CoBANK KNOWLEDGE EXCHANGE

THE QUARTERLY

Focused on the industries financed by CoBank

April 2025

Historic Shift in Trade Policy Risks Long-Term Loss of Trust

Businesses and markets grossly underestimated the size and scope of the administration's tariff policies.

Executive Summary

The long-anticipated "reciprocal" tariff plan turned out to be much more impactful than businesses had expected, and significant uncertainty remains as we enter a 90-day negotiating period with many of our trade partners. Regardless of how those negotiations evolve, the increasingly unpredictable nature of U.S. trade policy will have long-term implications for our trade relationships. Given the anxiety over tariffs and other news coming out of Washington D.C., consumer and business sentiment has turned sharply negative over the past two months. However, we will have to wait for the "hard" data to see if that translates into a weakening economy.

Grain, oilseed, and cotton prices have fallen by roughly 50% since 2022, but input costs have not seen a parallel drop. Uncertainty around the seemingly endless tariff drama, a less favorable federal biofuels policy environment, and an expected record-large South American harvest provide a downbeat outlook. Given low feed costs and strong consumer demand, meat, livestock and dairy markets have been enjoying generally good profitability, but tariff uncertainty will continue to weigh on markets for the foreseeable future.

Amid surging demand for electricity across the nation, a tariff-induced spike in the cost of transformers will further accelerate the costs of delivery. The new administration is taking a "technology agnostic" view, which may speed up the broadband buildout in underserved regions but won't provide the advantages of a "fiber-first" approach.

This quarterly update is prepared by the Knowledge Exchange division and cover the key industries served by CoBank, including the agricultural markets and the rural infrastructure industries.

Topics In This Issue:

- *Trust is key to any successful business relationship. A transactional approach to U.S. trade policy is unlikely to pay off in the long run.*
- *Low feed costs, strong consumer demand is boosting meat and livestock.*
- *Row crop producers' low profitability is worsened by uncertainty over biofuel and trade policies.*
- *Costs to build and maintain electric supply is likely to escalate amid historic surge in demand.*

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Inside this issue

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SPOTLIGHT

Uncertainty over tariff policy unlikely to liberate U.S. from prisoner's dilemma

By Rob Fox

Uncertainty over tariff policy has dominated boardroom discussions in recent months as President Trump continues to make good on his earlier assertion that "tariff" is his favorite word in the dictionary.

The situation changes almost daily, but as of now the basic tariff framework includes:

- "Reciprocal" tariffs put in place on April 2, which include across-the-board 10% tariffs on all products from all countries. Additional tariffs placed on many other countries were suspended on April 9 for a 90-day period, giving time for those to be negotiated. However, the tariff rate for China was raised to 125% and is in effect as of April 9.
- 25% on goods from Canada and Mexico that are not specifically covered by the United States-Mexico-Canada Agreement – products covered under the USMCA agreement remain tariff-free.
- Section 232 25% global tariffs on steel, aluminum, automobiles and most auto parts.
- Further Section 232 tariffs on copper, lumber, pharmaceuticals, and semiconductors are pending (those items are currently not included in the reciprocal tariff action).

Most of the focus thus far has been on the likely near-term effects: What will the tariffs mean for 2025 inflation, GDP and job growth? The overwhelming majority of economists and market analysts opine that the effects will be negative on both counts, but the severity of the effect is being debated – the betting odds of a recession in 2025 are now the same as a coin flip. Up until the last few weeks, most viewed the administration's tariff campaign as a short-term negotiating tactic to drive down tariffs in our export markets, but it is now shifting toward the view that some level of tariff protectionism is here to stay in order to promote domestic manufacturing. But, regardless of whether the tariffs come or go, whether or not we have a recession or stagflation, the effects of fickle trade policy will have very long-term consequences, particularly the international loss of trust in U.S. policymaking.

Economists often liken trade wars to the "prisoner's dilemma" game* that every student of the dismal science is challenged to play at some point in their education. It is a simple make-believe game where two people must independently choose to either confess or

1 **The new tariff regime is likely to increase inflation and cut economic growth,** but the severity of the effects is up for debate.

2 **Economic theory predicts** that, over time, there are only losers in a trade war.

deny their participation in a hypothetical crime. If both confess, both receive a short sentence; if both deny they both receive a longer sentence, and if one denies and one confesses, the denier goes free while the confessor faces a very lengthy sentence.

Most students want to win big and there is the temptation to "deny" hoping that your opponent "confesses." Sometimes this strategy works out. But then the professor tells the students to play it again. The "winners" who went free the first time are now in a pickle – trust has been lost and the likely outcome for them is a series of long prison terms. The only way out is to take a repeated series of defeats, or servings of humble pie, to earn back the lost trust.

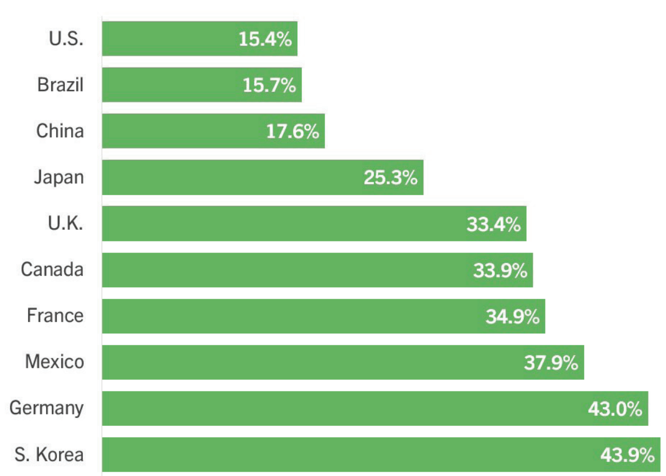
Trust is needed in any long-term relationship, and relationships between countries lasts a very long time – human lifetimes. Being trustworthy is not a sign of weakness or even kindness, and being trustworthy is a big advantage in the business world. A great example of strength via trustworthiness – one that many CoBank customers will be familiar with – is Walmart's grocery business. Although it has a well-earned reputation as a tough negotiator in supply contracts, once a deal is struck, its commitment is as good as gold. Walmart and its suppliers work to grow sales together and often have relationships that last decades – relationships that work to the benefit of both parties. Food companies can trust that they will be treated fairly, and that reputation helps Walmart secure long-term lower price supply contracts. On the other hand, there are other grocery retailers that focus on short-term transactional relationships; they will drop a supplier to save a penny per unit. But food companies know that and act accordingly – they don't invest resources in that relationship. But they will build a new plant for Walmart.

It now appears that the administration's primary objective of tariffs is to bring manufacturing capabilities back within U.S. borders. Although the U.S. is already the least reliant on imports of any major economy in the world *(Exhibit 1),* few would argue against the goal of increasing our capabilities in some industries for national security reasons. But unpredictable tariff policy isn't the way to achieve that. Businesses are unlikely to invest millions or billions based on expectations of a policy that could change at any time for any reason – they can't afford to take that risk. In business, trust is built through clear and honest communication, consistent delivery on promises, and the quick acknowledgement and correction of mistakes. As Warren Buffet said, "It takes 20 years to build a reputation and five minutes to ruin it."

**This deceptively simple game was concocted by two brilliant mathematicians and brought to the fore by Nobel Prize winner John Nash (familiar as the subject of the 2001 movie A Brilliant Mind). The optimal outcome of the prisoner's dilemma, mutual cooperation, is called a Nash equilibrium.*

3 The longer-term impact of capricious U.S. trade policy is the loss of trust abroad, something that will be very hard to regain.

EXHIBIT 1: Imports as a share of GDP



Source: World Bank national accounts data, and OECD National Accounts data files. License : CC BY-4.0

MACROECONOMIC OUTLOOK

Grim expectations haven't hit the economy yet. Will they?

By Rob Fox

Rapidly worsening expectations about the economy are generating concern amongst businesses and investors. Only three times since 1980 has the University of Michigan Consumer Sentiment Index dropped as quickly over a three-month period as it did from December 2024 to March 2025 (down 17 points to 57 versus long-term average of 85). In the same survey, long-term inflation expectations rose to their highest level since 1995. Another monthly survey done by The Conference Board showed that forward-looking expectations for income, business and labor-market conditions dropped to their lowest levels in 12 years. The Philadelphia Fed's March Manufacturing Business Outlook just posted the biggest two-month drop in new order expectations in its 58-year history.

These and many other surveys of consumers and executives regarding opinions, feelings, and expectations are referred to as "soft data," whereas official government and other economic reports of actual events are considered "hard data." Hard data includes things like weekly payrolls, consumer expenditures, unemployment claims, etc. At the moment there is a huge discrepancy between the historically awful soft data and the hard data, which remains fairly strong. Looking at a few high-level metrics of economic health: unemployment is 4.1%, the economy added 151,000 new jobs in February, inflation-adjusted incomes showed strong gains in January and February, and the fourth quarter 2024 GDP was just revised upward to 2.4%. Even headline CPI inflation is running a reasonable 2.8% versus a year ago.

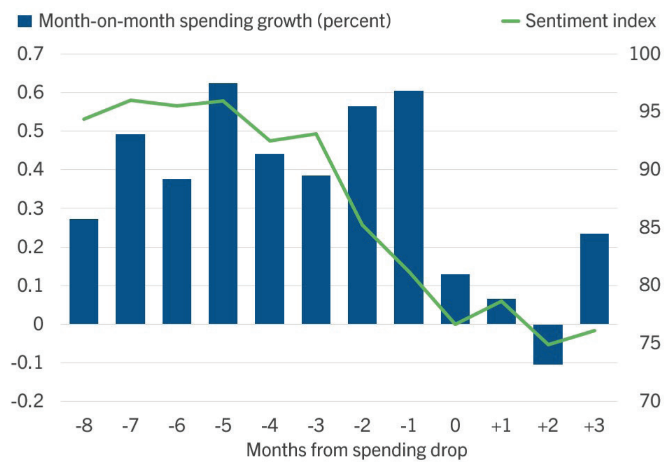
The million-dollar question is whether the dismal results of most surveys of opinion and sentiment will soon translate into real changes in economic outcomes. While their crystal balls are notoriously glitchy, economists are good at looking for parallel events in history and sorting out the data. Not including the short pandemic-related recession, which was overwhelmed by massive government stimulus, the prior

1 **"Soft" datapoints measuring consumer and business sentiment about the economic outlook have dropped sharply over the past few months.**

2 **Yet, "hard" data, such as unemployment and job creation continue to show the economy is doing well.**

EXHIBIT 1: Consumer sentiment and spending growth

Average of 1990, 2000, 2007 recessions

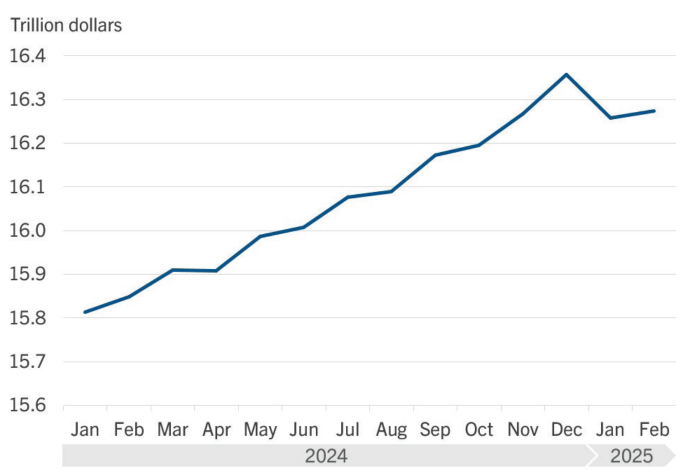


Source: St. Louis Fed, University of Michigan, CoBank calculations three recessions (1990, 2000, and 2007) were all forewarned by weakening sentiment that led to a steep decline in consumer spending (which comprises nearly 70% of the economy). The chart above *(Exhibit 1)* shows the average relationship between consumer sentiment and month-on-month consumer spending growth. Using the eyeball metric, it appears that the drop off in spending occurred three to five months after sentiment showed signs of weakening.

Also note that consumer spending in January and February has fallen off its strong post-pandemic trend, but not yet alarmingly so *(Exhibit 2).* Market watchers noted that this January was the coldest month since 1988, which led to a slowdown in auto sales, home improvement, and other outlays. But there were no such excuses for the weak February numbers. Given the rapid drop in sentiment polls, keep an eye on the next hard data reports: retail sales on April 16 followed by total consumer spending on April 30. That should provide some guidance as to which way the economy is heading.

3 **Historic data suggests that declines in consumer spending begin to become apparent three to five months after a sharp decline in economic sentiment.**

EXHIBIT 2: U.S. real personal consumption



Source: St. Louis Fed FRED

GOVERNMENT AFFAIRS

When will Congress take its powers back?

By Lauren Sturgeon Bailey

The aggressive pace of the second Trump administration has exceeded that of Trump 1.0. On day one, President Trump announced 26 executive orders. FDR previously held the record for most executive orders in the first 100 days, releasing 99, while Trump now stands at 112 in just the first 78 days. More than 30 of the executive orders relate to shrinking the federal government or reinventing trade and tariff policy while others focus on deregulating fossil fuel use, decreasing immigration, and targeting officials who have spoken out against the president.

In addition to exercising his executive powers, the president has already successfully persuaded Congress to follow his direction on several issues. Even before he was sworn in, Trump asked Congress to pass a short-term continuing resolution to fund government agencies through the end of fiscal year 2025. Congress did so rather than passing individual appropriations bills for the year.

With the whole country watching the impact of President Trump's sweeping tariffs, Congress has yet to take action on this economic gambit. Currently the markets are falling, and the patience of the American people is being tested. Republican leadership is being forced to make extremely difficult decisions, many in states where Trump won. Do Republicans continue to defend the president's use of tariffs as a negotiation tool, or simply move on to the next issue of the day? The tactic appears to be the latter as the House and Senate have begun preparing for major tax legislation.

It is the duty of the U.S. Congress to fund the government each year, a responsibility that is increasingly ignored. The last Congress was the least productive since 1951. Now with the Republican party controlling the executive and legislative branches, elected officials wait for direction from the White House rather than lead on the issues. If this tariff test continues to go poorly, will members be willing to take a stance? Or will our elected officials be comfortable with relinquishing their governing authority to the president?

Individuals and businesses alike are hoping to see the tax law extended, many industries need meaningful immigration reform, and agriculture still demands a Farm Bill. The American public will ultimately want a functioning Congress. While many are comfortable with a little bit of pain when they know something good will follow, not everyone has the patience to wait indefinitely. As the House and Senate negotiate budgetary tricks and gimmicks to hopefully move a "big, beautiful bill," Congress must walk and chew gum at the same time. Too much is at stake between trade and export issues, economic uncertainty, and a suffering agricultural economy. Will Republicans take back their "power of the purse" or will they continue to watch the "power of the pen" drive the 119th Congress?

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GRAINS AND OILSEEDS

Trade and biofuel policy uncertainty weigh on crop prices

By Tanner Ehmke

Corn and soybean prices weakened last quarter amid trade and biofuel policy uncertainty and the arrival of a record-large South American soybean harvest. The weaker U.S. dollar could not offset the market's retaliatory tariff price correction leading to waning export demand. Uncertainty over the 45Z Clean Fuel Production Tax Credit also significantly reduced soyoil use for biofuels (*Exhibit 1).*

Heading into spring planting, U.S. farmers reported they intend to plant significantly more acres to corn and less to soybeans and wheat, with corn offering the greater profit opportunity *(Exhibit 2).* Margin opportunities for farmers are still slim, with prices of corn, wheat and soybeans all at four-year lows. Widening carries in the futures markets, though, rewarded elevators carrying company-owned grain *(Exhibit 3).*

Corn

Farmers reported they intend to plant 95.326 million acres to corn this spring, up 5.2% YoY and well above USDA's previous estimate of 94.0 million released in February. Corn prices had rallied through the first half of the quarter on strong export demand and resilient domestic usage for feed and ethanol production, prompting farmers to plan for more corn acreage.

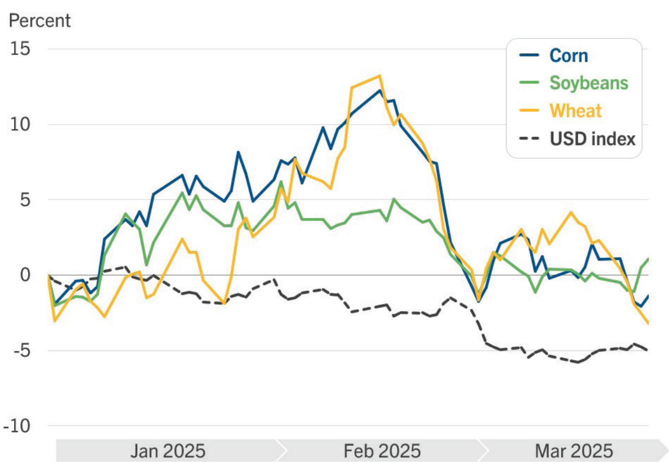
USDA reported March 1 corn stocks at 8.151 billion bushels, down 2.4% YoY *(Exhibit 4).* Total corn usage from Dec. 1 to March 1 was the highest in four years. Uncertainty over trade policy has dampened exports, but total U.S. corn sales are still strong. Corn's price performance still remains competitive to soybeans and wheat.

Globally, corn stocks are tight. The market will closely be watching the development of Brazil's safrinha corn crop, planting progress in the U.S., and for clarity on trade and biofuel policies.

1 Uncertainty over trade and biofuel policy in the U.S. helped pull down corn, soybean, and wheat prices despite the tailwind of a weakening U.S. dollar.

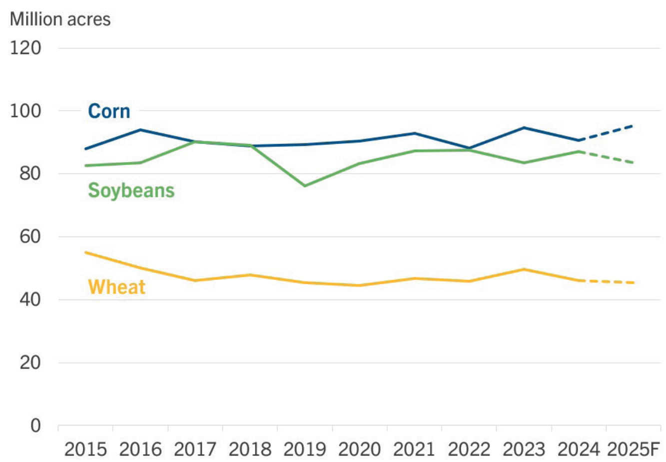
2 Farmers intend to plant the largest corn acreage in the U.S. since 2013 as corn offers the greatest margin opportunity versus other crops.

EXHIBIT 1: Corn, wheat, soybean prices vs. U.S. dollar



Source: Barchart.com; CoBank calculations

EXHIBIT 2: U.S. planted area



Source: USDA-NASS Prospective Plantings

Soybeans

A record South American soybean harvest weighed on prices last quarter with Brazil harvesting a record crop. USDA currently estimates Brazil's soybean harvest at a record 169.0 MMT, up 10.5% YoY, with Argentine production at 49.0 MMT, up 1.6% YoY. Chinese demand for U.S. soybeans at the end of the quarter was down 6.3% YoY as purchases shifted to South American origin.

Domestically, crush demand showed signs of slipping from weakening crush margins as biofuel demand for soybean oil wanes under the uncertainty over U.S. biofuel policy. The sharp slowdown in the February crush pace raises questions over crush expansion in the U.S.

USDA pegged U.S. soybean area for 2025 at 83.495 million acres, down 4.1% YoY as farmers switch more acres to corn.

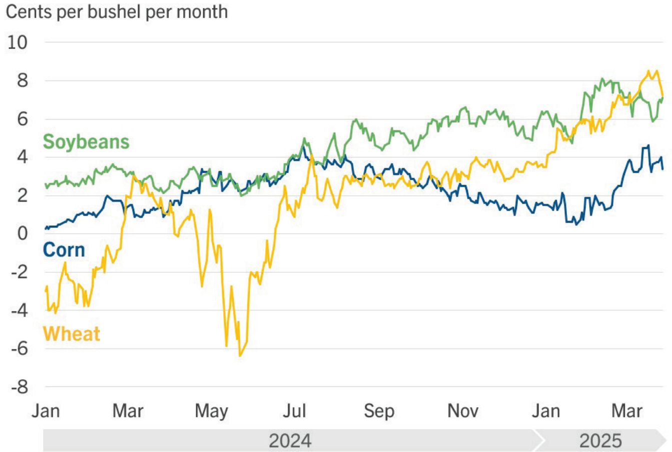
Wheat

Trade uncertainty weighed most heavily on wheat prices last quarter with greater export competition. Wheat exports rebounded earlier in the quarter on the weakening U.S. dollar, a slowing Russian export pace as its wheat stocks, and concerning conditions in key growing regions around the world. Prospects have improved for the EU wheat harvest; the European Commission forecasts wheat production at 126.5 MMT in 2025/26, up 13.1% YoY.

Wheat stocks of 1.237 billion bushels were up 13.6% YoY following last year's bigger harvest while exports have not cleared inventories. USDA forecasts total wheat acres planted in the U.S. at 45.350 million, down 1.6% YoY and the second lowest since 1919. Spring wheat acreage was forecast at 10.0 million, down 6% YoY. With world wheat stocks tight, the market will closely observe spring growing conditions in the U.S., Europe and the Black Sea.

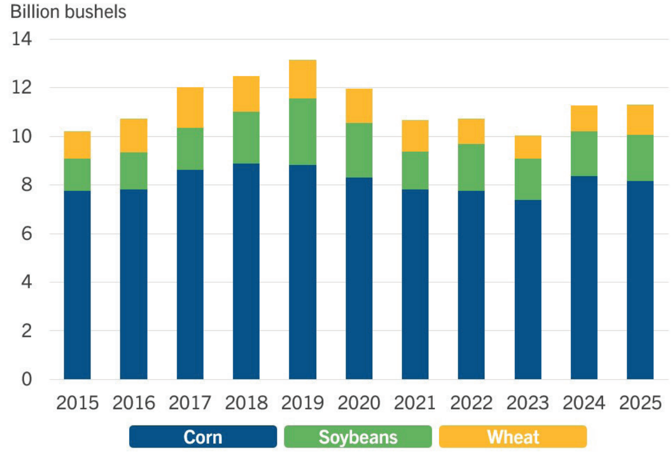
3 **U.S. grain stocks on March 1 revealed a strong usage pace for corn and soybeans** **since Dec. 1, but wheat usage continued to fall.**

EXHIBIT 3: May-July 2025 futures carries



Source: Barchart.com; CoBank calculations

EXHIBIT 4: U.S. stocks on March 1



Source: USDA-NASS Grain Stocks

FARM SUPPLY

Spring brings agronomy sourcing challenges

By Jacqui Fatka

Grain cooperatives across the country come into the spring facing obstacles in sourcing chemicals from China, higher nitrogen applications needed after a wet fall and potential challenges finding labor. Overall, the cost of crop inputs are projected lower for the 2025 growing season, and $10 billion in government assistance will help offset input costs that – although lower – remain elevated in relation to lower commodity prices. However, the ad hoc assistance will not make producers whole as payment levels are well below cost of production estimates.

In February, the U.S. Department of Agriculture estimated production costs to continue the downward trend from the 2022 peak. From last year, fertilizer expenses dropped 9% in real 2025 dollars, 11.1% in nominal dollars *(Exhibit 1).* Global and domestic potash fundamentals remain strong ahead of the spring application period. Rising corn acre forecasts means higher nitrogen demand, especially if even more farmers shift to corn. Some areas in the Midwest saw fall fertilizer applications down 75% year-over-year, meaning that many more farmers will be applying fertilizer this spring – creating the perfect storm for potential disruptions if the spring brings supply chain hiccups or rain delays applications.

Crop protection companies felt the squeeze in 2024 with revenues declining 5% YoY for many of the major companies. Some regions and companies continue to face destocking pressures, resulting in varying outlooks for 2025. Growth in biologicals did not reach double-digit growth targets last year but remain a bright spot for cooperatives helping producers add life back to their soils.

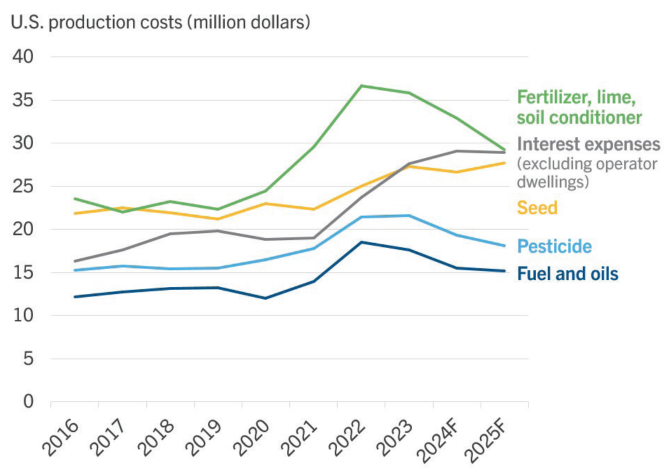
USDA projects seed expenses to rebound in 2025 by 4.2% ($1.1 billion) to $27.7 billion after a decline projected for 2024. Projected changes in planted acreage explains both the decline in 2024 and the increase in 2025. Interest expenses have nearly doubled since 2016. More stressed cash flow for crop producers has also softened machinery purchases and farmland values.

1 Production expenses are forecast to fall to their lowest level in real terms since 2021 after a two-year decline.

2 Fertilizer prices have decreased but last year's wet fall will require higher spring applications.

3 Farm interest expenses have nearly doubled in the past decade.

EXHIBIT 1: Input costs trend lower, interest expenses climb



Source: USDA (real dollars)

BIOFUELS

Biofuels industry waits for policy certainty

By Jacqui Fatka

Establishment of the renewable volume obligations under the Renewable Fuel Standard and decisions on the future implementation of 45Z, the Clean Fuel Production Credit, will determine the trajectory of biofuels demand and production. The Environmental Protection Agency has indicated it may propose 2026 levels this spring with a final rule by this fall, which would bring some certainty to the industry if levels more closely align with production capacity.

Biodiesel and renewable diesel production slowed significantly to start the year as the industry seeks stability with the absence of the $1/gallon blenders' tax credit and the uncertainty surrounding guidance on 45Z implementation. Domestic production of renewable diesel and biodiesel were down 41% YoY for January and February *(Exhibit 1).* Margin pressure exceeded projections. Biodiesel producers were operating at 39% nameplate capacity in February, while renewable diesel producers were running at 56% (vs. 72% last year) and seeing thin margins. The pullback in production is greater than anticipated, revealing even larger plants are making the economic decision to not run or pull forward maintenance.

Assuming RVO levels for 2026 are not at or below 2025 levels of 3.35 billion gallons, biobased diesel production will need to pick up this quarter to generate more renewable identification numbers to hit the 2025 mandate. Lack of policy certainty has led to a sharp drop in RIN prices, a major revenue source for biodiesel producers. Industry associations asked EPA to set biobased diesel volumes for 2026 at no less than 5.25 billion gallons and establish consistent growth for 2027 and beyond based on the industry's investments in additional crush capacity. Production and generated RINs for 2025 already hinge on next year's RVO levels. Available credits for 2024 exceed the required volume by 2.6 billion, a byproduct of EPA setting the previous RVO levels under production capacity.

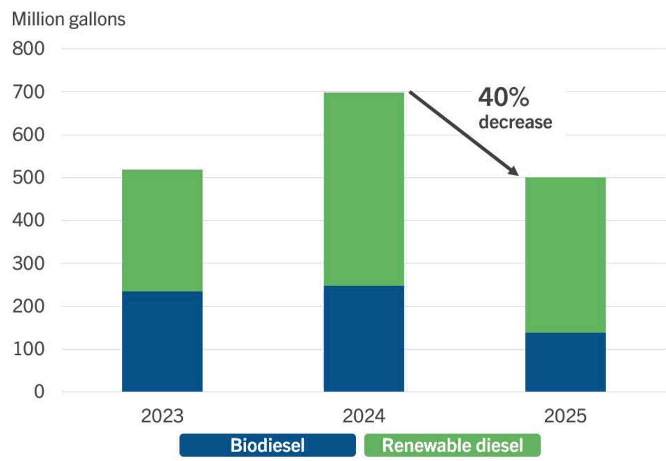
If the administration approves future small refinery exemptions, this could lower the overall ethanol mandate established in future RVOs. Blending is expected to hold steady or increase slightly as consumers choose higher blends and California uses E85. The ethanol industry's greatest challenge is potential export disruptions due to tariff disputes. Ethanol exports can move the needle on ethanol demand more quickly and effectively than nationwide E15, where legislative certainty stalls in the halls of Congress.

1 Renewable diesel and biodiesel production has scaled back to find stability **without the blender's tax credit, pushing prices above petroleum.**

2 Industry associations have asked the EPA to return to the regular administrative schedule of proposing 2026 RVO levels **by this spring and finalized by fall.**

3 Ethanol's record exports in 2024 may slow down **if tariff threats materialize.**

EXHIBIT 1: Domestic biodiesel and renewable diesel production in January and February



Source: EPA Moderated Transaction System (EMTS)

ANIMAL PROTEIN

Producer values start 2025 strong, growth outlook remains moderate

By Brian Earnest

The intersection of increasing production costs and the consumer's willingness and ability to pay has been front of mind for livestock and poultry producers. Calendar year 2024 data reveals that U.S. per-capita consumption of meat and poultry rose 1.3% YoY to 228 pounds. Despite much higher price levels, this points to exceptionally resilient demand, prompting optimism ahead of grilling season.

After a period of frenzied food service "revenge spending" by consumers in 2022 and 2023, we expected higher prices and weakening wage growth in 2024 would pull them back into the kitchen. New USDA-ERS data largely confirms that, as inflation-adjusted food away from home spending flattened mid-year 2024, and food-at-home spending grew by 2% YoY.

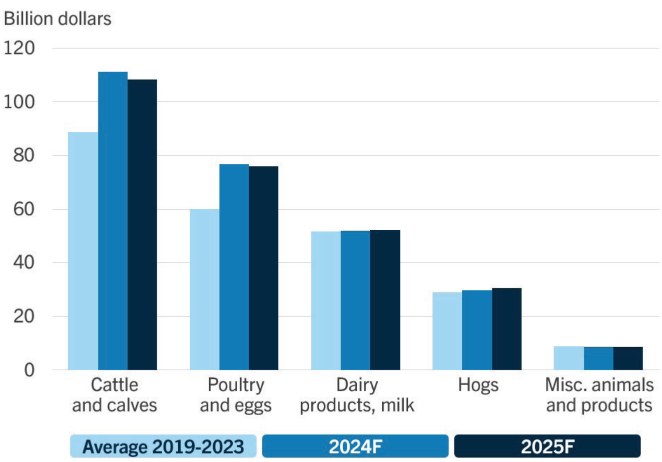
The burden of inflation does not fall only on the consumer, producers are still dealing with elevated non-feed costs. The producer price index for slaughter cattle, for instance, was up an average of 17% YoY during the most recent three months reported. However, the impact of falling cost of feed – always the biggest cost segment – has provided recent tailwinds to the industry: Corn prices retreated by 27% YoY, all hay prices were down 21%, and soybeans fell 21% in the most recently ended 12 months. With that, animal feeders and integrated processor performance has excelled *(Exhibit 1).* Nearly across the board, livestock and poultry market performance is improved YoY.

While barriers to animal protein trade have arisen over the last few months, with more likely ahead, U.S. meat and poultry exports held up through the end of 2024. U.S. red meat and poultry export sales rose 4% in 2024 to the second highest on record, at a value of $24 billion *(Exhibit 2).*

1 **Livestock prices remained firm through the first quarter.**

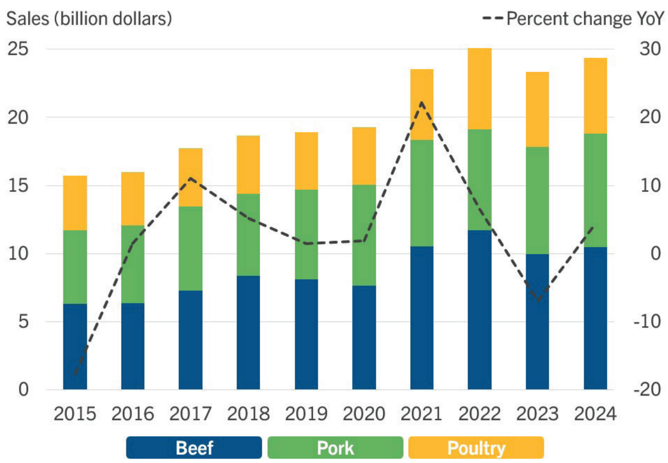
2 **Trade relationships remain important to animal protein producers' bottom line.**

EXHIBIT 1: Livestock gross income is stable



Source: USDA-ERS

EXHIBIT 2: U.S. red meat and poultry export sales



Source: USDA, CoBank calculations

Chicken

While broiler demand typically slows during the fourth quarter and into the first quarter of the new year, the market was largely void of any concerns. At 800 million pounds, total chicken in freezers at the end of December 2024 were at the lowest level since December 2016, and prices for boneless skinless breast meat remained elevated.

Since Jan. 1, both breast meat prices and inventories have been on the rise. But with beef prices still chasing record highs, food service outlets continue to have ample incentive to look at white meat chicken to drive feature activity and limited time offerings. This should bode well for both broiler integrators and consumers alike as the chicken segment tends to chase the value end of the spectrum.

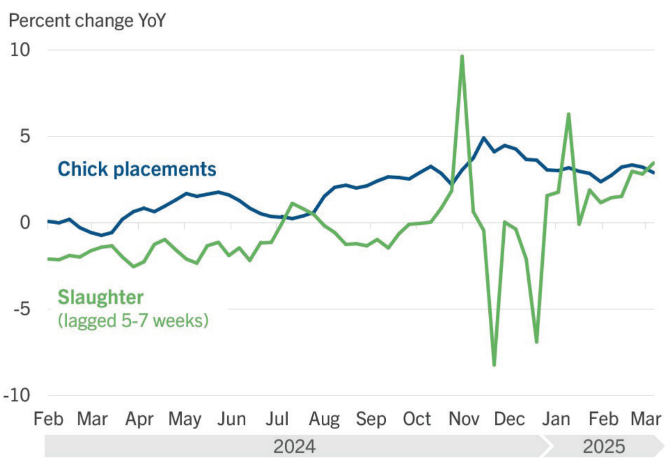
Production metrics have yielded a moderately favorable outlook for 2025. Chick placements were up as much as 3% on any given week in the first quarter, and 2.5% higher year-to-date *(Exhibit 3).* Harvest rates were moderately higher as well, but both livability and hatchability issues remain a factor. As a result, USDA is forecasting broiler production to grow just 1.5% overall this year.

Exports have been utilized as a significant growth mechanism for broiler disappearance over the last decade. Both Mexico and Canada have grown their market shares in recent years. While trade relationships remain a vital component of support to the overall cutout and items like chicken paws, domestic consumers have fallen in love with dark meat. Despite export volumes falling to the lowest levels in nearly a decade during 2024, leg quarter values remained firm over the last 12 months at a 30% premium versus the five-year average *(Exhibit 4).*

1 Strong broiler prices and shallow inventory levels are providing optimism in the poultry sector.

2 Chick placements are up about 2.5% year-to-date and production growth is expected to be moderate overall in 2025.

EXHIBIT 3: Chick placements rising and liveability improving



Source: USDA, CoBank calculations

EXHIBIT 4: Trade importance on U.S. chicken leg quarter values

Source: USDA

Beef

Despite challenges and volatility in the U.S. cattle herd, the beef sector has been able to maintain production to meet strong consumer demand. U.S. beef production through the third week of March was 6.03 billion pounds, up 1.1% year-to-date compared to 2024. Weekly dressed cattle weights have pushed 3% to 6% higher than a year ago, hitting a record 882 lbs./head in late January.

According to the 2025 USDA Cattle report, total cattle inventory fell 0.6% to 86.7 million head, the lowest since 1951. The herd size of nearly every category of cattle was smaller compared to the year prior. Higher calf prices have given producers an incentive not to cull open cows as quicky *(Exhibit 5),* and no state had a noticeable uptick in beef heifer replacements. This will further postpone the beef cow rebuild until at least 2027 should extra heifers be held back this year.

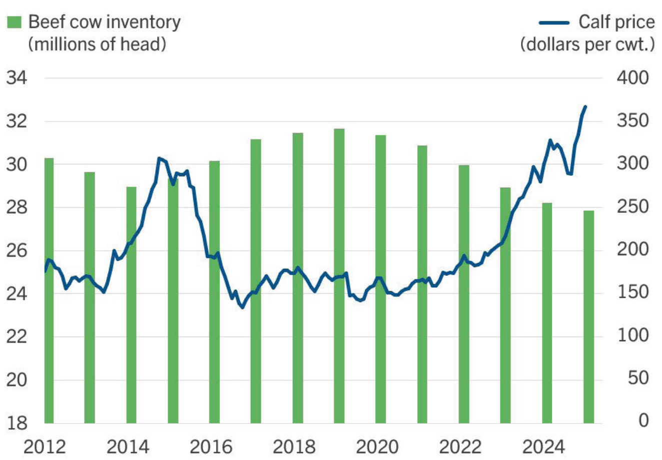
Inexpensive feed costs and tight supplies have kept cattle in the feedlot for more days *(Exhibit 6),* causing a surge in feeder cattle prices during the first quarter. According to the CME Daily Feeder Cattle Index, feeder cattle prices have ranged $26-$52/cwt. higher compared to a year ago and reached a record $288/cwt. in March. Packer margins remain squeezed, suggesting more cattle are staying on feed for longer and prices are continuing the upward trajectory.

These conditions have pushed the all-fresh retail beef price to new highs and set a record of $8.32/lb. in February, according to USDA-ERS. Lean beef is becoming scarcer as fewer beef and dairy cows are sent to slaughter, further accelerating the price growth for ground beef. In 2025, the U.S. will import more lean beef from countries like Australia and Brazil to help meet demand.

1 Total weekly cattle slaughter was down over 3% YoY in the first quarter, with the largest category drop being 20% YoY in beef cow slaughter.

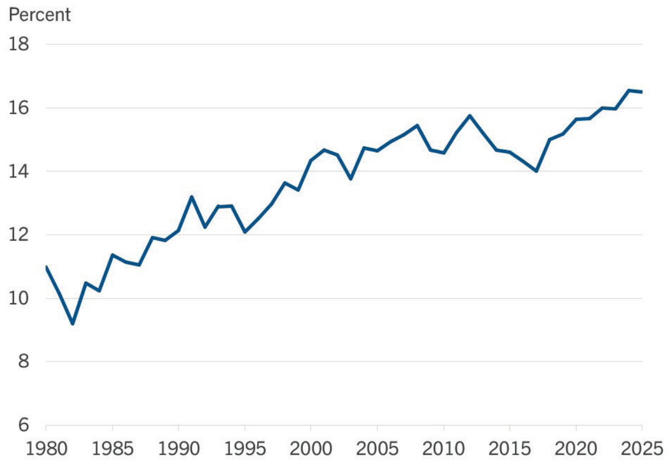
2 Record high prices abound across the cattle sector from calves to the retail shelf amid continuing herd liquidation and delaying rebuilding.

EXHIBIT 5: Continuing beef herd liquidation with record high calf prices



Source: USDA-NASS

EXHIBIT 6: Cattle on feed make up more of the total cattle inventory



Source: USDA

Pork

Growing export opportunities and strengthening domestic interest in pork are moving U.S. hog prices higher. This has provided more incentive to hog producers to increase production in 2025 compared to recent years. The CME lean hog index started the year at a premium of more than 30% YoY *(Exhibit 7).* Retreating feed costs and improved livability are playing into a more favorable situation as well. Feeder pig values started the year up about 25% YoY, but have since fallen quite drastically, which could stall any potential expansion.

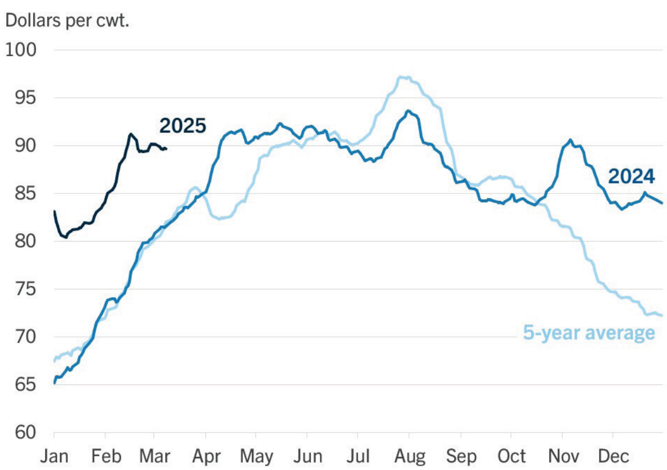
More importantly, the dynamics of the industry suggest that a firm pork cutout and tempered feed costs provide ample support for growth. During the first quarter of 2025, the USDA pork cutout value was up 6% YoY on average, which was a 15% premium to the five-year average. Pork producer margins have been positive for 11 months through February 2025 which hit $14.07/head, according to Iowa State University. However, nearly one year of profit has not been enough to offset the steep declines seen in 2023 where margins averaged $29/head loss. This improved to only $0.90/head lost on average in 2024.

While these factors are in play, the U.S. pork sector is using genetics to discover as much efficiency as possible *(Exhibit 8).* The latest USDA Hogs and Pigs report revealed that the breeding herd continued to contract by 0.6%, and pigs saved per litter continued to rise YoY in the three months ending February 2025. Further aiding pork production efficiencies, which grew 1.8% YoY, carcass weights were up about 1% YoY. Overall, this contributes to an expectation that the U.S. pork sector will see moderate growth this year, which should support hog prices and keep pork as an affordable protein alternative to beef.

1 Pork production continues to rely on efficiencies to maintain stable supply **as the breeding herd continues to contract.**

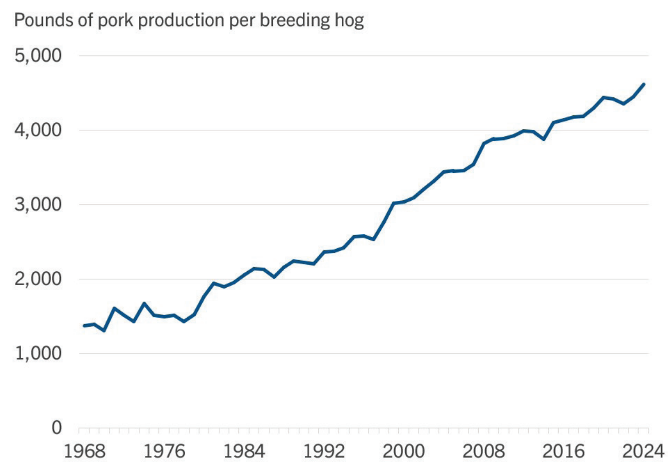
2 Lean hog and cutout prices were up to start 2025 **and we may be seeing the first signs of an upward turn in the production cycle.**

EXHIBIT 7: Lean hog futures are on the rise



Source: CME, LMIC

EXHIBIT 8: The swine breeding herd is becoming more efficient



Source: USDA-NASS

DAIRY

Market tribulations stymie dairy demand

By Corey Geiger

Early this year, most market signals indicated that dairy could have a bright 2025. After all, dairy continued to be a growth category with domestic retail sales climbing $2 billion over the past year to $78 billion, according to Circana. Restaurant sales climbed from $93.7 billion in March 2024 to $97.6 billion by November 2024. For exports, international cheese shipments grew 17% and reached a record 1.13 billion pounds last year. Dairy product exports posted $8.2 billion in sales, standing second only to the $9.5 billion all-time high in 2022.

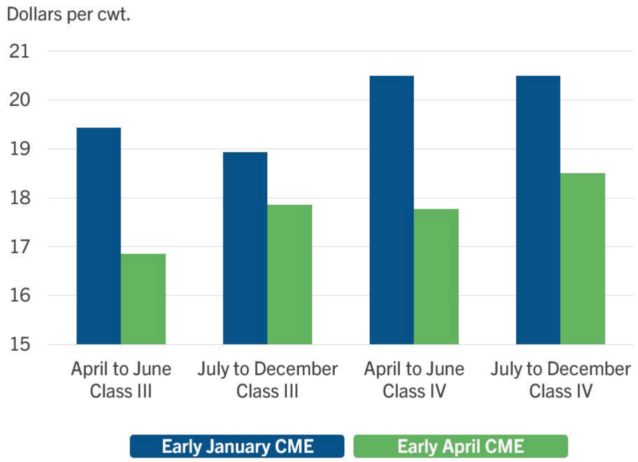
However, headwinds have begun to blow on domestic dairy demand. Restaurant sales slid from $97.0 billion in December to $95.5 billion by February 2025, according to the U.S. Census Bureau and the National Restaurant Association. Earlier projections for strong export sales began to tarnish as tariff talk made importers jittery. As this was taking place, U.S. dairy farmers churned out record milk components driven by incentives in milk checks.

This market uncertainty sent futures contracts tumbling. From early January to early April, April-to-June Class III futures fell by $2.57/cwt. to a $16.86 average *(Exhibit 1).* Class IV dropped even further, losing $2.73 over 100 days to reach a $17.77 average for the contract bundle. While not as dramatic, July-to-December Class III fell $1.07 cents during the same trading window to settle at $17.86/cwt. on the CME. Meanwhile, Class IV butter-powder futures for the final six months of this year dropped by $1.99 to settle at a $18.51/cwt. average as concerns about dairy product exports continued to mount.

1 Tariffs are concerning as Mexico, Canada, and China account for half of all U.S. dairy product and ingredient exports.

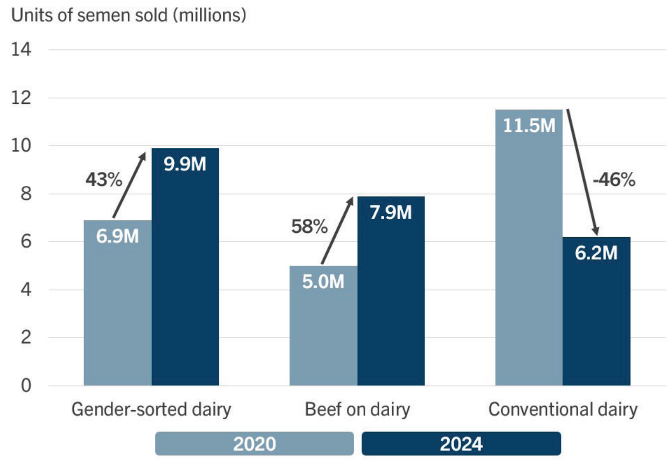
2 Restaurant sales are at a seven-month low. With half of the dairy category eaten at dining establishments, dairy demand could slow.

EXHIBIT 1: Dairy futures have shifted lower since the new year



Source: CME Futures Contracts

EXHIBIT 2: Major semen sales shifts since 2020



Source: National Association of Animal Breeders

Despite this market downturn, dairy continues to have some bright spots. For starters, feed prices, paced by corn, soybeans, and alfalfa hay, all trended lower compared to just one year ago. Also, most U.S. dairy product and ingredient prices are lower than the EU and New Zealand, which could spur exports. In addition, dairy replacement numbers remained at a 20-year low and that will keep milk production in check over the next couple of years.

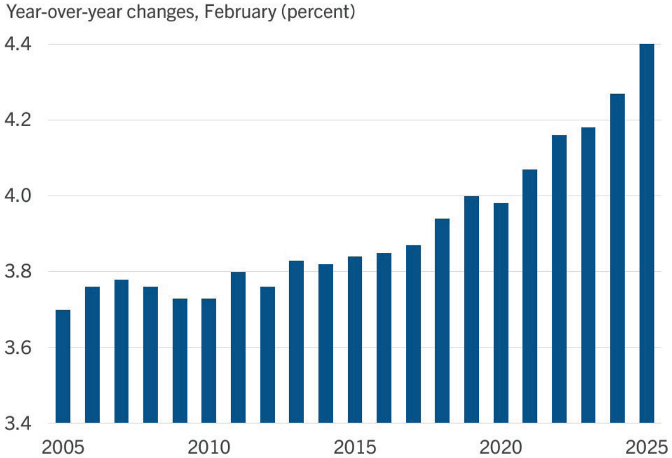
For the second straight year, dairy farmers bought a record 7.9 million units of beef semen to use on dairy heifers and cows to capitalize on record beef prices. However, to shore up the dearth of dairy replacements, U.S. dairy farmers bumped up purchases of gender-sorted semen from 8.4 million units in 2023 to 9.4 million units in 2024, according to sales data from the National Association of Animal Breeders. That means more dairy replacements are in the pipeline but that delivery to the milking string is still three years away due to biological cycles *(Exhibit 2).*

Near term, it's a buyers' market on cream, with butter churns running at capacity. That historic cream delivery has become possible due to epic growth in dairy components. Butterfat levels have vaulted from 3.70% to 4.40% over the past 20 years *(Exhibit 3).* Meanwhile, protein climbed from 3.06% to 3.40%. While some market analysts are concerned about overabundant butterfat supplies, processors and marketers must keep in mind the butterfat boom continues as the U.S. imported a record 172.6 million pounds of butter and anhydrous milk fat last year, according to USDA Foreign Agricultural Service data. That's up from 10 million pounds in 2010 *(Exhibit 4).* Additionally, more abundant and lower-priced cream supplies may spur ice cream makers to add more cream to their ice cream.

3 U.S. dairy producers continue to churn out components with butterfat and protein reaching record levels.

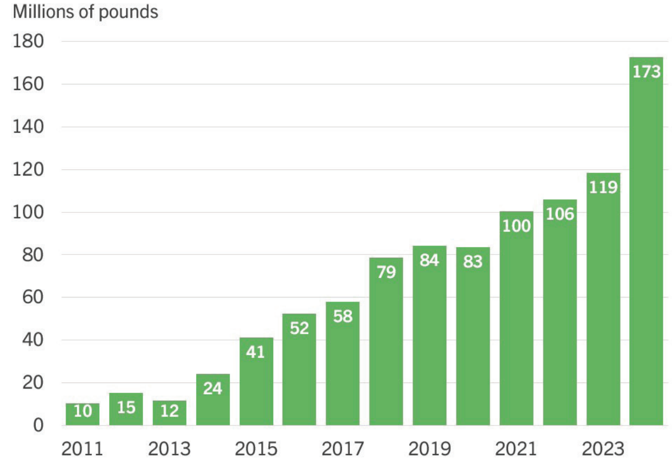
4 While butter inventories could become burdensome, domestic demand has also surged with butter imports growing 45% in the past year.

EXHIBIT 3: Butterfat levels have vaulted from 3.70% to 4.40%



Source: USDA Agricultural Market Service

EXHIBIT 4: U.S. butter imports have grown significantly



Source: USDA Economic Research Service

COTTON, RICE AND SUGAR

Cotton and rice acres to fall in 2025, but sugarbeet acreage to rise

By Tanner Ehmke

Cotton

U.S. cotton farmers are struggling with the lowest cotton prices in five years as the trifecta of slowing consumer demand, ample world supplies, and trade policy uncertainty drag prices lower *(Exhibit 1).* Total U.S. cotton export commitments at the end of the quarter were down 4.6% YoY, with purchases from China – the world's top cotton buyer – down 82.6% YoY. China harvested its biggest cotton crop in 11 years, reducing need for imports. Brazil, the world's top cotton exporter, is set to harvest a record crop.

Demand for cotton globally is also under pressure. A slowdown in world economic growth and rising concern of a weakening U.S. economy are dampening retail sales for clothing and apparel among cautious consumers. Competition from cheaper synthetic fibers also is pressuring demand for natural fibers.

U.S. farmers intend to plant 9.87 million acres to cotton – down 11.7% YoY and the lowest acreage since 2015 as farmers switch to crops offering more profit opportunity *(Exhibit 2).* Texas cotton acreage is seen down 8% YoY as farmers switch acres in favor of crops like corn, sorghum and sunflowers. Persistent drought in Texas, though, is raising concern of low cotton yields compounding loss of acreage. Drought has expanded to 70% of the top-producing cotton state, up from 44% at the start of the year. The saturated global market, though, will limit cotton's upside price risk.

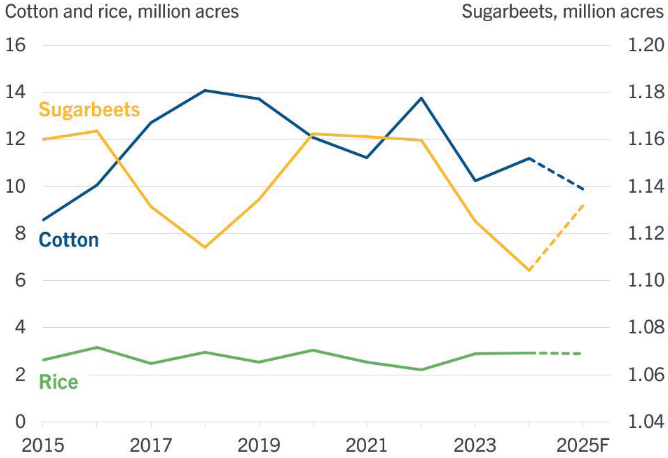
1 U.S. cotton farmers are struggling with the trifecta of ample world supplies, falling demand, and heightened trade uncertainty.

2 Following India's lifting of export restrictions, the flood of Indian rice onto the world market has pulled prices to multi-year lows.

EXHIBIT 1: U.S. cotton prices

Source: Barchart.com

EXHIBIT 2: U.S. planted acres



Source: USDA-NASS

Rice

The arrival of the Brazilian harvest and the flood of Indian rice onto the world market following India's lifting of restrictions on rice exports has pulled U.S. long-grain prices to four-year lows *(Exhibit 3).* U.S. rough rice stocks on March 1 were down 3.6% YoY on strong export demand, particularly to Mexico, but still plentiful. The durability of last quarter's swift export pace, though, is under scrutiny. Uncertainty over trade policy is showing signs of curbing demand for U.S. rice abroad ash the U.S. recently missed out on the Colombian TRQ.

Rice planting is now in the early stages in Louisiana and Texas with rice farmers indicating they intend to plant slightly less rice this year. USDA predicts total U.S. planted acreage falling to 2.895 million acres, down 0.5% YoY. Long-grain rice acreage was forecast at 2.240 million, down 1.5% YoY, but medium- and short-grain combined was seen rising to 655,000 acres, up 3.1% YoY.

Sugar

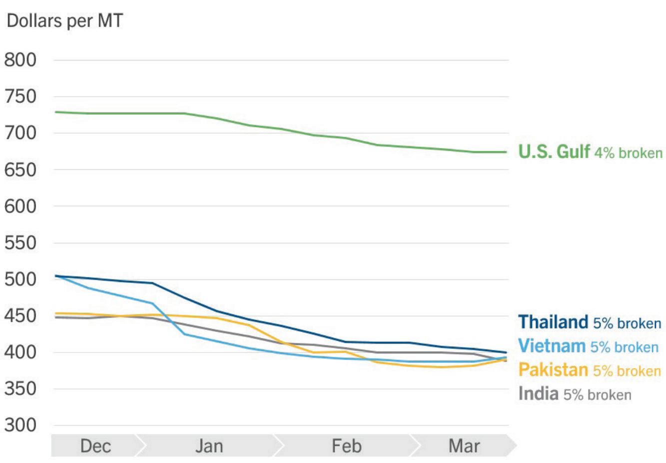
Despite tightness in world sugar supplies and Mexico's ongoing drought that has restricted its ability to fulfill its suspension agreement with the U.S., the large U.S. sugarbeet harvest last fall has capped price rallies *(Exhibit 4).* USDA figures beet sugar production for the 2024/25 marketing year at 5.389 million short tons raw value (STRV), up 4.2% YoY, while cane sugar production is estimated at 4.019 million STRV, down 2.9% YoY.

Imports from Mexico are seen falling 4.6% YoY perpetually dry growing conditions reducing Mexico's cane sugar harvest, while a stronger Brazilian real slowing Brazilian sugar exports. Total imports are forecast at 2.779 million STRV - down 27% YoY and the lowest since 2007/08. Amid world tightness in sugar supply, U.S. sugarbeet farmers are expected to expand planted acreage this spring with USDA forecasting acreage to climb to 1.132.0 million, up 2.5% YoY and the highest in three years.

3 Sugar imports from Mexico are expected to be the lowest since 2007/08

as Mexico struggles with drought and lower cane sugar production.

EXHIBIT 3: World rice prices in 2025



Source: IGC

EXHIBIT 4: Raw sugar prices

Source: Barchart.com

SPECIALTY CROPS

Juice demand slips further

By Billy Roberts

Prices for orange juice have dropped significantly, as consumer demand has waned *(Exhibit 1)* and expectations call for a larger Brazilian crop. The expected 20% increase in Brazil's crop next season, however, could be as much of a detriment as a boon; Brazil's Center for Advanced Studies on Applied Economics has said that the sugar-to-acid ratio in oranges had fallen below the optimal level for crushing, hurting juice quality. Additionally, excess limonin – a bitter compound resulting from irregular harvesting – has affected the final product and its appeal in the U.S. and EU, per Brazil's CEPEA.

While Brazil's orange crop appears set for a notable uptick this year, USDA's National Agricultural Statistics Service has far bleaker news for Florida's production. Compared to the 2023-24 season, the report predicts Florida's production of Valencia oranges will fall 38% and the early, midseason and navel orange crop will drop 32%. In addition to citrus greening that has already heavily impacted the state's orange production, October 2024's Hurricane Milton caused millions in damage through prime citrus-growing counties. Florida nonetheless accounted for nearly half (49%) of domestic orange production in 2023-24.

Volume sales of consumer purchases of orange juice tell only part of the story, as the category's dollar sales dropped 6.9% and 7.3% in 2024 and 2023, respectively. In many respects, however, orange juice simply reflects the challenges facing juices overall. The only segment that has seen any volume growth in the past two years has been bottled apple juice, and only by 0.3%. Pineapple juice and all frozen juice segments have seen significant volume declines. Consumers continue to turn away from juice on concerns about the beverage's negative health impact, specifically high sugar and low fiber content.

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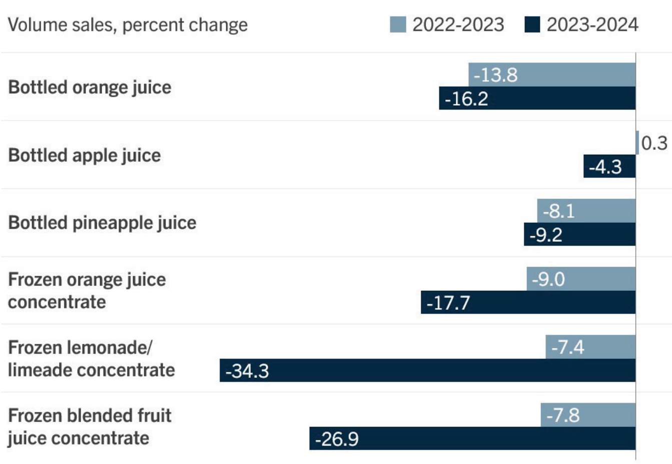
1 Consumer purchases of juices in all forms fell considerably over the past two years.

2 Florida's orange production is set to plummet this season, while Brazil's crop – despite increasing – faces problems of its own.

EXHIBIT 1: Juice volume sales, percent change, 2022-24



Source: Circana; week ending Feb. 9, 2025

FOOD AND BEVERAGE

Consumer shifts prompt manufacturers to revise expectations

By Billy Roberts

Recent earnings reports reveal a number of manufacturers revised down expectations for their full-year results. General Mills expects its sales to fall as much as 2% this year; Campbell's and Kraft Heinz expect business to slow, with the latter reporting a 2.1% drop in organic sales in 2024 and guiding for FY25 sales to be flat to -2.5% YoY. Campbell's, in addition to a below-consensus revenue forecast, cited weakness in the overall snacking environment as cause for concern, likewise a reason Conagra Brands cut its FY25 earnings outlook. Even retail goliath Walmart issued a disappointing FY26 guidance, including lower sales and earnings per share growth, all coming as consumers continue to pull back on grocery store spending.

Nearly three-quarters of U.S. consumers (73%) have changed their buying habits over the past year, per the EY Future Consumer Index. Complicating matters further for those brand manufacturers is the growth in private label, particularly consumer retention. Just under half (45%) of those who try private label stick with the products, prioritizing price and quality over brand familiarity. The Private Label Manufacturers Association notes 2024 sales reached a record $271 billion. The 3.9% increase from 2023 contrasts with the 1% increase seen in national brands. A significant 69% of consumers perceive private labels as comparable or superior to national brands, reflecting a shift in consumer perception over the past decade.

1 **Reduced package size or price increases have reached their limits with consumers.**

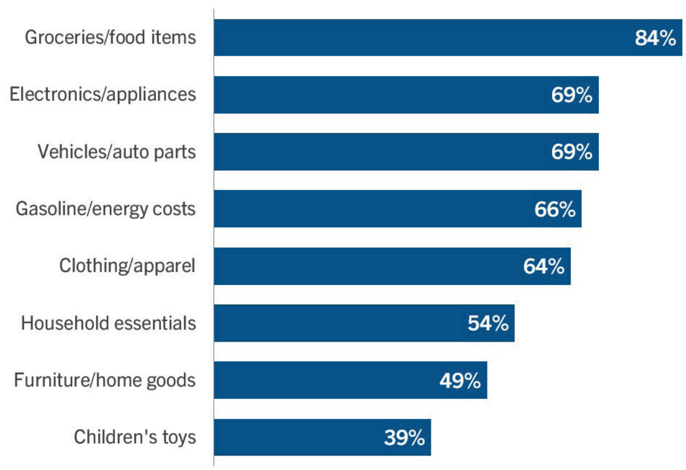
2 **Brands face a need to adapt and demonstrate value.**

Consumers adjust purchase behavior

Consumers continue to prioritize value in restaurants as well; a survey from the National Restaurant Association finds 95% of restaurant operators say consumers are more value conscious. Consumer packaged good food/beverage brands are well aware that more price increases could jeopardize sales volume. Manufacturers can ill afford to risk more volume attrition, instead opting to improve efficiencies.

For consumers, prices remain a top concern, especially considering their expectations from tariff impacts. In fact, findings from Intuit Credit Karma reveal significant changes in U.S. consumer spending habits due to

EXHIBIT 1: Which everyday goods do consumers expect to be more costly as a result of tariffs?



Source: Credit Karma; February 27-March 11, 2025; 2,074 adults ages 18 and older anticipated tariffs, particularly among Gen Z and Millennials. The widespread belief is that tariffs will increase prices for essential goods, prompting shifts in purchasing behaviors. This trend would be a continuation of shifting behavior seen essentially since the era of heightened inflation and, more realistically, the pandemic.

Fully eight in 10 (82%) U.S. consumers anticipate that tariffs will raise prices, with groceries expected to see the highest increases *(Exhibit 1).* In response, 62% are cutting back on non-essential items, and 55% are opting for cheaper alternatives. Lower-income households are less likely to change their spending unless they observe actual price increases, reflecting their financial instability.

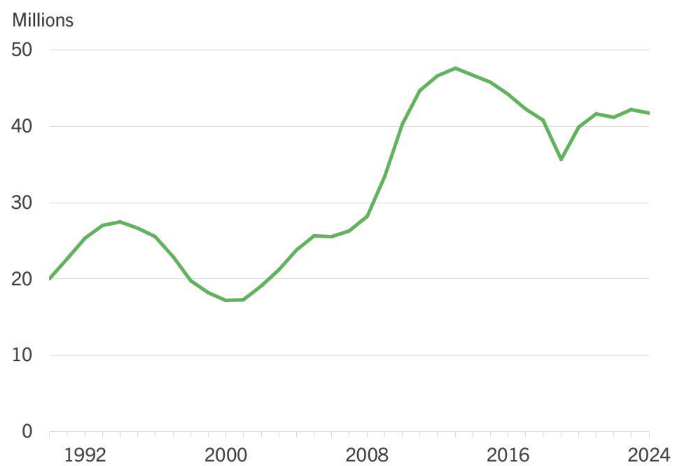
Manufacturers face even more potential challenges than consumers who seek lower-cost alternatives, as potential cuts in federal domestic food assistance programs could significantly impact grocery sales, especially discretionary items. Evercore ISI research estimates that Supplemental Nutrition Assistance Program benefits *(Exhibit 2)* could be cut significantly over the next several years as Congress seeks ways to cut spending to offset extending the first Trump-era tax cuts.

The House of Representatives approved a budget framework directing the House Committee on Agriculture to trim $230 billion from government programs by 2034. Ideas being circulated suggest making cuts to the SNAP program by shifting some responsibility for funding the food assistance program to individual states. It is likely to result in deep cuts to SNAP benefits, which currently account for a significant percentage of grocery spending. Several food manufacturers, particularly CPG companies that derive a large portion of their sales from snacks and other discretionary items, could come under additional pressure if this proposal becomes a reality.

3 Potential changes to consumer-assistance government programs could spell trouble for snack and beverage brands.

At the same time, 16 states, including Idaho, Kansas, South Carolina, and Tennessee, have introduced state legislation asking Congress to ban the SNAP eligibility of candy and sugary soft drinks. These efforts could set the stage for limiting the purchases of other indulgent foods. Historically, USDA and the agricultural industry at large has rejected such state efforts, but Secretary of Agriculture Brooke Rollins has indicated that she may issue waivers to allow states to restrict certain items from SNAP eligibility. Health and Human Services Secretary Robert F. Kennedy Jr., with no jurisdiction over SNAP, has indicated the administration will grant state waivers to restrict purchases of soft drinks through SNAP.

EXHIBIT 2: SNAP participants



Source: USDA Food and Nutrition Service SNAP Data Tables

POWER, ENERGY AND WATER

Made in America, unless it's not: Tariffs and transformers

By Teri Viswanath

Surging power demand and a faster replacement cycle, driven by aging infrastructure and increased storm damage, is already causing electricity prices to outpace inflation for consumers. But even greater cost escalation might lie ahead, as critical elements of the electricity supply-chain face import tariffs and rising trade headwinds. Spending on delivering electricity had already been increasing at the fastest clip in decades, with a growth rate of 50% over the past five years or more than twice the rate of inflation, according to a recent Berkeley Lab report. Now with tariffs likely headed downstream, from the 25% levied on grain-oriented electrical steel (GOES) to critical transformer components and beyond, the utility industry will face increased cost pressures.

Transformers are essential to the electric grid, shuttling electricity between waystations by stepping voltage up or down using electromagnetic induction. The flow of electrons typically begins at the power plant with large power transformers (LPTs, with power load handling capacities above 100,000 kVA), increasing voltage for efficient long-distance transmission (155 kV to 765 kV), then reducing it for local distribution systems (less than 10 kV). The U.S. purchases fewer than 1,000 of these heavy-weight pieces of equipment each year – but 80% of those purchases originate from Mexico, making LPTs a clear candidate for tariff protection *(Exhibit 1).*

At the opposite end of electricity delivery flow are the smaller distribution transformers (with power handling capabilities of up to 5,000 kVA) that can safely lower voltage for household use (240 volts), with small and medium power transformers (5,000 kVA to 100,000 kVA) playing an important role in conducting grid traffic somewhere in between. All three lower classes of transformers are acquired in larger quantities but mostly sourced from domestic producers, making these segments less of a national security threat, according to the U.S. Department of Commerce Section 232 investigation five years ago. Yet, the Commerce Department found that the primary components going into those assembled-in-America transformers are largely foreign sourced, making the case for a potential tariff "tax" over the entire equipment segment.

1 The administration will now likely turn its attention to critical U.S. industries with known trade imbalance issues.

2 The U.S. Commerce Department has already determined that critical transformer components are being imported at levels that threaten national security.

EXHIBIT 1: Transformer production, imports and exports by handling capacity

Category (HTS code)	U.S. production (units)	U.S. imports	U.S. exports	Import penetration
Liquid <650 kVA (8504.21)	1,035,055	210,999	33,871	17%
Liquid 650-10,000 kVA (8504.22)	23,298	8,240	3,029	29%
Liquid 10,000-100,00 kVA (8504.23.0040)	1,640	594	99	28%
Liquid >100,00 kVA (8504.23.0080)	137	617	5	82%

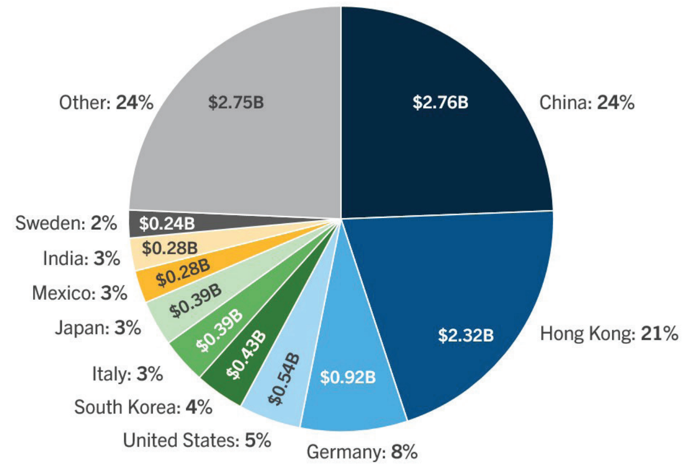
Source: U.S. Department Commerce Bureau of Industry and Security survey (production); U.S. International Trade Commission dataweb (exports and imports)

Let's break this down... The most important part of a transformer is its core (either stacked or wound), which is made up of thin layers of laminations, usually made of GOES. The 2019 Commerce Department survey conducted as part of its investigation found that 88% of laminations are imported while 54% of the fabricated stacked cores (now, about 80% because of subsequent U.S. business closures) and 75% of wound cores are sourced from foreign sellers. The previous Trump administration already made an impairment finding not only for LPTs but for the laminations incorporated into transformer cores as well as imported stacked and wound cores that are incorporated into American-made transformers. Canada and Mexico are the main sources for U.S. imports of these transformer cores and laminations, though neither country is particularly significant on the global stage, as China largely dominates exports *(Exhibit 2).* Nor does either country have a domestic source of GOES, which means raw materials are imported.

3 Supply chain tariffs will amplify spending on electricity delivery, which is increasing at twice the rate of inflation.

Canada and Mexico were notably missing from the "Liberation Day" tariff announcements, but this doesn't mean these neighboring countries are off scot-free. Preexisting 25% tariffs will remain for all goods that aren't compliant with the United States-Mexico-Canada Agreement. Under the USMCA, transformer cores and laminations qualify for duty-free treatment – if they are produced in the United States, Canada, or Mexico, or a combination of those countries – but they have to meet specific USMCA rules of origin. And this is where the problem lies. The original Section 232 investigation found that "neither Mexico nor Canada has indigenous production capability for GOES. While Japan is the leading source of GOES for these countries, they also import some of this material from China and Russia." Section 232 investigations are rare, with the department only conducting 26 from 1980 to 2024. With the administration's larger, country-level trade policy revealed, we expect it will focus on industry-specific fine-tuning – with essential industries, such as the power sector, squarely under the microscope. Without a doubt, the U.S. re-wiring of global trade will add cost pressures to an already overheated utility procurement market. The fact is that the U.S. power grid needs substantial investment and with so much of the supply chain imported, that price tag is rising.

EXHIBIT 2: Top 10 exporters for parts of electrical transformers
HTS code 8504.90, 2019



Source: Global Trade Atlas, retrieved on July 6, 2020 cited on pg. 71, The Effect of Imports of Transformers and Transformer Components on the National Security report

DIGITAL INFRASTRUCTURE

New administration brings new questions for the future of BEAD

By Jeff Johnston

The Infrastructure Investment and Jobs Act of 2021 included $42.5 billion for the Broadband Equity, Access, and Deployment program to support rural broadband network builds in unserved and underserved areas. The program took a fiber-first approach as the administration wanted to "future proof" networks built in rural America. The program's specific requirements on reporting, letters of credit and pricing have been criticized and blamed for the program's low adoption rate.

At the federal level the BEAD program is managed by the National Telecommunications and Information Administration, which resides in the U.S. Department of Commerce. President Trump has nominated Arielle Roth to lead the agency, and she has been characterized as having a technology-agnostic mindset on broadband service in rural America. Commerce Secretary Howard Lutnick has promised to take a "rigorous review" of the BEAD program and plans on "ripping out the Biden administration's pointless requirements."

Based on these appointments, it seems likely that fixed wireless access and low earth orbiting satellites could play a larger role in rural America's broadband access. This will likely accelerate availability of government-supported broadband coverage for the unserved and underserved. But the risk to this FWA and LEO strategy is whether it truly future-proofs these networks.

As artificial intelligence grows in popularity and new bandwidth-intensive applications are adopted, having a network that can easily scale to meet growing demand could become critically important. Fiber networks are known for their ability to easily scale to meet surging demand (remember COVID-19 and how easily the fiber networks handled that surge in growth) while wireless networks have inherently less headroom in them. For example, to add additional capacity new antennas/technologies are needed or new access points must be added. And it is one thing to add a new terrestrial cell site for additional capacity, but it's a whole new economic equation when it comes to satellite internet. Instead of just installing a new cell tower, satellite internet providers need to launch new satellites into space.

Bringing reliable and affordable internet quickly to rural Americans in unserved and underserved areas is very important. And taking a more technology-agnostic approach probably makes sense in some areas given the high cost and challenging terrain found throughout rural America. And reducing red tape and burdensome reporting requirements should help get rural Americans connected quicker.

1. **The new administration promises big changes to the BEAD program** **by eliminating "pointless requirements."**

2. **Changes will likely include a more technology-agnostic approach to how the money is allocated,** **which will benefit wireless technologies.**

3. **Wireless makes sense in remote areas where fiber deployment is costly,** **but these networks have inferior operating leverage versus fiber.**

This quarterly update is prepared by the Knowledge Exchange Division and covers the key industries served by CoBank, including the agricultural markets and the rural infrastructure industries, as well as relevant legislative and regulatory developments.

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