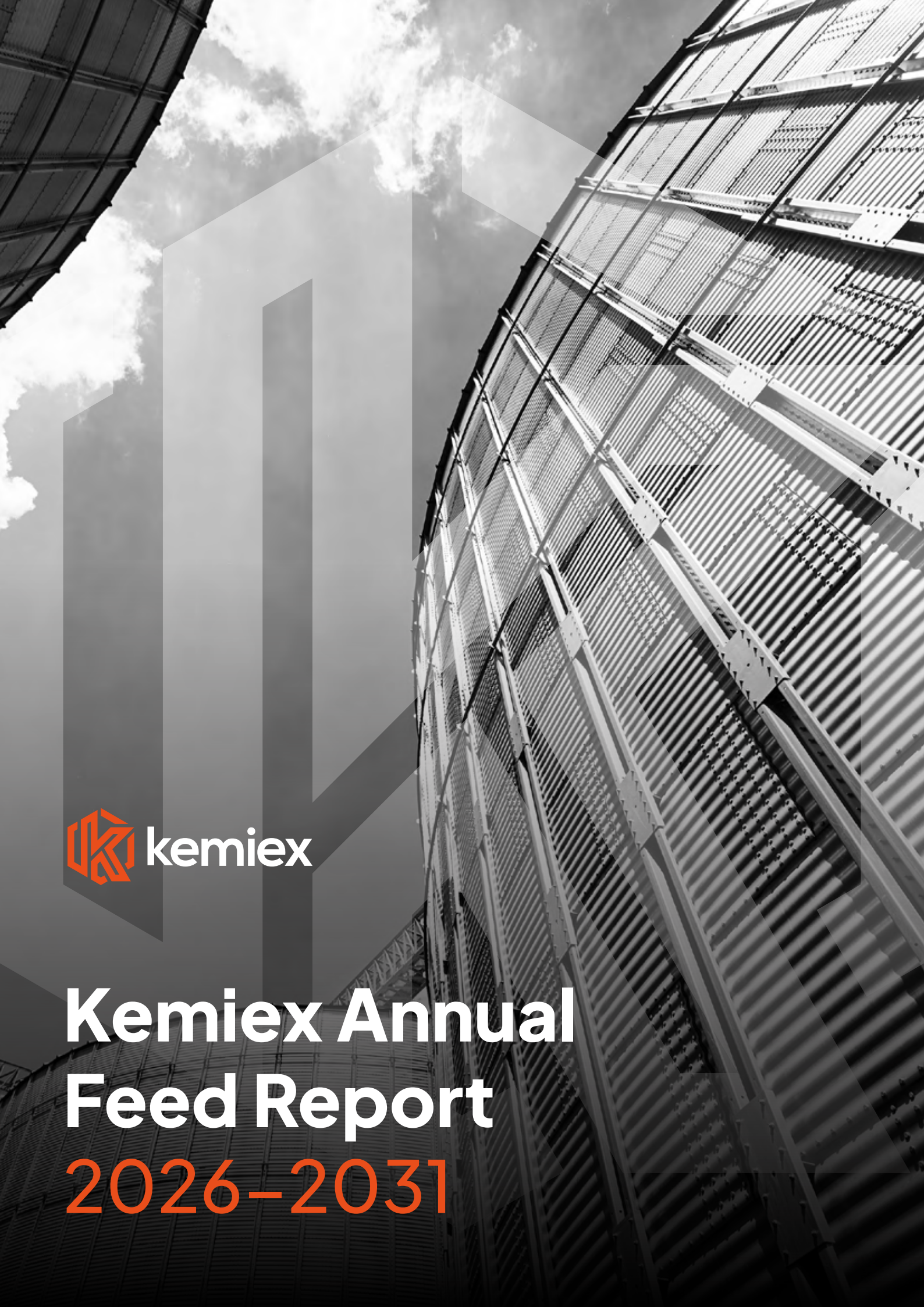


kemiex

Kemiex Annual Feed Report 2026–2031

Market Intelligence Solutions for Raw Materials

Kemiex is the **smartest way to stay informed** and **transact raw materials**. We're a team of highly motivated international professionals, with vast experience with raw materials from multiple sectors such as tech, finance, insurance, consulting or corporate law.

95+	9000+	4
countries	clients	offices

Our Core Values

Clear Objectives

We set precise, strategic goals that guide every step toward delivering high quality and continuous results.

Team of Experts

Our work is driven by a dedicated team of innovative specialists committed to excellence and growth.

Trusted Partnerships

We collaborate with premium partners to ensure the highest standards and build lasting success together.

Partners and Stakeholders,

One conversation changed the way we saw this industry.

A veteran buyer once told us that every major purchasing decision felt like solving a thousand-piece puzzle with half the pieces missing. Markets moved faster than information. Suppliers saw one part of the picture, buyers another. By the time the pieces came together, opportunities had often passed.

The animal nutrition industry feeds the world. Yet the information supporting it has not always kept pace. Supply chains span continents, markets react overnight, and businesses are expected to make faster decisions with greater confidence. The challenge is no longer access to information. It is turning information into clarity.

That challenge is why Kemiex exists.

Eight years ago, we left careers in Swiss banking convinced that this industry deserved the same quality of market intelligence that financial markets had long taken for granted. We had no capital, no technical background, only a conviction that better information leads to better decisions.

Since then, our mission has remained the same: helping companies make sense of increasingly complex markets. Today, that means not only delivering market intelligence, but helping businesses build the structured data and insights that will power the next generation of decision-making.

One thing, however, has never changed: our independence.

Kemiex has no commercial interest in whether prices rise or fall, no position to protect, and no agenda beyond providing the most accurate, timely, and complete picture of the market possible. That independence is the foundation of everything we do.

In the pages that follow, you will find our perspective on key ingredients, price dynamics, and the structural forces shaping global markets. You will also find the first industry-wide econometric framework projecting feed consumption growth and demand for critical micro ingredients through 2031, built from decades of historical data across more than 130 countries.

Markets will continue to be shaped by weather, geopolitics, innovation, and human decisions. But better information reduces uncertainty.

The puzzle will never be complete. But every additional piece reveals a clearer picture. We hope this report helps you find yours.

PAU FRANQUET & ORIOL SALUDES
Co-founders of Kemiex AG

Index

Executive Summary

Key Takeaways of the Feed and Additive Global Outlook 2026–31

This publication is the first built on Kemiex's econometric feed modelling framework: a bottom-up assessment of feed grain and oilseed consumption across more than 130 countries, constructed market by market (see methodology on page 17).

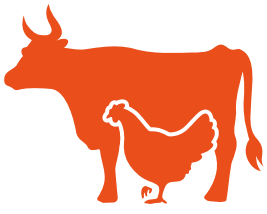
The model integrates a wide range of economic and demographic indicators, is validated against +45 years of historical data, applies robust forecasting methods, and enables supply-demand scenarios for key additives, illustrated for Methionine and Vitamin E 50% (see page 23 and 25).

Top 3 Consumers
Absolute cumulative growth leaders

~1'420 mmt
2025 global volume consumed

Growth Rate
2026–2031 CAGR

Latam & South Asia
Fastest growing regions



Poultry & Dairy
Key demand drivers

Global Feed Consumption Outlook

Global Feed Consumption Set to Expand Continuously on Poultry and Dairy Growth

Kemiex Annual Feed Report 2026–2031 delivers a structured assessment of feed consumption, integrating species-level production data, macroeconomic indicators and population trends.

At the global level, the Kemiex model forecasts feed consumption to reach approximately 1'450 million metric tons (mmt) in 2026, expanding at a compound annual growth rate (CAGR) of 1.5% to reach 1'560 mmt by 2031. Poultry meat, eggs, and dairy are the primary growth drivers, while swine remains subdued across key markets.

Growth trajectories diverge sharply between market types. Developing economies are experiencing accelerated demand growth as rising incomes and urbanization drive dietary transition toward higher animal protein consumption.

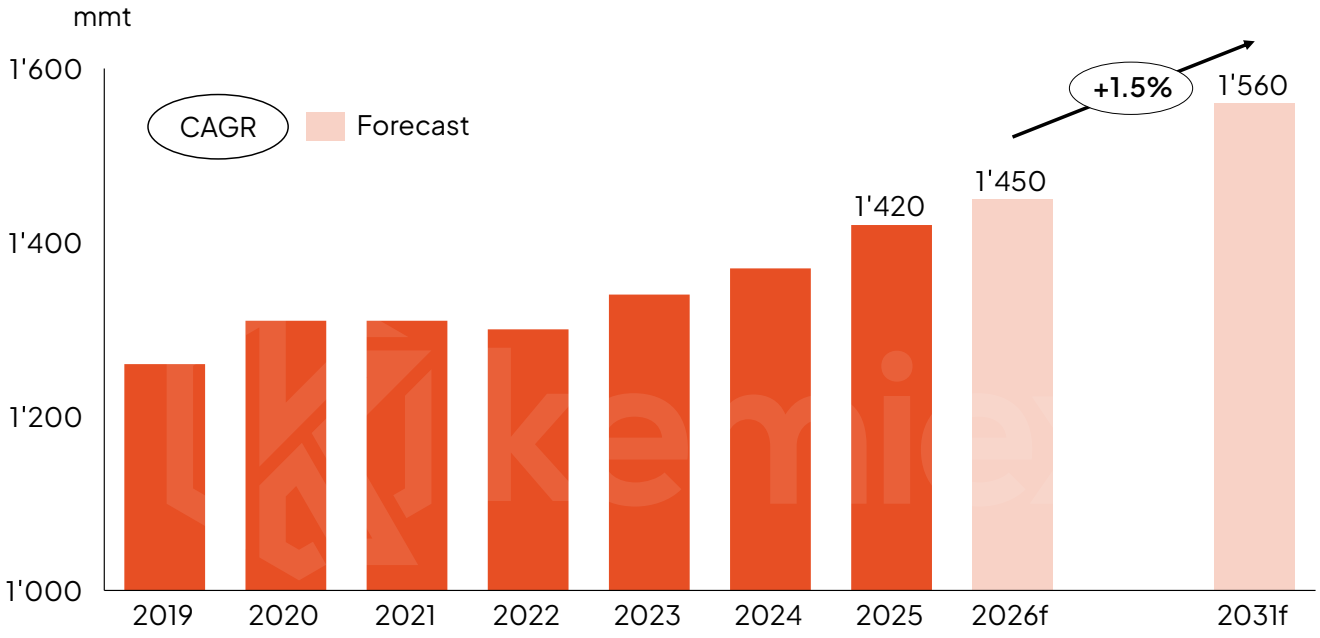
Mature markets, by contrast, are characterized by modest volume gains and increasing emphasis on production efficiency over expansion.

Latin America and South Asia stand out as the fastest-growing regions through 2031, where expanding poultry sectors, favorable demographics, and rising domestic protein demand are expected to generate a disproportionate share of incremental global feed volume.

The projections presented reflect a baseline scenario, assuming stable macroeconomic conditions, continued productivity gains, and no substantial disruption to global feed trade. At the time of publication, Middle East tensions and disruptions to the Strait of Hormuz - through which over 20% of global oil, gas, and other feedstock trade flows - are driving heightened volatility across energy, freight, fertilizer, and feedstock markets. Supply-side shocks or significant policy shifts may yield materially different outcomes from the baseline.

Poultry meat, eggs, and dairy are primary growth drivers, while swine remains subdued.

Global feed consumption 2019–31f



Top Feed-Consuming Areas

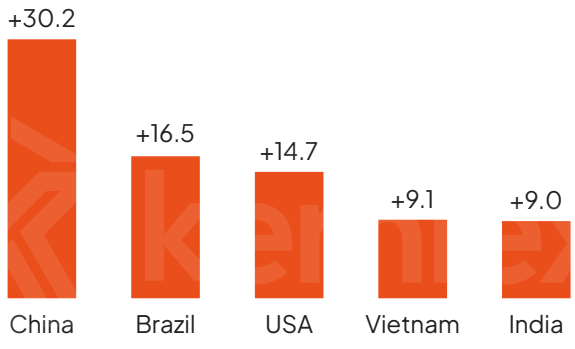
China, United States and Brazil remain largest feed consumers

Global feed consumption is highly concentrated, with the three largest consuming nations China, the United States, and Brazil accounting for nearly 45% of total world feed demand in 2026. China leads by a substantial margin, with an estimated 336.6 mmt consumed in 2026, followed by the United States at 214.8 mmt and Brazil at 98.1 mmt. This concentration extends further down the ranking, with the top 10 consuming countries collectively representing approximately 63% of global feed demand.

Country	2026f (mmt)	CAGR 2026–31 (%)	Absolute change 2026–31 (mmt)
China	336.6	+1.7%	+30.2
United States	214.8	+1.3%	+14.7
Brazil	98.1	+3.2%	+16.5
India	51.4	+3.3%	+9.0
Russia	50.0	+1.6%	+4.1
Mexico	40.6	+1.2%	+2.5
Spain	41.0	+1.6%	+3.5
Germany	28.8	-1.1%	-1.5
Argentina	25.4	+1.1%	+1.5
France	25.0	-1.8%	-2.1

Over the forecast horizon, China, Brazil, the United States, Vietnam, and India are projected to generate the largest absolute increases in feed consumption. However, the nature of that growth differs substantially by market. China and the United States are expected to contribute significant absolute volumes while growing at moderate rates, a reflection of already-mature livestock sectors. Brazil, Vietnam, and India, by contrast, combine high relative growth rates with substantial absolute volume gains, driven by expanding livestock industries, rising per capita protein consumption, and more favorable demographic trends.

Absolute feed consumption growth 2026–31f (mmt)



China

China remains the world's largest feed consuming nation by a considerable margin, with total consumption forecast at 336.6 mmt in 2026 and expected to grow at an annual rate of 1.7% through 2031. This trajectory reflects a livestock sector undergoing structural rebalancing rather than broad-based expansion. Pork production, historically the dominant driver of Chinese feed demand, is expected to remain relatively flat as the sector works through a prolonged period of oversupply and margin compression. Offsetting this, robust growth in broiler meat, dairy, and aquaculture production is projected to sustain overall feed demand and support continued volume gain. Nevertheless, a declining population presents a meaningful downside risk to feed demand in China.

USA

Total feed consumption in the United States is forecast at 214.8 mmt in 2026, with annual growth at 1.3% until 2031. Demand is primarily driven by robust expansion in broiler and layer production, complemented by moderate growth in pork output. As a mature livestock market, incremental volume gains are expected to be modest but consistent. On the consumer side, the growing adoption of GLP-1 medications and broader affordability pressures warrant close monitoring, as both have the potential to moderate per capita animal protein consumption. In a market characterized by price sensitivity for some consumer groups, and bifurcated consumer spending power, these dynamics could subtly shape long-term feed demand.

EU

Total feed consumption across the EU-27 is forecast at approximately 202 mmt in 2026, with demand outlook to remain essentially flat through 2031 at about 201 mmt, reflecting a marginal annual decline of -0.1%. The outlook varies considerably within the bloc, with Spain and Poland emerging as bright spots, projected to grow at approximately 1.6% and 1.9% per annum respectively. In contrast, Germany, France, and the Netherlands face declining consumption, driven by shrinking cattle and swine herds and shifting consumer preferences. Across the EU, meat production is expected to be flat to negative through 2031, with poultry as one of the sole segments delivering limited growth, reflecting a market navigating regulatory pressure, dietary transition, and demographic maturity.

Brazil

Brazil ranks as the third largest feed consuming nation globally, with total consumption forecast at 98.1 mmt in 2026 and strong annual growth of approximately 3.2% forecast through 2031. This robust outlook is underpinned by a combination of competitive advantages unique to the Brazilian market, including access to abundant and low-cost domestic supplies of corn and soybean meal, a favorable demographic trajectory, and broad-based expansion across virtually all animal protein segments. Poultry production stands out as the primary driver of feed demand, with Brazil's position as a leading global exporter of chicken meat reinforcing domestic production incentives. Beef and swine exports also contribute positively, adding an export-driven demand layer that further strengthens the overall feed consumption outlook through 2031.

Asia and Latin America drive global feed demand

The primary engines of global feed demand growth are Asia and Latin America, both of which benefit from a convergence of favorable drivers: expanding animal protein production, rising per capita protein consumption, positive demographic trends, and growing household wealth.

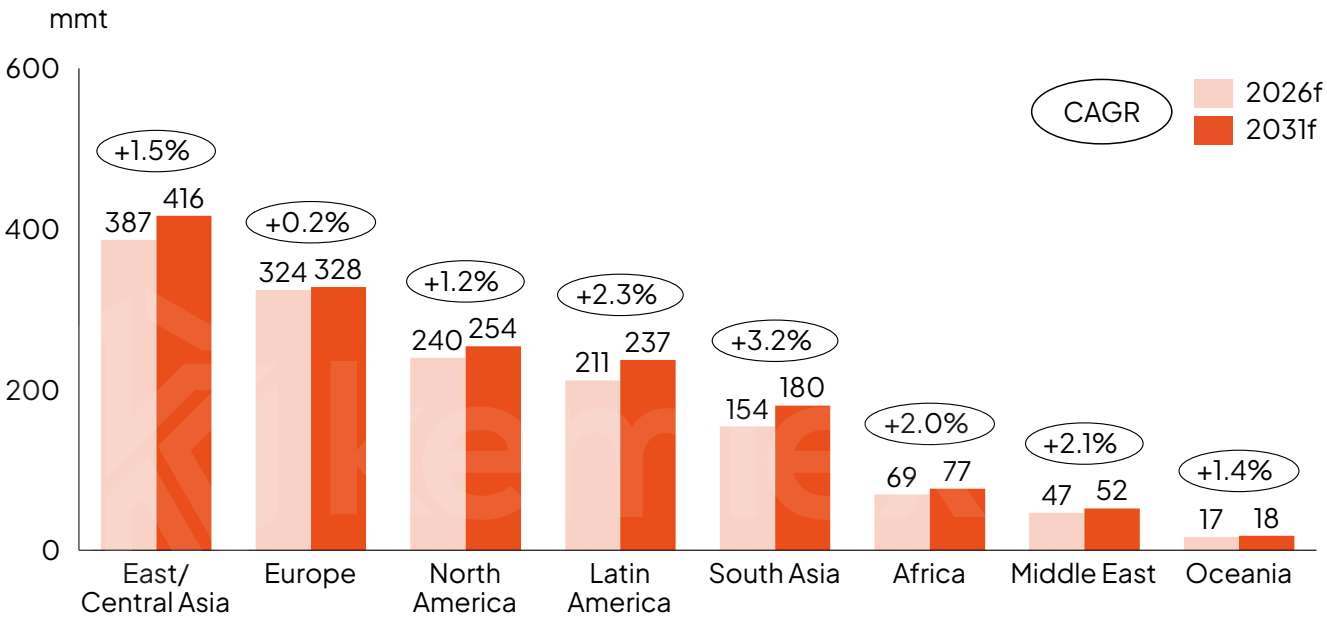
These regions are expected to account for a disproportionate share of incremental global feed volume through 2031, as China, Brazil, Vietnam and India rank within the top 5 countries for absolute growth over the next 5 years. At the subregional level, South Asia and Latin America are estimated to be the fastest growing at 3.2% and 2.3% annually.

The growth outlook for global feed consumption narrows considerably for large established markets with East Asia, Europe, and North America expected to grow at moderate rates through 2031. East Asia, North America, and Europe show modest growth rates of 1.5%, 1.2%, and 0.2% p.a. respectively, amid structural headwinds, although absolute volumes remain sizeable.

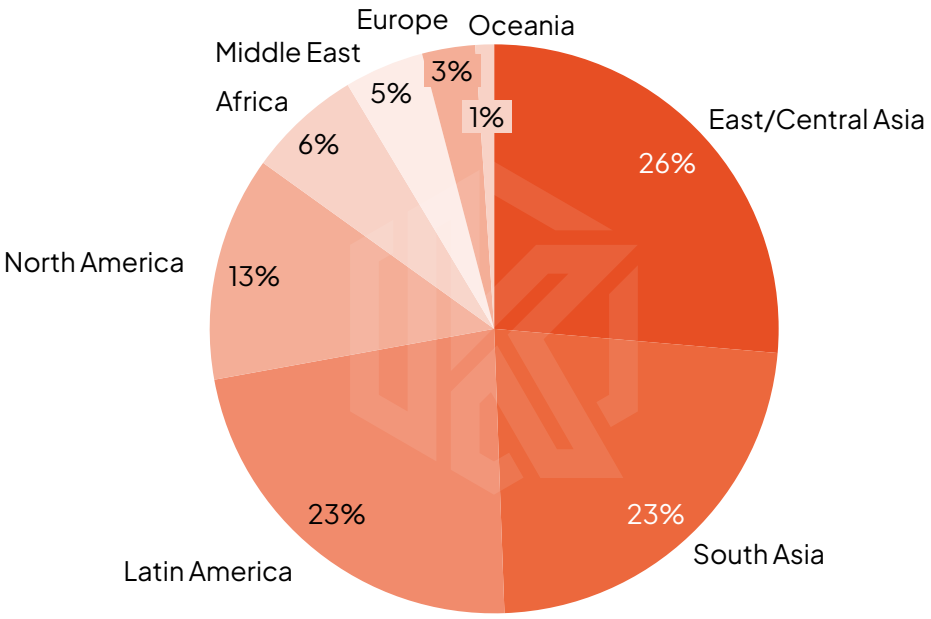
Beyond these regions, Africa, Middle East, and Oceania also present robust outlooks, as the rate of expansion in these markets reflects strong protein demand growth and structural investment in domestic livestock sectors, making them important markets to monitor over the longer term.

South Asia and Latin America are estimated to be the fastest growing at 3.2% and 2.3% annually.

Regional feed consumption 2026–31f

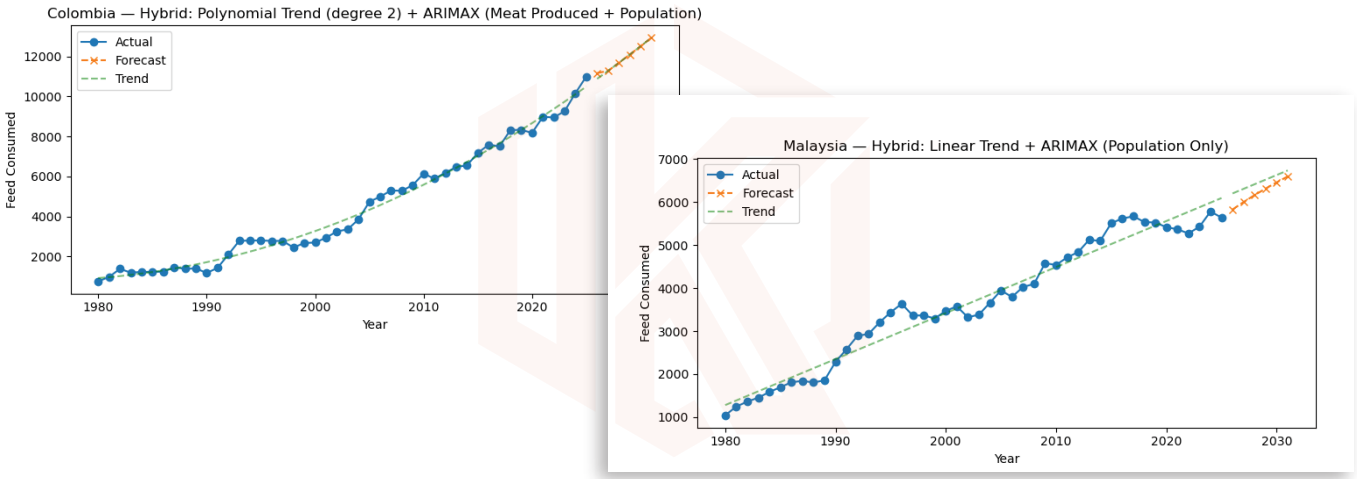


Absolute growth distribution by region



Methodology

The Kemiex feed consumption model is built on a dual econometric framework designed to capture both the structural and cyclical dimensions of feed consumption. A long-term linear regression model anchors the analysis to historical trends spanning more than 45 years, while an ARIMAX model captures deviations from this trend and quantifies the influence of key exogenous drivers, including livestock production volumes, population dynamics, and macroeconomic indicators. The combination of these two approaches ensures that both slow-moving structural forces and shorter-term demand fluctuations are reflected in the outputs, providing a rigorous framework well-suited for the forecasting demands of the global feed industry.



Feed Additive Pricing Environment

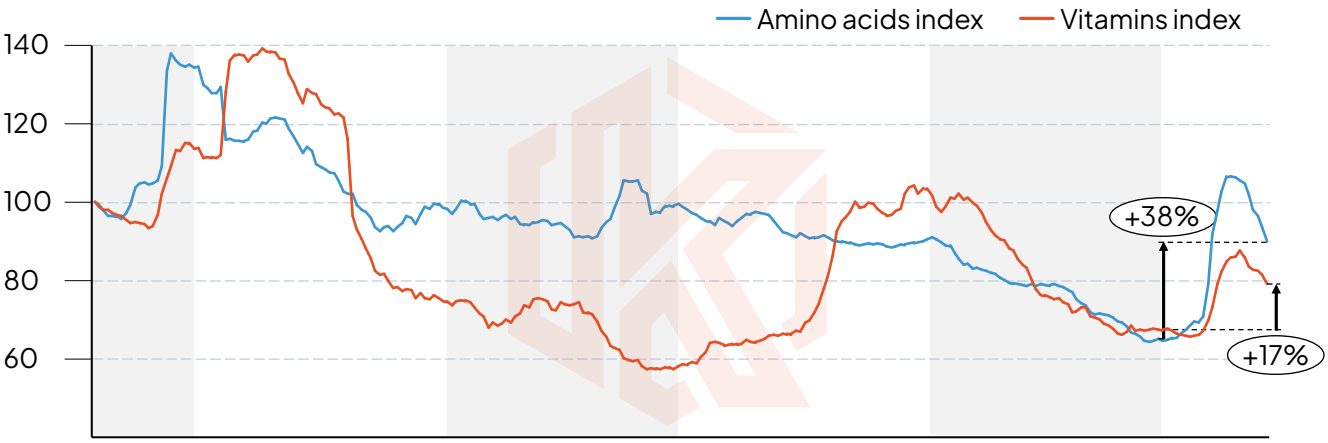
The Kemiex feed consumption model serves as the foundation for a broader analytical framework extending into feed additive demand. By linking country and species-level feed consumption estimates to established nutritional requirement standards, the model derives forward-looking demand estimates for key additives. This approach translates structural feed demand dynamics directly into additive-level supply and demand scenarios. The following section provides context on current market pricing across the broader vitamins and amino acids complex before diving into supply & demand models.

Throughout 2025, most vitamins and amino acids experienced significant price declines. Vitamin markets underwent a pronounced normalization following the supply disruptions of 2024, which had triggered sharp price spikes across multiple products. As production capacity was restored, prices not only retraced but fell below pre-disruption levels for select Vitamins. Amino acid markets faced a separate but equally persistent challenge, with structural oversupply exerting sustained pressure on prices throughout the year, further compounded by competition from affordable soybean meal as bio fuel policies led to a rush in crushing.

As of June 2026, additive prices have been volatile. Geopolitical conflict in the Middle East has significantly disrupted energy, chemical, and freight markets, driving uncertainty and elevated risk premiums across feedstock and ingredient supply chains. The pace and durability of any normalization will be key determinants of the recovery path, particularly for vitamins, amino acids and minerals with direct exposure to energy and upstream supply chains linked to the Middle East.

Geopolitical tensions and conflict in Middle East have materially disrupted energy, chemical and freight markets.

Vitamins and amino acids index



	2022	2023	2024	2025	YTD June
Amino acids	-24%	+1%	-8%	-28%	
Vitamins	-34%	-21%	+76%	-34%	

Kemiex Price Benchmarks cover 32 feed additives: DL-Methionine, Methionine Hydroxy Analog (MHA), Lysine HCl, Sulfate and Liquid, Threonine, Tryptophan, Valine, Arginine, Vitamin E, Vitamin A, Vitamin B1, Vitamin B2, Vitamin B3, Vitamin B5, Vitamin B6, Vitamin B9, Vitamin B12, Vitamin C 99% and 35% phosphate, Vitamin D3, Vitamin K3, Biotin, Choline Chloride, MCP, DCP, Magnesium Oxide, Copper Sulfate, Manganese Sulfate, Zinc Oxide, Betaine, Taurine

Methionine Supply & Demand

Methionine demand outlook remains solid

Global methionine consumption (converted to an acid basis, 99% for DL-Methionine and 88% for liquid MHA) is projected at 1.89 mmt in 2026. Under the Kemiex baseline scenario, demand is projected to grow at approximately 2.4% per annum from 2026 through 2031, driven primarily by the continued global expansion of the poultry industry. This growth is reinforced by increases in chicken consumption for key regions such as Latin America and South Asia.

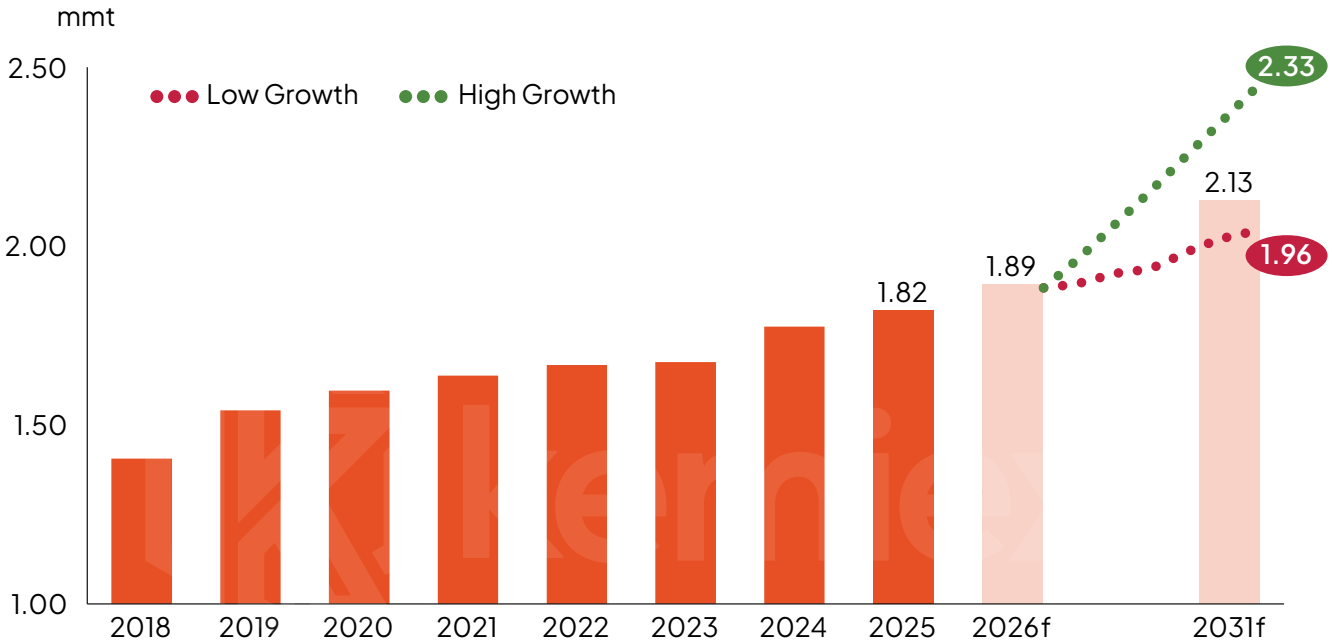
Moreover, the affordability of chicken relative to other animal proteins has positioned the category for growth and points to sustained long-term demand. Gradual population growth and wealth creation across these regions provide additional support to the baseline outlook.

Alongside the baseline, Kemiex has constructed two alternative scenarios to capture the range of plausible demand outcomes. In the high-growth scenario, methionine consumption could expand at approximately 4.2% per annum, driven by accelerated meat production growth in emerging markets and wider adoption of precision feeding technologies.

The low-growth scenario projects annual growth of approximately 1.4%, reflecting a more constrained environment characterized by economic headwinds, disease-related production disruptions, and slowing population growth weighing on meat consumption. Together, these three scenarios provide a structured framework for evaluating methionine demand under a range of market conditions.

Demand is projected to grow at approximately 2.4% per annum from 2026 through 2031.

Global methionine consumption 2018 - 31f



Methionine capacity set to expand, potentially outpacing demand

In 2025, global methionine production capacity remained concentrated among a small number of markets, with China accounting for approximately 35% of total capacity, followed by Europe at 21%, United States at 17%, Singapore at an estimated 14%, and Japan, Malaysia, and Russia adding up to the remaining 13%. Capacity expansion announcements during 2025 were heavily weighted toward China, with select de-bottlenecking projects in Europe and few greenfield projects being speculated outside, reinforcing its trajectory as dominant force in global methionine supply.

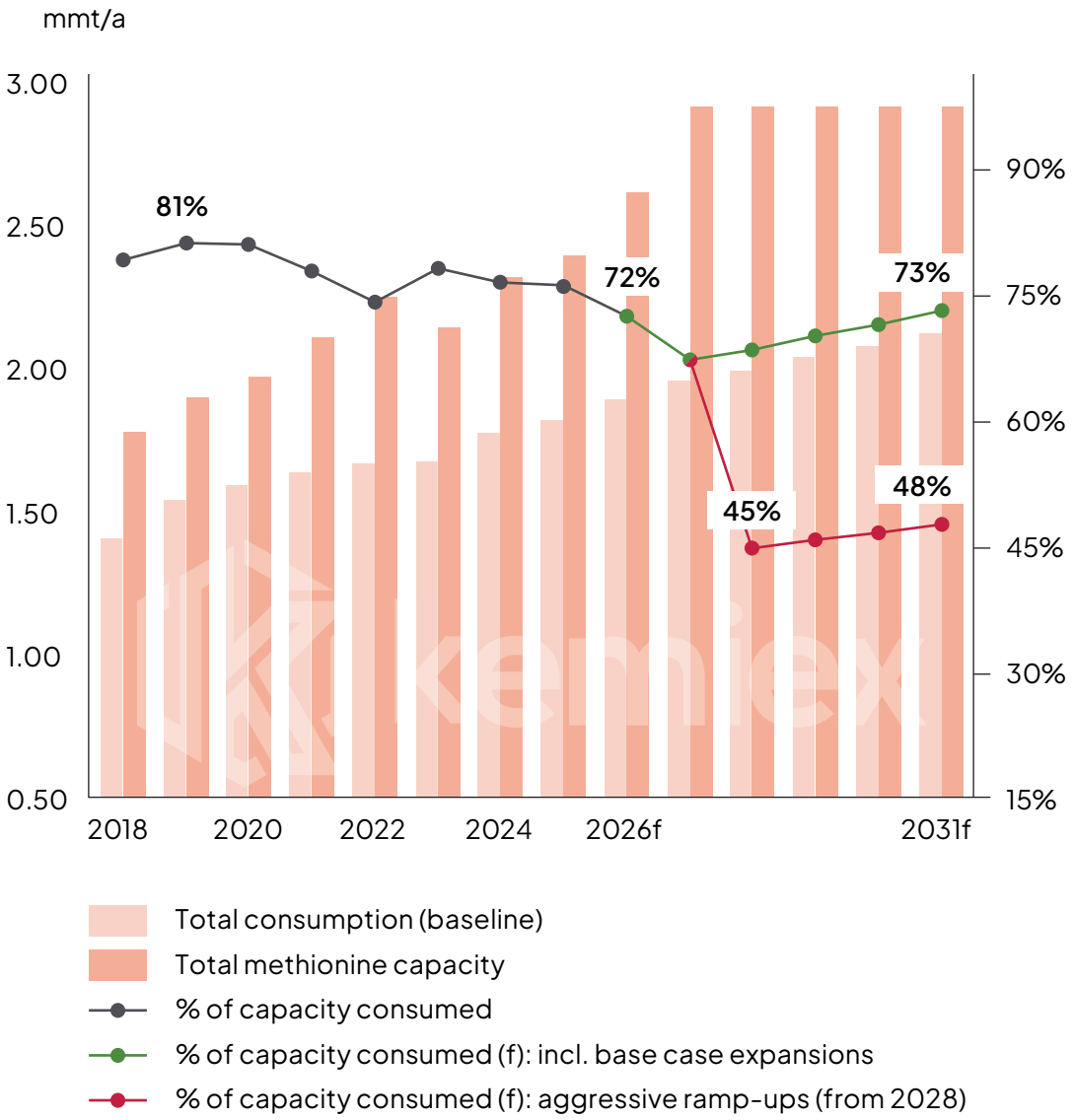
Modelling the impact of varying expansion scenarios reveals a meaningful risk of oversupply should announced capacity additions fully materialize. Under the base case, demand growth of 2.4% yearly reflects a market that does require some additional supply to meet growing demand. In this scenario, including Lingsheng's 200 kilotons per annum (kt/a) expansion, which is expected to initiate production in 2026, the share of capacity consumed declines modestly in the near term before recovering to approximately 73% by 2031. In an aggressive scenario, encompassing Hebang's announced 600 kt/a expansion and East Hope's 450 kt/a addition among others, the share of capacity consumed could fall below 50%, placing significant downward pressure on methionine prices.

Aggressive capacity additions are likely to be phased in over time, reflecting the lead times required for capital-intensive construction, commissioning, and scaling. Once operational, plants are expected to ramp up rapidly to design capacity to absorb high fixed and capital costs. Not all announced expansions are expected to materialize, and the aggressive scenario should therefore be viewed as an upper bound rather than a base case.

As of March 2026, amid the conflict in the Middle East, Evonik declared force majeure for DL-Methionine due to tight propylene supplies at its Singaporean facility, causing allocations for available quantities. Across its three methionine hubs in Antwerp, Mobile and Singapore the nameplate capacity exceeds 700 kt/a.

> **Demand growth of 2.4% yearly reflects a market that requires additional supply to meet growing demand.**

Methionine Supply & Demand 2018–31f



Note: Capacity consumed shows **"Base case expansions"** including Adisseo +33kt MHA (50% in 2026 and full from 2027) and +150kt DLM (full from 2027), NHU +70kt DLM (full from 2026) and 180kt MHA (50% in 2025 and full from 2026). +200kt Inner Mongolia Lingsheng Crop Science (Miraculous) coming online in 2026/27 (of which 30% in 2026).

"Aggressive ramp-ups" include Hubei Yilihong +200kt DLM and +200kt MHA, Roskhim +75kt DLM (from 25kt/a), Sichuan Hebang +600kt/a (of which +180kt/a DLM and +420kt/a MHA; from 70kt/a current MHA capacity), East Hope/Dongming Plastics +450kt/a (construction start mid-2026), Wanhua +150kt MHA, and others.

Vitamin E Supply & Demand

Vitamin E outlook moderately positive as global feed demand rises

Kemiex estimates global consumption of synthetic feed-grade Vitamin E 50% powder at approximately 148 kt in 2026, with demand forecast to grow at 1.4% per annum through 2031. This moderate growth trajectory reflects the stable expansion of global feed demand and continued growth in animal protein production across key markets.

Global production capacity for Vitamin E converted to a 50% powder basis is heavily concentrated in China, with NHU and ZMC collectively representing more than half of total global capacity. Only two producers operate outside of China: BASF in Ludwigshafen, Germany, and dsm-firmenich in Sisseln, Switzerland, which has recently divested its Animal Nutrition and Health division to private equity firm CVC.

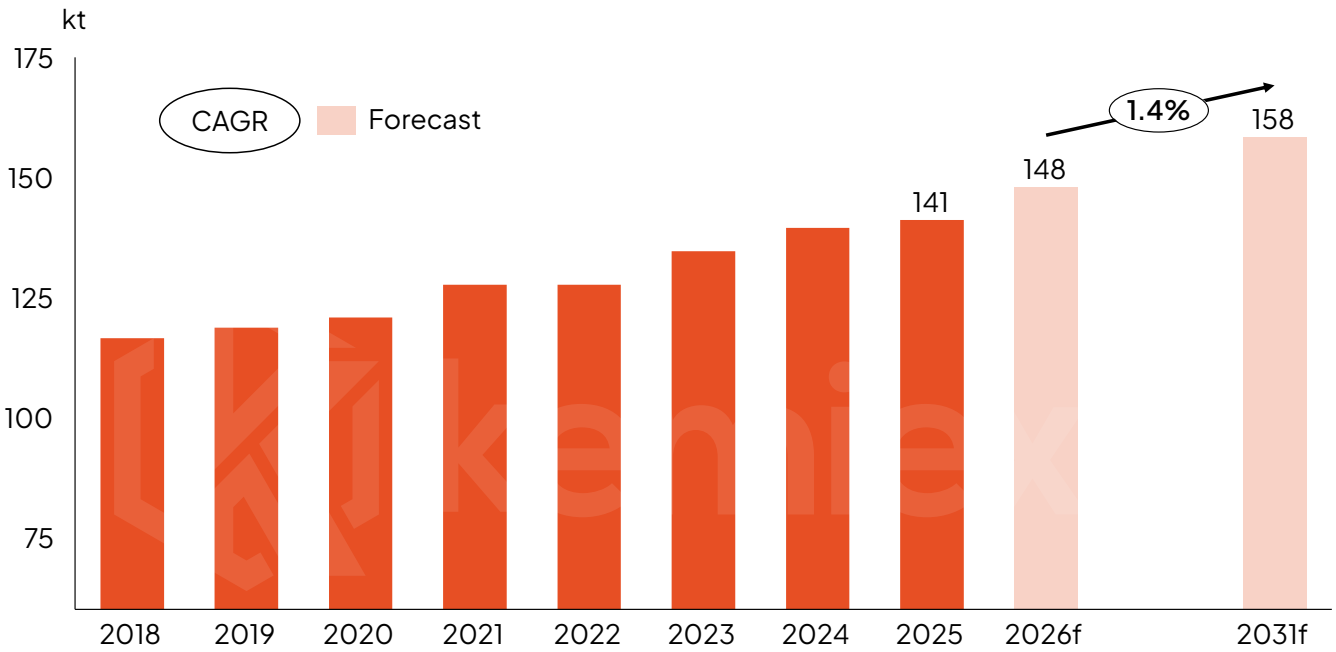
This concentration of capacity in China, combined with structural changes among Western producers, highlights the market's dependence on Chinese supply and its sensitivity to domestic cost and policy.

The capacity expansion pipeline remains similarly China-centric, though the outlook for new entrants is mixed. Garden withdrew its plans to enter Vitamin E production in 2025, citing insufficient market conditions to justify the investment. Tianxin is expected to proceed with its planned market entry, although definitive timeline remains unclear.

Wanhua is understood to be advancing its announced expansion of up to 30 kt/a feed-grade 50% and additional food-grade volume. Ramp-up is expected by mid-2026 with full commercialization to follow.

This moderate growth trajectory reflects the stable expansion of global feed demand and continued growth in animal protein production.

Global Vitamin E 50% consumption 2018–2031f



Among existing producers, both ZMC and BASF have announced additional capacity additions. Should all above projects come online as anticipated, the supply landscape could shift through 2031, adding further concentration to Chinese producers.

China and United States represent by far the largest national markets for Vitamin E 50%, reflecting their scale of livestock production and animal protein output. Chinese consumption is projected at approximately 32.3 kt in 2026, with United States close behind at 31.2 kt. Both markets carry a moderately positive growth outlook, with China forecast to expand at 1.7% per annum and United States at 1.3% through 2031.

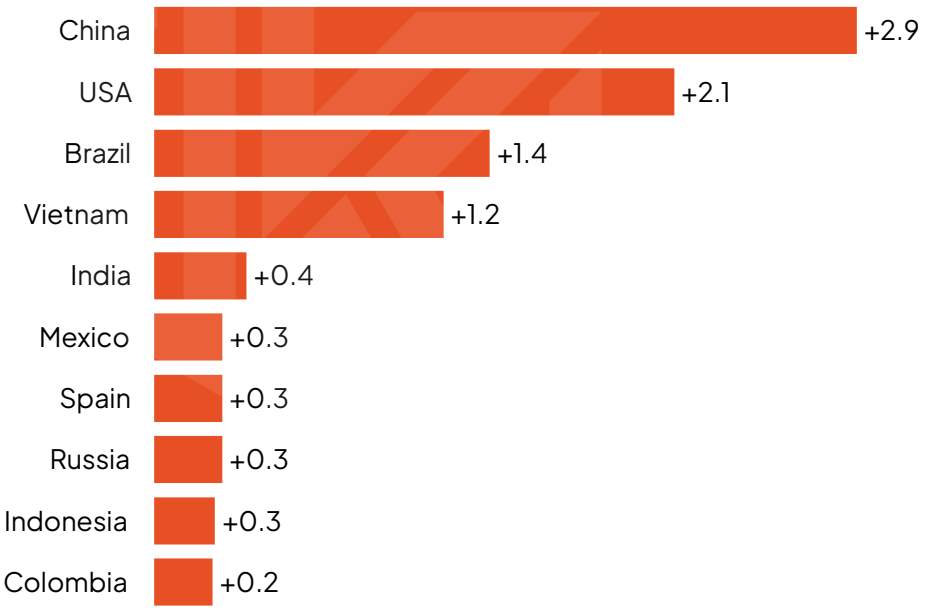
In absolute terms, China and the United States are expected to contribute the greatest incremental volume growth over the period but are closely followed by three rapidly expanding markets.

Brazil, already the third largest consumer of Vitamin E 50% globally, is forecast to add approximately 1.4 kt by 2031, growing at 3.2% per annum. Vietnam presents one of the most dynamic growth profiles in the market, projected to add 1.2 kt at an annual growth rate of 6.2%. India, while adding more modest volumes of approximately 0.4 kt, is also forecast to grow at 3.3% annually, reflecting the continued scaling of its livestock sector.

Top 10 Vitamin E 50% Consumption

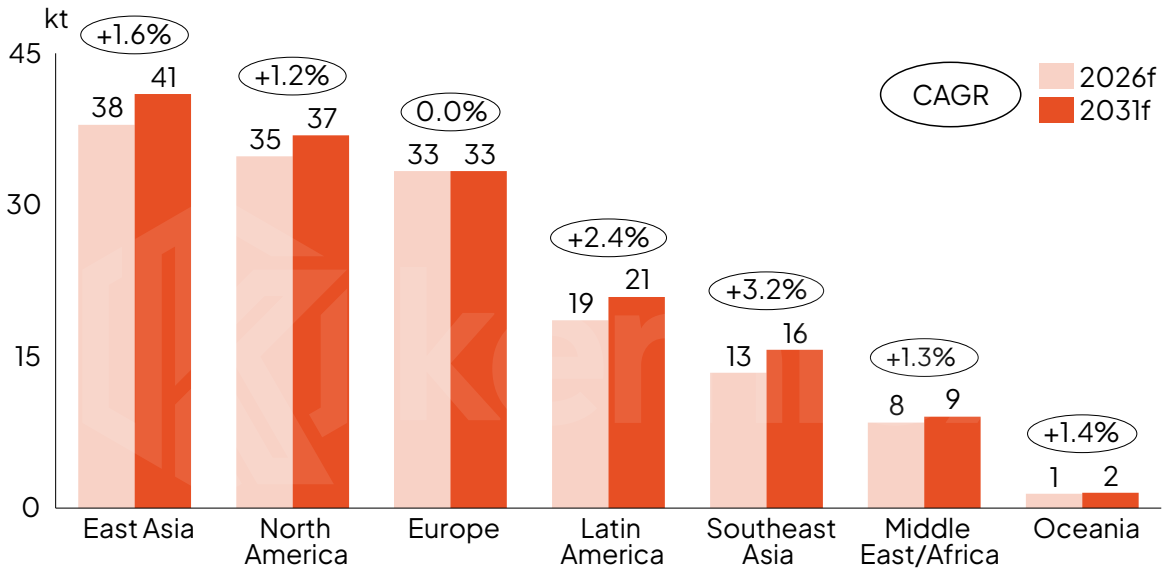
Country	2026 (kt)	2026–31 CAGR (%)
China	32.3	+1.7%
United States	31.2	+1.3%
Brazil	8.2	+3.2%
Mexico	4.5	+1.2%
Germany	3.9	-1.1%
France	3.6	-1.8%
Canada	3.6	-0.2%
Russia	3.4	+1.6%
Vietnam	3.4	+6.2%
Spain	3.3	+1.6%

Absolute Vitamin E 50% consumption growth 2026–31f (kt)



At the regional level, South Asia and Latin America are the fastest growing markets for Vitamin E consumption, at 3.2% and 2.4% per annum respectively. European consumption, despite representing one of the largest regional totals, is forecast to be flat to slightly negative through 2031, reflecting structural declines in livestock numbers, stagnating meat production, and shifting consumer preferences. As with feed consumption more broadly, this regional picture masks meaningful variation at the country level, with Spain's expanding swine industry and Poland's growing poultry sector both pointing to positive Vitamin E consumption growth within an otherwise subdued European outlook.

Regional Vitamin E 50% consumption 2026–31f



Note: Europe includes Ukraine, Russia and Türkiye

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