

Conterra Outlook

Summer 2023



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Net Farm Income and Agricultural Economic Update

Summer 2023 Edition



Highlights

2022 Net Farm Income

The highest ever on record. Most producers benefitted from higher commodity prices, and while some costs were up and government payments were down, it was not enough to offset price and production gains. Substantial variability remains across sectors.

Agricultural Resilience

Historical resilience during recessionary times is primarily driven by different market dynamics fundamental to U.S. Agriculture.

- An important factor related to agriculture's performance is the strength of the U.S. dollar on the international stage, considering a substantial amount of production (~20%) is exported overseas.

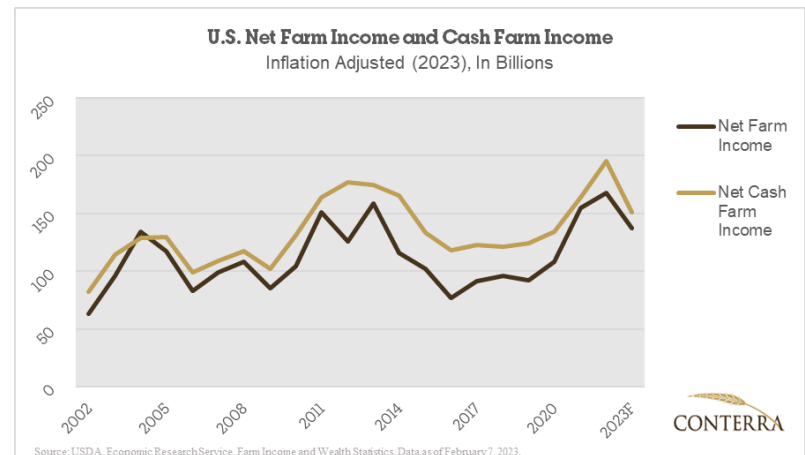
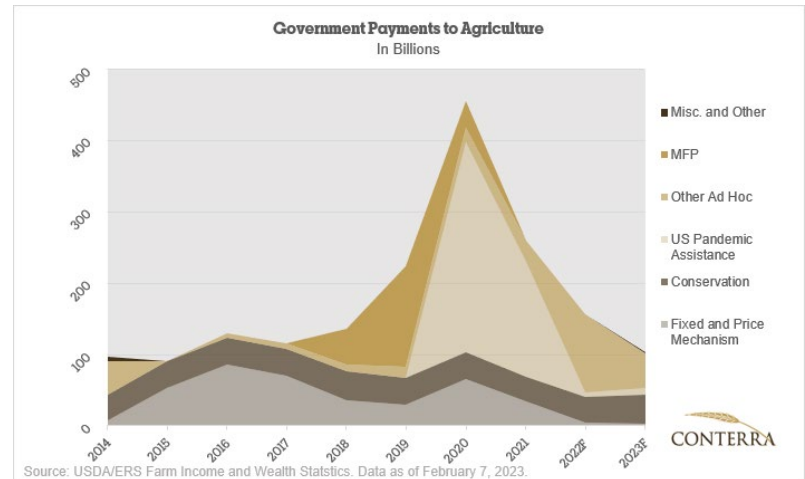
2022 Net Farm Income

Based on recent estimates provided by the USDA, the 2022 net farm income reached an unprecedented high, measuring at a staggering \$162.7 billion. This remarkable achievement can be attributed to the remarkable surge in commodity prices, which have reached record highs.

Despite the substantial decline in government payments, as outlined in the Government Payments to Agriculture graph, a notable decrease since the peak associated with the Market Facilitation Program and COVID relief payments including the Coronavirus Food Assistance Program, and the increased expenses encountered throughout the year, these factors proved insufficient in preventing both the inflation-adjusted Net Cash Farm Income (based solely on cash receipts and payments) and the Net Farm Income (which considers changes in crop and livestock inventory) from attaining the highest levels ever recorded.

The U.S. Net Farm Income graph, sourced from the USDA, illustrates the significant growth in Net Farm Income, which has witnessed a remarkable rebound from the lows observed during the 2017-2018 crop year. This graph serves as a testament to the robust trajectory of the agricultural sector, highlighting its resilience and continued prosperity.

The graph provided not only showcases the impressive growth in Net Farm Income over the years but also demonstrates the USDA's projected decline expected in 2023. According to the USDA's forecast, after inflation is factored in, there is an anticipated decrease of nearly 20%, equivalent to \$30.5 billion, in Net Farm Income. This significant pullback in income can be attributed to a multitude of factors that warrant closer examination.



Industries in Focus

One of the key contributors to this decline is the projected reduction in livestock production and receipts, which collectively constitute approximately half of the overall value of the US agricultural sector. With the exception of cattle, all major livestock categories are expected to experience price pull backs from 2022. The forecast provided indicates a substantial \$14.7 billion decline in total livestock production year-over-year.

A report by the Farm Bureau (referenced here: "2023 USDA Farm Income Forecast Erases 2022 Gains" on the Market Intel section of the American Farm Bureau Federation's website - fb.org) highlights that chicken eggs are anticipated to witness the largest percentage decrease in production, amounting to a significant 24% decline valued at \$4.9 billion. This reduction is primarily attributed to lower production resulting from the outbreak of highly pathogenic avian influenza.

It is evident that the challenges faced by the agricultural industry are multi-dimensional. The projected decreases in Net Farm Income underscore the importance of closely monitoring these factors and their potential impact on the overall financial health of the farming community. Corn and soybeans are expected to see declining revenue, as prices pulled back from historical highs. Wheat, on the other hand, is expected to increase 4%, tied to the harsh drought experienced in the West and continued grain issues tied to the War in Ukraine. While the drought has subsided in many parts of the West, weather conditions throughout the remainder of the year will dictate both price and production.

The dynamics of international relations are expected to contribute to ongoing volatility in the grain markets. According to the USDA's Economic Research Service (ERS), Brazil, boasting the largest arable land area in the world, has emerged as a dominant player in global agriculture (source: "Brazil's Momentum as a Global Agricultural Supplier Faces Headwinds" on the USDA ERS website). The country currently exports over 50% of the world's soybeans. While Brazil faces certain challenges, such as infrastructure, financing, corruption, and environmental concerns, it has the potential to continue enhancing its productivity over the next decade.

The significance of Brazil's agricultural productivity becomes particularly pronounced in the context of 2023. China, a key player in the global grain market, has been increasingly canceling its U.S. grain purchases amidst growing tensions in international relationships. Simultaneously, Brazil has experienced a bumper crop, further amplifying its international impact on the market. These factors, coupled with a strong US dollar, supply chain disruptions, and persistent geopolitical tensions, are poised to shape the grain markets in the near to medium term.

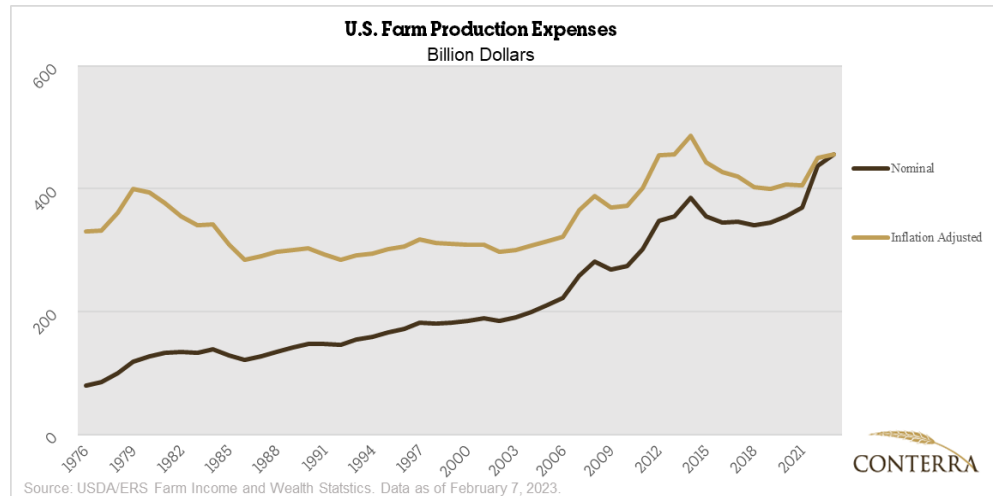
As global events and relationships evolve, it is important to closely monitor these factors and their impact on grain markets. Adapting to this ever-changing landscape and understanding its implications will be crucial for grain farmers as they navigate the complexities of the international marketplace.

How Costs Shape Net Farm Income Over Time

When examining production costs, we observed a mixed picture in 2022, with certain expenses experiencing a decline. Notably, costs associated with fertilizer, feed, and fuels have pulled back from their previous record highs experienced earlier in the year. This reduction provides some relief for farmers, easing the burden of these specific inputs. However, despite this positive development, the overall impact on production costs is insufficient to fully offset the effects of other factors.

Higher labor, marketing, and interest costs pose ongoing challenges for farmers. In their latest meeting, the Federal Reserve maintained its course of increasing interest rates, further exacerbating the situation. The Federal Funds Rate target was raised to a range of 5% to 5.25%, reaching the highest level since the summer of 2007. These interest rate hikes represent the primary tool utilized by the Federal Reserve to influence and manage the economy, as numerous short-term borrowing rates are closely tied to movements in the Federal Funds Rate.

The accompanying chart visually illustrates this data, providing a clear depiction of the contrast between nominal and inflation-adjusted production expenses since the 1970s. While nominal expenses are reaching unprecedented levels, the inflation-adjusted figures offer valuable insight by showcasing a relative decrease compared to the record highs witnessed in 2014, or roughly 10% below those highs.



Navigating the complexities of production costs is an ongoing challenge for farmers, particularly as they face fluctuating input prices, rising labor expenses, and a changing interest rate environment. Staying well-informed about these developments and their potential impact is crucial for farmers to make informed decisions and effectively manage their operations in an ever-evolving economic landscape.

Farm Equity: What Drives Changes?

Shifting our focus to the farm industry equity as a whole, it is worth noting that higher incomes in 2022, coupled with increasing land prices, have played a pivotal role in bolstering farm equity. As per the USDA's forecast, farm equity, which serves as a measure of farm balance sheet strength, is projected to experience a 5% increase, rising from \$3,344 billion in 2022 to \$3,512 billion in 2023.

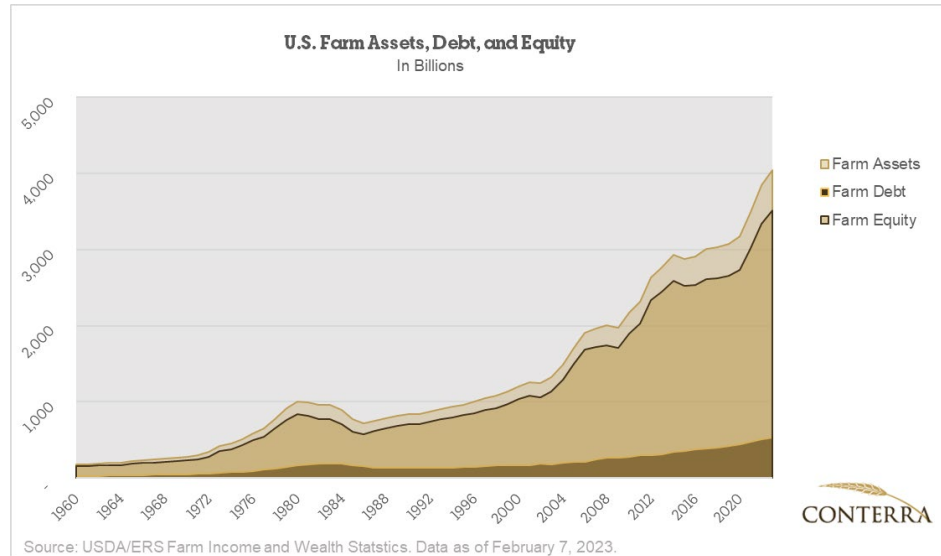
To gain further perspective, the chart below depicts the substantial growth in U.S. Farm Assets, debt, and equity over the period from 1960 to 2023, adjusted for inflation. While debt has displayed a consistent upward trend since 2010, the growth patterns of equity and total assets have shown a less persistent trajectory. It is important to recognize that the primary drivers behind the fluctuations in farm equity are the profitability of farm operations coinciding with retaining earnings and the continuous appreciation of land values and other farm assets.

The strengthening of farm equity serves as a significant indicator of the overall financial well-being and resilience of the farming sector. Higher incomes and rising land prices

contribute to the accumulation of wealth and bolster the balance sheets of farming operations. This increased equity provides a solid balance sheet-based foundation for farmers, enhancing their ability to weather the unforeseen.

However, it is essential to approach these trends with a nuanced perspective. The profitability of farm operations and continued retaining of earnings remains a critical factor in shaping farm equity. Fluctuations in commodity prices, input costs, and market dynamics can significantly impact farm profitability and, consequently, the trajectory of equity growth. Additionally, the appreciation of land values, driven by various factors such as market demand, government policies, and demographic changes, can influence the overall value of farm assets and contribute to changes in equity levels.

Understanding the dynamics and interplay of these factors is crucial for farmers and policy makers alike. By staying informed about the complexities of farm equity and its drivers, stakeholders can make informed decisions to support the financial health and sustainability of the agricultural industry.



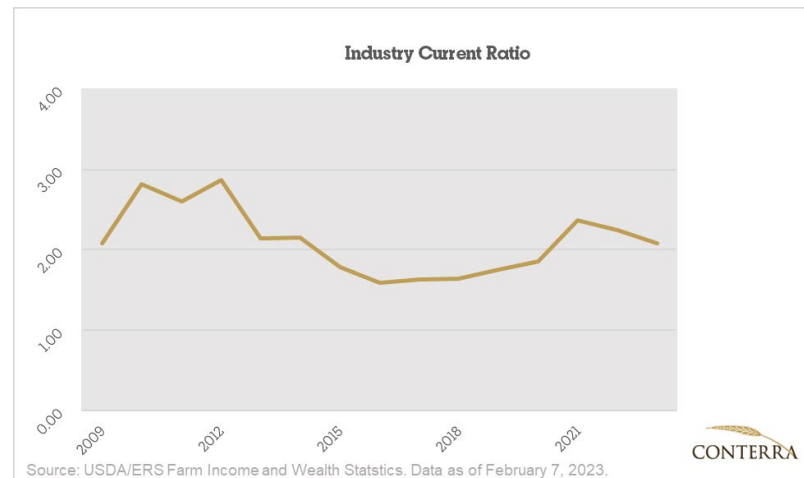
Another important measure of farm health, which lenders often take into account during the loan approval process, is the current ratio. This ratio is determined by dividing current assets by current liabilities. Typically, when evaluating a farm's financial status, a higher current ratio is considered favorable as it indicates a greater ability to cover short-term obligations as they come due. When a farm has a profitable year and there are limited capital expenditures, the year-end current ratio is likely to increase compared to the previous year. This is because the farm's current assets, such as cash, accounts receivable, and inventory, may have grown while the current liabilities, such as accounts payable and short-term operating loans, have remained relatively stable. The surplus of current assets over current liabilities contributes to a higher current ratio.

However, there are instances when the current ratio may decline. For example, when a farm decides to utilize its cash reserves to purchase new capital equipment or make a down payment on land, this action is often referred to as "moving assets down the balance sheet." By converting cash into long-term assets, the farm's current assets decrease, which can lead to a lower current ratio. Furthermore, during an unprofitable year, operating losses can accumulate and impact the farm's current ratio. As expenses exceed revenues, the farm's profitability declines, and it may rely on its available cash or other current assets to cover ongoing expenses. This reduction in current assets coupled with increasing current liabilities contributes to a declining current ratio.

A Closer Look: What Do Lenders Look At When Examining A Balance Sheet?

Lenders closely consider the current ratio when assessing a farm's financial stability and repayment capacity. A higher current ratio indicates a stronger ability to meet short-term obligations, while a lower current ratio may raise concerns about liquidity and potential difficulties in servicing debts. Therefore, farm operators should strive to maintain a healthy current ratio by balancing their capital investments, managing cash flow effectively, and striving for profitability.

According to the chart to the right, the USDA projects liquidity in the agricultural sector will continue to decrease from its peak in 2021.



This decrease can be attributed to the winding down of increased government payments that began in 2018 and the Market Facilitation Program, a pull-back in commodity prices experienced which played a significant role in supporting the growth of farmers' current assets. Despite the anticipated decrease, the forecasted liquidity level for the end of the year remains above the target current ratio of 1.25, indicating a generally healthy state across the agricultural industry.

Summary

To summarize, the overall state of US agriculture in 2022 can be characterized as prosperous, despite some variations observed within different sectors. However, considering current assumptions and predictions, most forecasts indicate that the Net Farm Income for 2023 will experience a decline compared to the record highs achieved in 2022. Nevertheless, it is crucial to note that the projected income for 2023 is anticipated to surpass long-term inflation-adjusted averages. This prospect offers a certain degree of reassurance regarding the industry's stability and sustainability.

Despite these positive factors, certain sectors faced challenges. For instance, livestock producers grappled with higher feed costs, fluctuating market prices, and supply chain disruptions. Similarly, some crop farmers encountered difficulties due to extreme weather events, such as droughts, which affected their production and profitability.

Looking ahead to 2023, economists and agricultural experts anticipate a dip in Net Farm Income compared to the exceptional levels achieved in 2022. This projection is based on several factors. First, commodity prices are expected to stabilize or moderate after experiencing a surge in 2022. While prices may remain relatively strong, they are unlikely to reach the same extraordinary levels observed in the previous year. Second, input costs, including fuel, fertilizers, and labor, are expected to continue rising, albeit at a somewhat slower pace. These cost pressures could exert downward pressure

on profitability for some farmers.

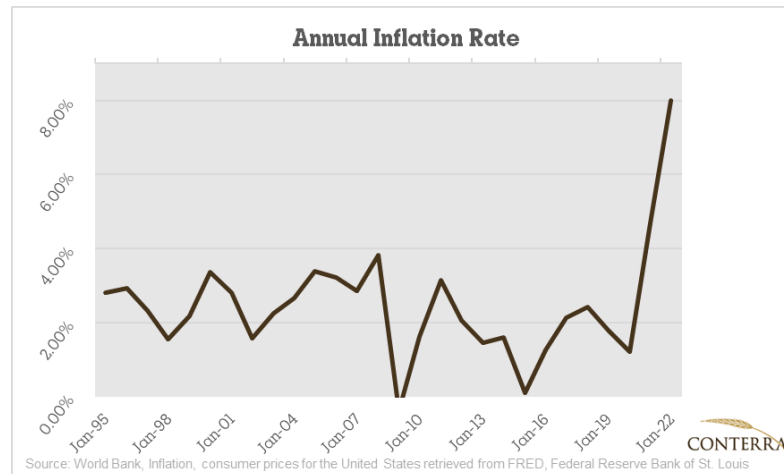
Despite the projected decline, the anticipated Net Farm Income for 2023 remains promising from a long-term perspective. It is expected to exceed the inflation-adjusted averages over the years, signifying the agricultural industry is still relatively robust and sustainable. This reassurance stems from the underlying factors supporting the sector's performance. Demographic shifts, evolving dietary preferences, and the increasing global demand for food, fiber, and fuel continue to create opportunities for US farmers. Moreover, advancements in technology and agricultural practices enable farmers to enhance productivity, reduce waste, and mitigate environmental impacts, contributing to the industry's long-term viability.

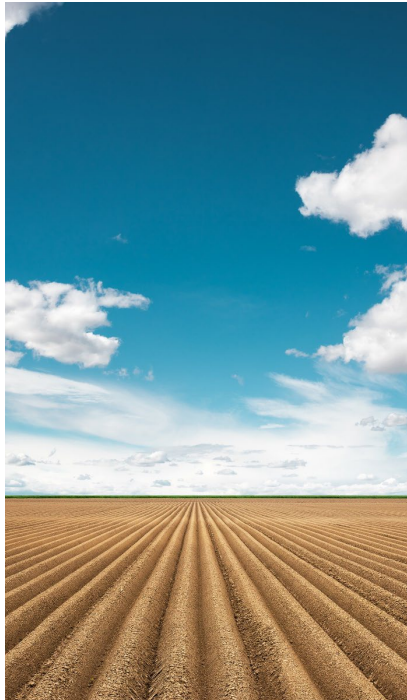
While there may be challenges and uncertainties on the horizon, the US agricultural sector has demonstrated resilience and adaptability throughout its history. Farmers and industry stakeholders are likely to continue employing innovative strategies and leveraging emerging opportunities to navigate the evolving landscape. Policymakers and organizations also play a vital role in supporting farmers through effective policies, research, and development programs, ensuring the sustainability and prosperity of US agriculture in the years to come.

Macroeconomic Update: Recession Concerns

Inflation: Still a Concern?

Inflation has remained a topic of concern across the economy, as the Federal Reserve continued to raise interest rates consecutively for the 10th time in May 2023. While there is speculation about a potential pause in rate hikes, key indicators that the Federal Reserve closely monitors, including annualized inflation, job market reports, and consumer spending, have all shown resilience despite the rate increases. With that said, inflation and consumer spending are beginning to weaken as increased rates have pushed up borrowing costs. However, economists express apprehension about the possibility of at least a moderate recession in the United States. Some point to significant declines in business investment, while others highlight the weakening housing market as potential indicators of an impending economic downturn.





Portends of a Recession?

Indeed, there are valid reasons for these concerns. Business investment experienced a decline, and inventories pulled back during the first quarter of 2023. This trend is often interpreted as businesses reducing their investment in inventory and capital expenditures in anticipation of reduced consumer demand later in the year. Notably, the first quarter of 2023 marked the first decrease in private business inventories since the onset of the pandemic. Although consumer spending has still shown year-over-year growth, it has begun to flatten. One point of particular concern has been the noticeable increase in credit card debt as consumers have

placed increasingly higher living costs on their credit cards. In fact, credit card debt has risen by 26% between the beginning of 2021 and 2023.

Rather than solely focusing on whether the U.S. is technically in a recession or not, there are other primary factors that influence agriculture's performance. Agriculture has historically demonstrated a relatively resilient performance during economic recessions. While the specific impacts can vary depending on the nature and severity of the recession, several factors contribute to agriculture's overall stability.

Ag's Performance in a Recession

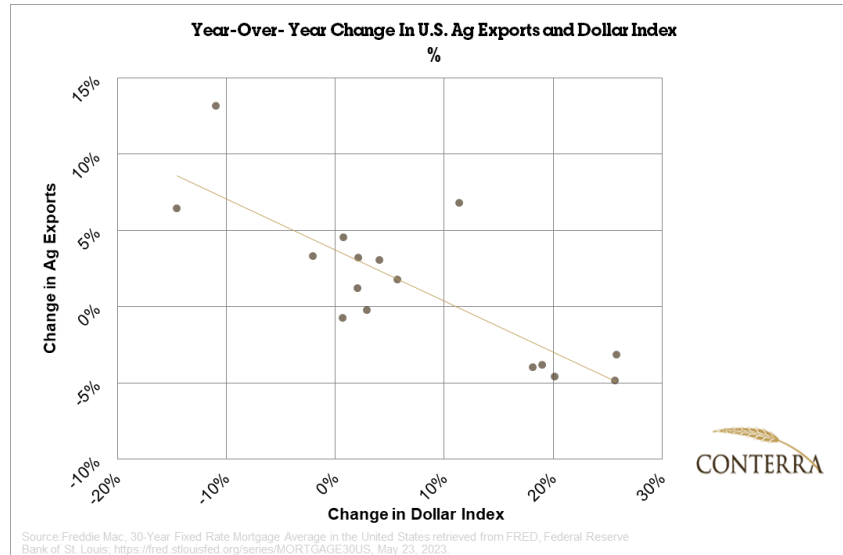
First and foremost, the essential nature of food and agricultural products ensures consistent demand, even during challenging economic times. Regardless of the economic climate, people need to eat, which provides a fundamental support for developed agricultural markets. This demand stability helps mitigate some of the adverse effects that other industries may experience during recessions.

Moreover, agriculture often benefits from countercyclical patterns. When economic downturns occur, consumers may opt for more cost-effective food options, favoring staple crops and basic agricultural products. This shift in consumer behavior can sometimes benefit agricultural producers who specialize in these essential commodities.

Additionally, government support programs and policies play a crucial role in stabilizing the agricultural sector. Governments often provide assistance to farmers and rural communities through various mechanisms, such as subsidies, insurance programs, and loans. These measures help

farmers withstand economic challenges and ensure the continued production of food and other agricultural goods, which has long been considered a point of national security.

Furthermore, the global nature of agriculture can contribute to its resilience during recessions. Agricultural exports play a significant role in many countries' economies, including the United States. While domestic demand may fluctuate during a recession, international demand for agricultural products can remain relatively stable or even increase. This can provide opportunities for agricultural producers to tap into global markets and offset any potential declines in domestic consumption. Given the global reach of U.S. agriculture, one crucial factor is the strength of the U.S. dollar. U.S. agriculture is one of the only industries which runs a current account surplus, implying the country exports more commodities than it imports.



As the U.S. dollar gains strength on the international stage, it leads to increased costs for importing nations that rely on U.S. commodity imports. However, it is essential to recognize that the distribution of U.S. commodity exports is not uniform across the globe. In 2021, Mexico, Canada, the European Union, and China emerged as significant destinations, accounting for nearly half of all U.S. agricultural imports.

With that said, information can still be had by analyzing U.S. agricultural exports against changes in dollar strength. As the pattern above shows, year-over-year increases in the dollar's value have historically been associated with decreasing agricultural exports, which is expected. Notably, recent tensions between China and the United States have resulted in China canceling additional corn purchases in mid-2023. While geopolitical factors undoubtedly play a role in these developments, the strength of the U.S. dollar has also played a significant part. In fact, the Chinese renminbi has experienced a depreciation of approximately 10% since the beginning of 2022. This depreciation is primarily influenced by the higher interest rates prevailing in the United States, as investors seek greater returns on U.S. debt, which is widely regarded as a "risk-free" investment. The chart above highlights this relationship, as it plots year-over-year changes in the dollar index against total agricultural exports.

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Taylor Kaus joined Conterra in 2020 and focuses on analysis of credit and operation stability as part of the underwriting process. This work has focused on understanding broad agricultural market trends and how individual borrowers and applicants operate in those environments. Taylor grew up in western Nebraska, spending time on his grandpa's farm, branding cattle and baling hay. He received his Bachelor of Science and Master of Science in Agricultural Economics and Statistics from the University of Nebraska. Taylor is currently a Level II CFA Candidate.

About: Conterra Ag Capital

Conterra Ag Capital is an agricultural lender that provides borrowers, from family farms to large agribusiness, a full portfolio of flexible lending and financial solutions. Based in West Des Moines, Iowa, and with team members around the country, Conterra has leadership with decades of ag finance experience. Conterra's deep understanding of agriculture and the overall ag economy allows the company to quickly adapt to the needs of today's producers. Conterra partners with community banks and lenders, brokers and correspondents and manages assets for hedge funds, insurance companies and private investors to provide a broad spectrum of loan products supporting American agriculture.

Paul Erickson has held various executive leadership positions in the financial services and agricultural sectors. Paul has been involved in all facets of lending including loan origination, loan approval and the closing process. In addition, he works closely with staff on all distressed assets and large transactions. Paul grew up on a small grain and beef cattle farm in northern Minnesota. He obtained a Bachelor of Science in Animal Science from Iowa State University with continuing education at Harvard Business School.



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