

# Supply Chain Issues

## Key Takeaways

- The March inflation figure, with a peak of 8.5% higher than a year ago, is the highest rate of inflation since 1981-82.
- Gasoline prices hit a new high, rising above \$5.01 in June, up 63% higher than the same week in June 2021. Diesel prices also rose to \$5.72 per gallon in June, up 74% compared to \$3.29 per gallon in June 2021.
- The U.S. produces Urea Ammonium Nitrate (UAN) fertilizer and imports it from many different countries, including Russia and Trinidad and Tobago which account for 79% of imports.
- The U.S. International Trade Commission (USITC) ruled in late July to reject the Department of Commerce's proposal to impose duties on imported UAN fertilizer.
- AFBF claims the much larger reasons for current overall inflation, and those which will persist in the coming years, are the unprecedented actions of the Federal Reserve since March 2020 and the resulting growth in the money supply, a point which has been largely under the radar.
- According to a recent study by Texas A&M, a higher number of H-2A workers can be associated with lower unemployment, lower inflation, and higher wages.
- BNSF and UP, railroads which processed 64% of all grain rail cars in the second quarter of 2022, shipped 9% and 14% fewer grain rail cars than the same period last year, respectively.
- AFBF President Zippy Duvall recently stated, "farmers have already lost up to \$25 billion of agricultural exports this year because of the lack of access to export containers and record shipping costs and harmful surcharges."
- Russia and Ukraine contribute about 30% of global grain exports.

## Questions

1. How has your farming operation dealt with supply chain issues?
2. What can be done in your community to fill gaps caused by supply chain issues?
3. How can Farm Bureau engage in supply chain issues?

## Background

The United States and global agricultural industries rely heavily on an efficient and economically viable supply chain. Factors such as inflation, labor, transportation issues, and current worldwide events such as the COVID-19 pandemic and Ukraine-Russia conflict have had enormous effects on the success of the agriculture supply chain, and ultimately, U.S. farmers.

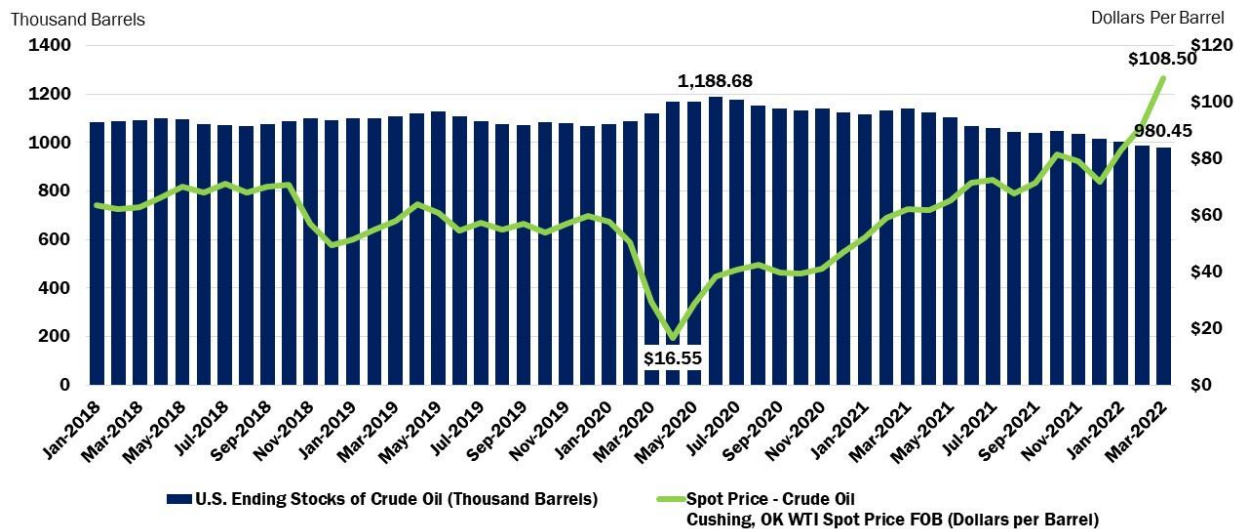
### *Cost of Inflation on Agriculture*

Since the COVID-19 pandemic, the rate of inflation in the U.S. economy has skyrocketed, with a particular increase since the beginning of 2022. **The March inflation figure, with a peak of 8.5% higher than a year ago, is the highest rate of inflation since 1981-82.** Since March, this figure has decreased slightly, but this does not mean a quick end to inflation is at hand. There are predictions inflation is almost certain to stay above 5% or 6% for the next couple of years.

## Soaring Fuel Costs

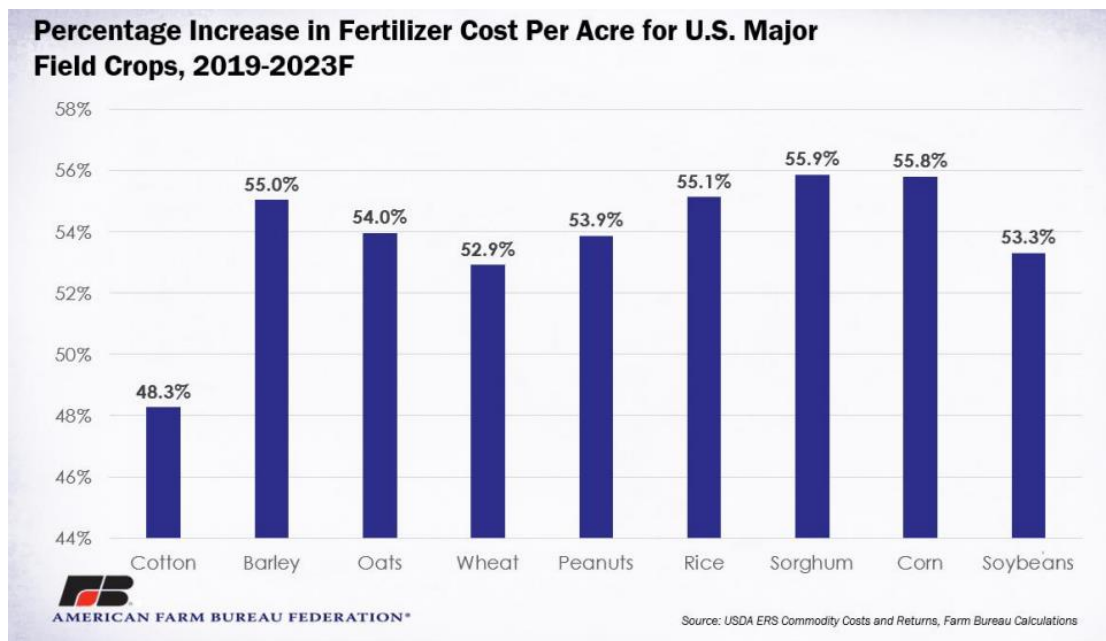
Farmers across the country and in Tennessee are highly reliant on reasonable input costs, and the cost of fuel is certainly no exception. **Gasoline prices hit a new high, rising above \$5.01 in June, up 63% higher than the same week in June 2021. Diesel prices also rose to \$5.72 per gallon in June, up 74% compared to \$3.29 per gallon in June 2021.** These prices are heavily influenced by the price of and supply and demand for crude oil. Stocks of crude oil, motor gasoline, and diesel have all been on the decline since early 2020. Although demand for gasoline and diesel fluctuates throughout any given year, with mid-March through the end of September being peak demand time, the U.S. currently does not have the adequate supply to cushion increasing demand.

## U.S. Domestic Crude Oil Stocks and Price



## Fertilizer Woes

Farmers of all kinds rely on fertilizers to ensure the best soil health on their farms, but fertilizer has not been immune to the effects of rising inflation. Urea Ammonium Nitrate (UAN) fertilizers account for 59% of total fertilizer use, and from 2021 to 2022, the cost of UAN fertilizer increased by over 60%.



**The U.S. produces UAN fertilizer and imports it from many different countries, including Russia and Trinidad and Tobago which account for 79% of imports.** The U.S. Department of Commerce found UAN fertilizer imports are dumped into the U.S. market at rates ranging from 9% to 127% for Russia and 63% for Trinidad and Tobago. Because of these findings, the Department of Commerce filed a petition in 2021 to the U.S. International Trade Commission (USITC) to impose duties on fertilizer imports based on these dumping rates. In response to this petition, American Farm Bureau Federation (AFBF) submitted comments directly to the USITC, specifying how increased duties on imported fertilizer would significantly harm America’s farmers and ranchers. After a series of hearings and arguments, however, **the USITC ruled in late July to reject the Department of Commerce’s proposal, preventing yet another significant increase in the price of fertilizer for farmers across the country.**

### *Federal Reserve’s Role on Inflation*

Last fall, the suspected causes for such high inflation were supply chain issues, particularly a shortage of shipping, rail, and trucking capacity to meet this growing demand brought on by ripple effects of the COVID-19 pandemic. These transportation bottlenecks continue, but it is clear now the U.S. economy has mostly recovered to pre-pandemic trends. AFBF believes this economic recovery has been strong enough it can be concluded a short supply of overall production cannot explain high prices anymore. **AFBF claims the much larger reasons for current overall inflation, and those which will persist in the coming years, are the unprecedented actions of the Federal Reserve since March 2020 and the resulting growth in the money supply, a point which has been largely under the radar.**

The Federal Reserve manages inflation in three ways: raising and lowering interest rates, buying and selling assets on the open market, and indicating future intentions in the market. Some decisions made by the Federal Reserve starting in early 2020 have had massive implications on inflation in the U.S.

- In March 2020, the Federal Reserve lowered interest rates from around 1.5% to just above 0%.
- The Federal Reserve then bought nearly \$6 trillion in assets with money they created, with the intention to put more money into the economy.

- The Federal Reserve’s actions drove a \$6.4 trillion increase in the M2 money supply between March 2020 and the end of 2021. “M2” money includes cash in circulation, checking and savings accounts, and other personal accounts. This 42% increase in only 22 months was a much larger increase than could be absorbed by economic growth, even with a strong recovery.

The combination of the above actions by the Federal Reserve and significant stimulus spending during the pandemic caused a major overstimulation of the economy, which eventually led to higher inflation.

### *Farm Workforce Modernization Act of 2021*

The shortage of farm labor in the United States is considered by many to be the largest issue affecting the agricultural supply chain today.

**According to a recent study by Texas A&M, a higher number of H-2A workers can be associated with lower unemployment, lower inflation, and higher wages.** In 2021, Rep. Zoe Lofgren (D-CA) introduced a bill called the Farm Workforce Modernization Act of 2021 to the US House of Representatives, which aims to seek provisions to alien farmworker rules by establishing a Certified Agricultural Worker (CAW) status and making changes to the temporary H-2A worker program. AFBF has concerns with certain provisions in the original bill, and as a result, House Agriculture Committee Ranking Member GT Thompson filed an amendment supported by AFBF. This amendment:

- More accurately reflects the demands of an agricultural workday and requires CAWs to work 800 hours or 140 days to maintain visa status;
- Requires CAWs to annually verify their employment status;
- Protects agricultural employers from frivolous lawsuits while maintaining worker rights;
- Improves the H-2A visa program by simplifying the wage rate provisions;
- Removes the caps on year-round H-2A visas to ensure nonseasonal employers have adequate access to a legal workforce; and

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- Ensures the mandatory E-Verify system is workable for producers while ensuring employers only hire legal workers.

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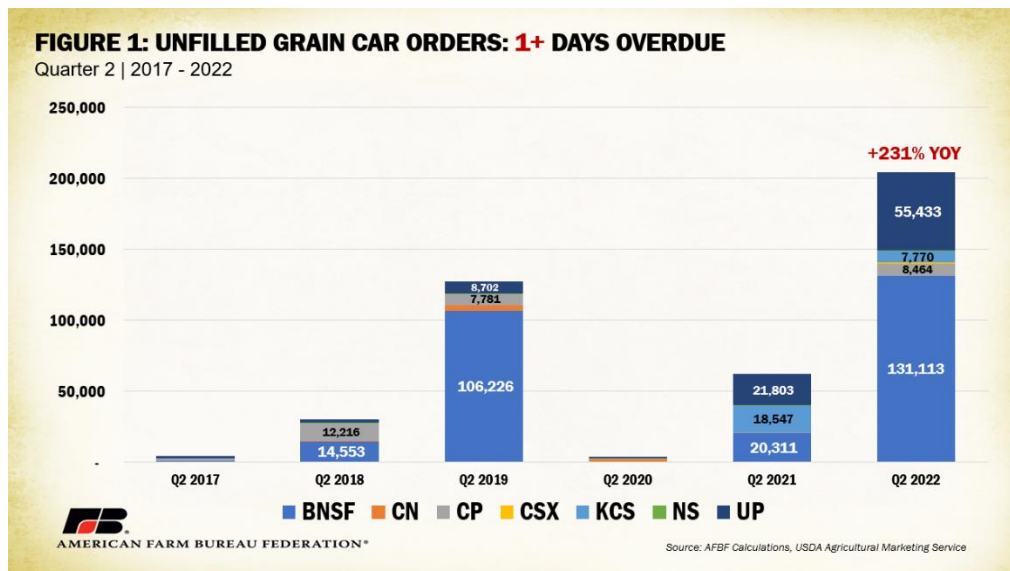
### Transportation Troubles

Market access is vital to the operation of any business, including farms across the United States. The complex system of highways, rail lines, rivers, flight paths crisscrossing the nation, and ocean ports dotted along the coasts allow inputs to reach producers and goods to reach customers – when these systems function effectively and efficiently.

### Railways

Over the past several years, starting with the COVID-19 pandemic, supply chain fluidity has plummeted, with heavy disruptions across freight delivery. According to a recent AFBF Market Intel article, total grain rail cars loaded and billed dipped slightly in the second quarter of 2022 from 381,000 cars in quarter one to 373,000 cars in quarter two. This 8,000-car difference is half the decline from quarter two 2021, a year ago, when 391,000 grain cars were loaded and billed across all carriers. In other words, railways loaded and billed fewer grain cars than last quarter and this time last year. **BNSF and UP, railroads which processed 64% of all grain rail cars in the second quarter of 2022, shipped 9% and 14% fewer grain rail cars than the same period last year, respectively.**

A look at unfilled grain car orders, a metric tracking grain cars not effectively loaded and billed, reveals these declines are not due to reduced demand from shippers. Each railroad reports its definition of “unfilled order” slightly differently, but it is generally referred to as the number of cars a shipper (such as a grain elevator) ordered but did not receive. Between the second quarter of 2021 and second quarter of 2022, the number of these unfilled orders jumped from 62,000 to 204,000 – a 231% increase.



Of these 204,000 unfilled grain car orders one or more days overdue, nearly 70% or 140,000 were also 11 or more days overdue – a 348% increase from the second quarter last year and 82% increase from

last quarter. This increases the risk of perishable products rotting while waiting for shipment and puts livestock operations at risk of not having a steady stream of feed available.

Rail speeds also continue to decline, with the average speed of grain and ethanol lower than other goods. The average speed for all goods has dropped to 22 mph (-14%) from quarter two 2020 and 21 mph (-15%) for ethanol and grains specifically.

### *Ocean Shipping Disruptions*

According to AFBF, about 25% of U.S. farm products are exported each year. This means America's agriculture industry heavily relies on the use of ocean shipping. Increased container delays and rolled bookings, increased demurrage fees, increases in the percentage of empty container shipments leaving U.S. ports, shortages of containers and storage space, exponential increase of shipping costs per container, and labor shortages and restrictions due to the COVID-19 pandemic all caused major port infrastructure issues and supply chain disruptions in American ports. **AFBF President Zippy Duvall recently stated, "farmers have already lost up to \$25 billion of agricultural exports this year because of the lack of access to export containers and record shipping costs and harmful surcharges."**

In the past few months, a couple efforts have been identified to address these issues:

1. In late January 2022, U.S. Secretary of Agriculture Tom Vilsack announced the establishment of a 25-acre "pop-up site" in an effort to increase capacity at the Port of Oakland in Oakland, California. This allows agricultural companies to fill empty containers more easily, get agricultural commodities into containers and onto ships more efficiently, and get those commodities exported on time.
2. In mid-June of 2022, President Joe Biden signed the Ocean Shipping Reform Act of 2021 into law. This bill gives new authority to the Federal Maritime Commission to give shippers more ability to solve issues with and increase transparency from ocean carriers.
3. In early July 2022, TFBF and AFBF, along with roughly 55 other organizations, signed onto a letter addressed to President Biden urging the administration to ensure negotiations between the International Longshore and

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Warehouse Union and the Pacific Maritime Association result in a new agreement between the two entities. This letter suggested the administration work to ensure the current contract is extended until another agreement is reached and both parties should agree not to engage in activities which could lead to more port congestion.

### *Russia's Invasion of Ukraine*

In late February 2022, Russia invaded its western neighbor Ukraine. This ongoing conflict has resulted in serious stress on global grain markets, with Russia and Ukraine both being major grain exporters. Combined, **Russia and Ukraine contribute about 30% of global grain exports.**

Some experts predict Ukraine will see an over 30 million metric ton decrease in their grain harvest due to factors related to the ongoing conflict. These factors include but aren't limited to: damage to farmland and grain storage, decrease in grain quality due to difficulty obtaining fertilizer and chemicals, and, perhaps most importantly, modes of transportation like ports, roadways, and railways being blocked by Russian forces.

Since the beginning of this conflict, millions of tons of grain remain trapped in Ukrainian storage facilities because the country's primary ports in Odessa and Mykolaiv, which both provide access to the Black Sea, are being blocked. According to a Wall Street Journal article, these ports accounted for more than 95% of Ukraine's grain exports prior to the war. With the route blocked, the country is exporting through its borders with the European Union and through barges on the Danube River that unload onto ships in the Romanian port of Constanta.

After weeks of negotiations, officials from Russia, Ukraine, Turkey, and the United Nations reached an agreement in mid-July to resume exports of grain through the Black Sea. These negotiations have resulted in setting up a coordination center in Istanbul, Turkey, which would oversee outbound shipments of Ukrainian grain as well as an agreement not to attack three major ports along the Black Sea. This agreement, which would provide significant relief to the global grain markets and inflation, was signed by all parties but remains under threat. Just one day after signing the agreement, Russia launched a missile attack on the Black Sea port of Odessa, one of the three ports specifically mentioned in the agreement. While this attack provides uncertainty to Russia's compliance with the agreement, the exporting of grain through these ports is still expected to continue.