

FOOD AND NUTRITIONAL

Supply Chain Outlook 2025

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ECONOMY

- U.S. GROWTH SLOWS BUT OUTLOOK IMPROVES
- FED CUTS RATES AS JOB MARKET WEAKENS

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Pricing Trends Key

- Price Increase 
- Price Increase Due
to Current Events 
- Price Stable 
- Price Decrease 

United States

U.S. growth will remain sluggish through the end of 2025 but is expected to improve in 2026. Following the government shutdown, which cost up to \$11 billion permanently, easing interest rates and tax cuts should help offset damage to economic growth. The Fed cut rates by 25 basis points after its October meeting, keeping rates between 3.75%–4%. This follows Congress's mandate requiring monetary policy adjustments to counter inflation and support employment.

Inflation stands at 3% annually, about 0.5% higher in Democratic states with tighter regulations, and is projected to fall to 2.9% by year-end. The Fed remains focused on the weakening job market rather than temporary inflation. While government data remain limited after the shutdown, private-sector reports show slow job growth and continued layoffs. Reduced immigration has revealed fewer jobs are needed to maintain productivity, likely due to AI optimization in the labor force. Declines in manufacturing and warehousing employment suggest advanced technologies are replacing traditional labor.

Employment growth is strongest in the West, moderate in the Midwest and South, and lowest in the Northeast. Gains are concentrated in trade, transportation, utilities, and healthcare. Factory slowdowns from rising costs have weakened demand. The Trump Administration is pursuing affordability reforms, including tax refunds, lower healthcare costs, and infrastructure investment to aid businesses.

Although tariffs and services inflation have added pressure, lower energy prices are helping stabilize costs. New trade deals have reduced tariffs on food imports, and several others nearing completion should further lower costs in 2026. Overall, the outlook is cautiously optimistic, with growth forecasts rising from 1.5% to 2% as 2026 approaches.

China

China's economic growth continues to face challenges but is expected to rebound strongly in 2026. While trade negotiations with the U.S. and Asia show progress, low investment, weak retail spending, and slowing industrial production continue to weigh on growth. Fixed asset investment is at its lowest since the pandemic after 10 consecutive months of decline. Retail sales remain sluggish, with steep drops in household spending on appliances, automobiles, and building materials. Consumer confidence has improved only marginally despite government stimulus programs.

Industrial production rose 4.9% year-over-year in October, though overcapacity remains a persistent issue. China has cut prices to boost exports but now faces higher tariffs from Brazil, India, Japan, and Mexico amid anti-dumping investigations, targeting steel, solar power, and mobile components.

The government's new Five-Year Plan aims to reduce reliance on exports and build industrial self-reliance through fiscal stimulus, structural reforms, and modernization. The plan emphasizes energy-efficient technologies and investments in metals, chemicals, and textiles to enhance competitiveness and sustainability. Easing interest rates next year, paired with fiscal expansion and credit growth, will support the plan's rollout.

China's 2026 economic outlook projects a strong rebound, with annual growth expected between 5% and 6%.

Market movement YTD as of 10/17/25:

- DJIA: 10.74%
- S&P 500: 15.03%
- NASDAQ: 19.24%

ECONOMY cont.

- CHINA GROWTH WEAK NOW, REBOUND EXPECTED
- JAPAN GROWTH SLOWS UNDER TRADE PRESSURES

Eurozone

The Eurozone has maintained slow but steady growth in 2025 and is expected to gain momentum in 2026. A strong labor market, lower inflation, and favorable financing conditions have supported growth despite global uncertainty. Policy support from the European Central Bank has helped member states manage the effects of U.S. tariffs. Real GDP data shows exports drove early 2025 growth before tariffs took effect, and fewer demand constraints along with the ECB's inflation control have kept the Eurozone resilient.

Inflation is currently 2.1%, just above the ECB target. The ECB is projected to hold rates steady through year-end and into mid-2026 to maintain stability. Slowing wage growth and rising job creation have provided households and firms with some cushion during periods of weak growth. However, the declining participation rate of the working-age population remains a challenge.

Although the finalized U.S.–EU trade deal brought clarity over the summer, slowing global growth and rising geopolitical tensions have increased uncertainty. **The Russia-Ukraine war continues to hinder EU growth**, especially for border states, and ongoing financial and defense aid to Ukraine weighs on economic performance. EU infrastructure funds will support investment and help offset the effects of national budgeting and fiscal reforms. Global forecasts still project Eurozone growth of 3.4%–3.5% in 2026 and 2027.

Japan

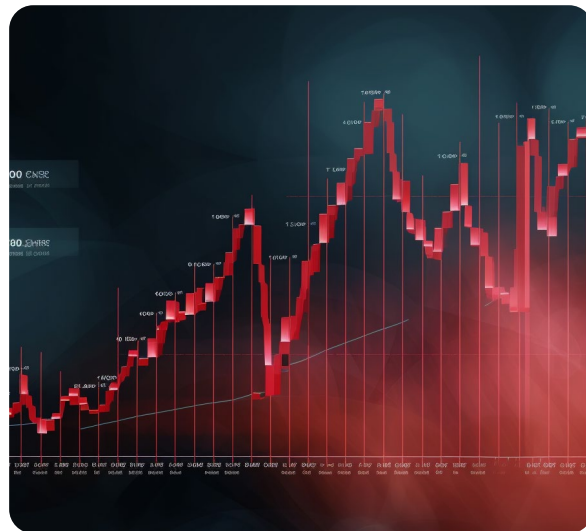
Japan's economic growth remains moderate but positive for 2025. Strong early-year growth from balanced trade before tariffs has faded as the economy adjusts to higher inflation and ongoing U.S. trade negotiations. Outside global trade, Japan's economy has grown 1% this year, down from 2% last year. Weak demand, rising inflation, and low consumer confidence continue to weigh on growth. Business investment is gradually increasing, but household consumption remains soft.

The Bank of Japan left rates unchanged to stabilize

the economy and remains cautious, fearing the U.S. trade deal could further slow growth. Government spending and public investment are declining, and large firms are less optimistic than a year ago. The labor market remains tight, though unemployment has risen from 2.3% to 2.6%, and wage growth is expected to slow early next year.

Low energy costs have helped curb headline inflation, but food prices continue rising—rice prices are up 49.1% from last year, down from 100.1% in June—and global coffee and cocoa prices have surged. Climate-driven crop issues and a weakening yen are adding inflationary pressure. The yen will appreciate if U.S. rate cuts coincide with BOJ rate hikes.

Though growth appears stalled for now, forecasts for 2026 are more promising if the BOJ can stabilize the economy through trade negotiations and manage inflation effectively.



Worldwide Economic Momentum Softens in 2025: Global Markets Navigate Tariffs, Inflation, and Tension

CURRENT EVENTS

- GLOBAL PRESSURES MOUNT: AI, CONFLICT, AND TRADE
- RENEWED PEACE PROPOSALS FOR RUSSIA-UKRAINE WAR

Global Concerns about AI

- **What was once seen as the solution to hiring, employment, and productivity gaps is now viewed as a significant threat to global business and economies.** Artificial Intelligence carries high costs and even higher risks if malfunctions occur. Data shows disproportionate layoffs in manufacturing, warehousing, and technology, industries heavily invested in AI. Recent declines in AI investment reflect growing fears of a potential tech bubble. A collapse could be catastrophic, with estimated correction costs of \$15 trillion USD and losses reaching 20% of global GDP for non-investors; by comparison, the 2000 Dotcom crash equaled 10% of global GDP.

During the Dotcom crash, a strong U.S. dollar softened losses, but today's dollar would not provide the same protection. High costs, slow ROI, limited funding, and rising debt risks are increasingly deterring businesses from AI adoption. Labor market gaps created by AI integration have reduced entry-level opportunities for new graduates, even those with advanced degrees. Market uncertainty, global trade restructuring, and steep integration timelines further reinforce hesitation about continued AI expansion.

Russia-Ukraine War Update

- **Continued attacks from both Russia and Ukraine this month have intensified tensions** during ongoing peace negotiations. Shortly after the U.S.-Ukraine meeting, Russia launched a large-scale strike on Kyiv using missiles and drones, killing at least six and causing power outages and widespread structural damage across several regions — raising concern among nearby EU member states. Ukraine retaliated with an attack on Russia's Rostov region, killing at least three.
- **President Zelensky states that Russia is targeting Ukraine's energy and critical infrastructure** to weaken the country and is urging allies and neutral states to pressure Russia toward diplomacy. President Trump has sent both nations a revised peace agreement and continues negotiations with Ukraine, while Russia has only loosely agreed to meet U.S. officials in Abu Dhabi in the coming weeks. A key requirement of the agreement — an immediate end to Russian invasions — is one Russia says it will not commit to at this time.

Tensions Rise Between Pakistan and Afghanistan

- **Unrest between Pakistan and Afghanistan has continued since the Taliban regained control in October 2021.** An interim peace agreement mediated by Qatar and Istanbul offered only short-term stability and included provisions that were never fully honored. Tensions have escalated as cross-border strikes on both Pakistani and Afghan soil increase.
- In late November, the foreign-backed Tehreek-e-Taliban Pakistan (TTP) carried out a suicide bombing in an Afghan neighborhood, killing at least 10 people, nine of them children, in retaliation for an earlier attack on a Pakistani military headquarters in Peshawar. Additional strikes in border regions are becoming more frequent as tensions rise. Neither government has commented on the attacks, with both placing full blame on Taliban forces.

Vitamins:

- **The tariff rate on Chinese fentanyl-related imports has officially been reduced** from 20% to 10%. The reduction is part of a broader economic agreement between the United States and China reached in late 2025. Under the deal, China has committed to halting exports of certain fentanyl precursors to the U.S. and to eliminating export controls on rare-earth elements and critical minerals.

Global Instability Rises Across Tech and Geopolitics

FAT SOLUBLE

VITAMINS

Trending Vitamins:

- VITAMIN K
- VITAMIN D
- VITAMIN B
- VITAMIN C

Vitamin A: Vitamin A pricing remains stable.



Vitamin D: Pricing continues to be soft but remains stable amid weak demand.



Vitamin E: Pricing for Natural Vitamin E remains stable. Synthetic versions have softened in the market.



Vitamin K: Current pricing for vitamin K1 is stable.



Pricing Trends Key

Price Increase

Price Increase Due to Current Events

Price Stable

Price Decrease

Price Stable to Rising

Price Stable to Decrease

Key Vitamin Supply Conditions Remain Stable or Decreasing Across Markets



WATER SOLUBLE

VITAMINS_{CONT.}

Trending Vitamins:

- VITAMIN K
- VITAMIN D
- VITAMIN B
- VITAMIN C

Vitamin C: Pricing is currently stable at low levels.



Vitamin B1 (Thiamine):

Pricing has been stable and expected to remain stable into early 2026 though prices remain at high levels.



Vitamin B2 (Riboflavin):

Riboflavin USP and food grade pricing are stable.



Vitamin B3 (Niacin/

Niacinamide): Niacin/ Niacinamide pricing is currently stable despite strong demand.



Vitamin B5 (Calcium

Pantothenate): B5 pricing remains at very low levels from new producers creating an oversupply in the market. Will be difficult for suppliers to maintain these prices in 2026.



Vitamin B6 (Pyridoxine): B6 pricing has continued to soften with suppliers holding inflated inventories.



Vitamin B7 (Biotin):

Low available inventory is causing prices to increase.



Vitamin B9 (Folic Acid):

Low available inventory is causing prices to increase



Vitamin B12 (Cyanocobalamin)

The B12 market price has stabilized. There is an ample supply of inventory which should keep pricing stable.



Pricing Trends Key

Price Increase

Price Increase Due to Current Events

Price Stable

Price Decrease

Price Stable to Rising

Price Decrease to Stable



MINERALS

- CERTAIN MINERALS SHOW RISING COSTS
- STABLE PRICING, BUT SLOWER AVAILABILITY

Trending Minerals

- Chelates
- Magnesium Citrate
- Zinc Gluconate
- Zinc Citrate

Calcium Carbonate: Visit the Granulations section on page 10 for more information about our directly compressible version of SuperTab® oyster shell calcium carbonate.

- SuperTab® Oyster Shell Granulation (OSG) 2000 AM
- SuperTab® Oyster Shell Granulation 2100 Malto
- SuperTab® Oyster Shell Granulation 2300 Acacia

Copper: Prices have stabilized but demand remains high.



Iron: Iron prices have stabilized, and supply is available.



Electrolytes

Calcium: Calcium prices have stabilized.



Magnesium: Magnesium market price and supply are stable.



Potassium: Potassium prices and availability are stable.



Phosphorus: Pricing has become relatively stable.



Sodium: Sodium prices have stabilized.



Zinc

Zinc prices and availability have stabilized. There have been new manufacturers that have entered the market which will keep the pricing stable.



Zinc Gluconate: The price of Zinc Gluconate is stable however, lead times remain long.



Zinc Oxide: Prices for Zinc Oxide had started to see some strengthening but have now stabilized.



Zinc Sulfate: Zinc Sulfate prices remain stable; however, lead times remain long.



Zinc Ascorbate: The price of Zinc Ascorbate is stable; however, lead times remain long.



Zinc Citrate: Prices are showing an increase with longer lead times continuing.



Pricing Trends Key

Price Increase

Price Increase Due to Current Events

Price Stable

Price Decrease

Price Stable to Rising

MINERALS^{CONT.}

- MOST MINERAL PRICES REMAIN STABLE
- HIGH DEMAND AND LEAD TIMES AFFECTING AVAILABILITY

Chelates

Zinc Amino Acid Chelate: Prices and lead times have stabilized.



Zinc Bisglycinate Chelate: Prices have stabilized. There have been additional manufacturers that have entered the market which should keep pricing from increasing as well.



Zinc Glycinate Chelate: Zinc Glycinate is experiencing longer than average lead times, but prices remain stable.



Copper Glycinate Chelate: Prices are stable and expected to remain so. There have been additional manufacturers that have entered the market which should keep pricing from increasing as well.



Manganese Amino Acid Chelate: Manganese Amino Acid has stabilized.



Trace Minerals

Chromium: Chromium prices remain stable but can be difficult to source due to long lead times.



Molybdenum: The Molybdenum market is experiencing longer than normal lead times, but prices are remaining stable.



Selenium: The selenium lead times have increased; however, prices are stable.



Pricing Trends Key

Price Increase

Price Increase Due to Current Events

Price Stable

Price Decrease

Price Stable to Rising



PREMIXES

- MANUFACTURERS ARE SWITCHING TO PREMIXES
- CUSTOM PREMIXES SIMPLIFY NUTRIENT PROCUREMENT

Custom Nutrient Premixes

More and more manufacturers are switching to vitamin and mineral premixes. Premixes consolidate multiple nutrients into a quality-assured, single-step ingredient and deliver economies of scale by simplifying ingredient procurement from a single source.



TWG SuperBlend®

Our value-added SuperBlend® custom nutrient premixes deliver performance and stability in high temperature and shear processes in a variety of food and beverage products, including:

- Extruded bars
- Gummy supplements
- Breakfast cereals
- Ready to drink beverages
- Beverage mixes



MICROENCAPSULATION

- AN EFFECTIVE METHOD OF MASKING UNWANTED FEATURES
- DELIVER A WIDE-RANGE OF FUNCTIONAL INGREDIENTS



Microencapsulation Technology

Vitamins, minerals, and other nutrients possess unique characteristics that can affect the appearance, color, and odor of the final product. Microencapsulation is an effective method of masking unwanted sensory characteristics while maximizing nutrient function.

SuperCoat®, our most recent innovation using our proprietary SMART™ process, envelops particles at the microscopic level in a protective shell. This value-added coating technology delivers superior performance and stability of essential nutrients for a wide range of multi-functional ingredients.

Trending Microencapsulated Nutrients:

- Vitamin C
- Vitamin B5 (Calcium Pantothenate)
- Vitamin B9 (Folic Acid)

With a diverse portfolio of products, **TWG Health + Nutrition** is one of only a select group of manufacturers with the technology and resources to deliver independent manufacturing of custom premixes, microencapsulated nutrients, and granulations.

Our comprehensive supply chain and extensive list of pre-qualified ingredients allows us to react quickly to changing market trends and help you keep up with consumer demand. We also understand that superior service is just as important as technology and expertise. That's why we provide you with prompt quotations, technical assistance, and support documentation to help you efficiently deliver your products on time. Contact us today to talk to one of our experts about your project needs or ask about any ingredients not listed here.



GRANULATIONS

- DELIVER ESSENTIAL NUTRIENTS IN GRANULAR POWDERS IDEAL FOR HIGH SPEED TABLETING
- CAN BE INCORPORATED INTO DRUM-TO-HOPPER TABLET BLENDS



Granulations

Rather than outsource granulations from a third-party manufacturer, TWG Health + Nutrition has committed to developing technologies and processes in-house to effectively and efficiently manufacture **SuperTab® direct compressible granulations**.

SuperTab® granulations deliver essential nutrients in uniform, free-flowing, granular powders ideal for high speed tableting processes. As usual TWG Health + Nutrition combines quality, innovation and superior knowledge to make sure your product is the best it can be. Ask about our granulation capabilities today!

Trending Granulations:

- Glucosamine
- Chondroitin
- Vitamin C

Oyster Shell Granulation

SuperTab® Oyster Shell calcium carbonate is sourced from an above sea level deposit, characterized as fossilized oyster shell beds. These oyster shell beds have been thoroughly vetted over the past ten years with testing of the material both analytically and physically to insure consistency and purity. TWG Health + Nutrition sources the high purity genuine shells exclusively from a domestic supplier.

Contact us today to get started on your next dietary supplement product containing calcium carbonate granulations. Insist on SuperTab® Oyster Shell authenticity in your formulation.



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Custom protein formulations
to address specific
functional needs.

POWERING YOUR NEXT
FORMULATION



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Custom Protein Blends



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