data-sufficiency and go/no-go review

Appendix D. Sources

[1] Office of Agricultural Economics, Agricultural Statistics of Thailand 2024, Table 4.8, p. 88. Source link

[2] Office of Agricultural Economics, revised durian national, regional and provincial annual releases for 2024 and 2025; OAE RRA agricultural-production survey manual definition of bearing area. Source link

[3] Food and Agriculture Organization, Potential Fruits: durian propagation, bearing and harvest guidance. Source link

[4] Thailand Department of Agriculture, durian orchard-management and first-cropping technical materials. Source link

[5] United Nations Comtrade, China reporter-side monthly imports of fresh durians, HS 081060, 2021-2024. Source link

[6] General Administration of Customs of China, Announcement No. 66 of 2022 on phytosanitary requirements for fresh durian imports from Vietnam. Source link

Analysis cut-off: 18 August 2026. All calculations are based on the validated source versions described above.