FOOD AND NUTRITIONAL

Supply Chain Outlook 2025

AUGUST - ISSUE 44





ECONOMY

- US DOLLAR REBOUNDS 3.2% IN JULY
- EU SIGNS NEW TRADE DEAL WITH US

TABLE OF CONTENTS

Economic Update	2
Current Events	4
Vitamins	5
Minerals	7
Premixes	9
Microencapsulation	10
Granulations	11
Message from TWG Health + Nutrition	12

Pricing Trends Key

Price Increase ///



Price Increase Due to Current Events





Price Decrease ///



Economic Outlook

United States - Data from July show stagnating economic growth and market uncertainty during the recent inflationary period. The Federal Reserve will continue its cautious approach to cutting rates, though many economists urge lower borrowing costs to prompt recovery. Monetary policy changes may be necessary as inflation is expected to climb through year-end. A rate cut is possible in September as President Trump and policymakers press the Fed to ease pressure on consumers and businesses.

In Q2, consumer prices remained below **3.0%**, real consumer spending rose 1.4%, durable goods grew 3.7%, nondurables 1.3%, and services 1.1%. Equipment investment increased 4.8%, government spending 0.4%, and defense purchases 2.2%. Energy prices fell sharply, with oversupply expected in 2026; combined energy dropped 1.1%, gasoline 2.2%.

Decreasing immigration is weakening job growth and raising unemployment. July job losses occurred in mining, manufacturing, business services, and government, though services rebounded in August. Financial and tech sectors led July growth, though tariffs may hinder further tech expansion. Hourly earnings rose 3.9%, a four-month high. Real wages outpacing rising prices may support purchasing power, depending on inflation.

The US dollar rebounded 3.2% in July after months of devaluation. Meanwhile, the US and China extended the tariff pause another 90 days as trade talks continue.

China

China's manufacturing sector has fallen to an 8-month low, weighed down by weak demand and surplus supply. Growth is further slowed by US-China trade negotiations, extreme weather, heavy domestic competition, and the collapsed housing market. Agriculture is struggling with record heat, storms, and flooding disrupting daily production.

The extended 90-day tariff pause adds uncertainty to an already fragile economy, now reliant on government support. Ongoing weakness in the property market has prompted a deflationary period, pressuring consumer prices. Low sales data are pushing policymakers to continue stimulus payments to restore confidence. Beijing is restructuring policies to spur domestic consumption and balance competitive pricing.

While housing, manufacturing, and retail remain weak, China's aerospace, automotive, railway, and shipbuilding industries are generating steady capital. GDP growth is forecast at 4.5% for Q3 and 4.0% for Q4, reflecting weak consumer activity, low job security, and trade instability with the US.

Eurozone

Inflation continues to stabilize, reaching the 2% target in the Eurozone, prompting the ECB to keep rates unchanged in the July meeting. After several monthly rate cuts to ease the monetary policy, the ECB is projected to keep rates steady until around December, depending on the stability of the economy. Recent economic weakening is the result of unsuccessful factory operations in Germany for the second consecutive month.

For Q2, the services industry grew more rapidly than manufacturing but still showed neutral growth patterns. Employment in the Eurozone is lower than usual, with wage growth at 3%, and only a 1% increase in labor productivity. Food prices are at risk amidst extreme weather conditions. The growing value of the euro is fostering more purchasing power, putting pressure on higher prices. A trade agreement was signed between the EU and the US, enabling a 15% baseline tariff on EU goods. The agreement will provide more certainty for consumers, businesses and investors. The EU is confident in long-term growth stemming from the \$738 billion investment program in Germany's business sectors. By funding existing factories, advancing research and development

ECONOMY cont.

- CHINA MANUFACTURING SINKS TO 8-MONTH LOW
- FISCAL DEFICIT NARROWS TO 4.8%

programs, increasing defense spending, expanding energy infrastructure and promoting critical raw materials, the Eurozone will create more domestic forms of growth. The official plans, set to launch in either September or October 2025, will establish more value for the Eurozone in global markets, while simultaneously creating economic growth.

Market movement YTD as of 8/20/25:

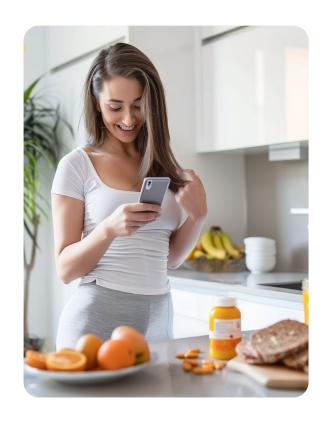
- · DJIA: 5.58%
- · S&P 500: 8.74%
- · NASDAQ: 9.64%

India

India's economic growth is drawing attention as its resiliency has far surpassed other global economies. Powered by a solid consumer base, a widespread investment landscape, and a digitally proficient workforce, India is positioned to become one of the fastest-growing consumer markets globally. GDP data shows India's economy is growing firmly by 7.4% a year, with full fiscal year growth at 6.5%. Domestic demand is stable and growing as inflation eases and rural communities remain in good condition.

Decreases in government spending lowered the fiscal deficit to 4.8% during an election year.

Government support, including tax exemptions and eased monetary policy, has enabled the economy to grow continuously. Although India's goods exports were threatened during global conflict and trade headwinds, its high-performing service sector recovered, lowering growth numbers. A trade agreement with the United Kingdom was recently finalized, allowing India to now focus on securing bilateral agreements with both the US and the EU. India's global trade objective targets deeper market access, more advanced intellectual property, and continued expansion of investment ventures. India still faces global risks, including ongoing wars, trade uncertainty, supply chain disruptions, potential recessions in the US and EU, and further slowdowns in China, all of which pose significant threats to its high-functioning economy.



Global markets
remain divided: the
US balances inflation
and growth, China
struggles with weak
demand, the Eurozone
steadies inflation but
faces trade risks.

CURRENT EVENTS

- US AND JAPAN FINALIZE NEW TRADE DEAL
- VITAMIN TARIFFS PAUSED AS TALKS CONTINUE

United States - Japan Trade Agreement

- The United States and Japan have finalized a trade agreement that benefits both countries' trade objectives. The US imposed a 15% tariff on all Japanese imports, up from 10%. Specific products that were previously taxed at a higher rate will also share the 15% tariff. The new tariff framework will create a transparent and mutually beneficial trade relationship for both countries.
- Japan agreed to invest \$550 billion into America's core industries. For America, rebuilding the core industries will create jobs, widen domestic manufacturing and foster generational wealth. The trade agreement also details immediate exports of rice from the US to Japan, as well as numerous aircraft that were made in the US, defense equipment, enhanced security in the Indo-Pacific region, and more free access to previously restricted markets.

New Truce Deal for Gaza

- Qatar and Egypt proposed a truce deal to Hamas and Israel that could lead to a turning point in the war. The proposal explains that Hamas must release at least half of the hostages that were captured in October 2023, while Israel must release Palestinian hostages and reduce the number of troops in the war.
- The compromise has many similarities to the deal proposed by the US recently; both proposals intended to open the door for a more meaningful conversation between Palestine and Israel. While parts of the proposal appear very attractive to the Hamas group, it is still unclear if Israel has received news of the proposal. The countries involved, as well as the participating allies, all feel pressure to make significant moves to end the war, as hundreds of thousands continue to suffer.

US aid to Ukraine

 Shortly after the summit in Alaska ended, President Zelenskyy joined President Trump in Washington along with Ukraine's European allies. President Zelenskyy's main objective was to establish a commitment for security aid against ongoing Russian attacks as well as assistance for direct communication with President Putin • The US did announce that any settlement between Russia and Ukraine would involve the US as a constant security measure for Ukraine moving forward. Currently, there is no working ceasefire agreement, as Putin is solely focused on acquiring Ukraine as Russia's historical property, and Ukraine is using every resource possible to avoid being recolonized. It is evident that the only foreseeable way Putin will abandon his plans is through the US as a mediator and an equal victory for Ukraine.

Vitamins:

- BASF announced on August 7, 2025, that their Force Majeure from one year ago, has been lifted on certain vitamin and carotenoids products in animal and human nutrition. More to be seen on how this will affect pricing and availability.
- The tariff landscape is still changing daily. Currently, the US and China are in a pause until November 9, 2025 on the reciprocal duties that were previously imposed. This has given the countries time to negotiate new trade deals. While an extension is likely, if common ground is not found, the previous percentages will again take effect. The US has also targeted countries with tariffs that are know for transshipments of material originating in China shipping to the US. Full impacts of tariffs have yet to be seen because of the inconsistency of the rates.

Global trade,
diplomacy, and
military conflicts
continue to shape
the world stage.





Vitamin A: Vitamin A pricing has stabilized. Market demands have been weak.



Vitamin D: Vitamin D has stabilized.



Vitamin E: Pricing for Vitamin E has stabilized.



Vitamin K: Current pricing for vitamin K1 has stabilized.









Price Increase Due to Current Events





Price Decrease 777



Price Stable to Rising



Price Stable to Decrease



Key Vitamin Supply Conditions Remain Stable Across Markets





Vitamin C: Pricing has stabilized.



Vitamin B1 (Thiamine):

Pricing has been stable lately but are showing signs of softening.



Vitamin B2 (Riboflavin):

Riboflavin USP and food grade pricing have stabilized. Supplies are adequate. Several new entrants have begun manufacturing and potential capacity increases can be expected by the majors.



Vitamin B3 (Niacin/ Niacinamide): Niacin/

Niacinamide pricing is currently stable.



Vitamin B5 (Calcium Pantothenate): B5 pricing

have started to decrease slightly. There have been new producers entering the market, creating an oversupply of material.



Vitamin B6 (Pyridoxine): B6 pricing have started to soften.



Vitamin B7 (Biotin):

Production of B7 has stabilized and started to decrease.



Vitamin B9 (Folic Acid):

Pricing of B9 has stabilized from the recent increases and remains a little elevated but are starting to see some softening.



Vitamin B12 (Cyanocobalamin)

The B12 market price has stabilized. There is an ample supply of inventory which should keep pricing stable and might even show some softening.



Pricing Trends Key

Price Increase ///



Price Increase Due to Current Events



Price Stable VV



Price Decrease 7/7



Price Stable to Rising



Price Decrease to Stable





MINERALS

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

Trending Minerals

- Chelates
- Zinc Gluconate
- Magnesium Citrate
- 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 are increasing.



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 are increasing.



Zinc Ascorbate: The price of Zinc Ascorbate is stable; however, lead times are longer than average.



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



Pricing Trends Key

Price Increase 7/7



Price Increase Due to Current Events

Price Stable 💯



Price Decrease ///



Price Stable to Rising





Chelates

Zinc Amino Acid Chelate: Prices and lead times for zinc amino acid are increasing.



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 multifunctional 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 prequalified 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.





