

Federal Reserve: Observations on the Ag Economy

According to the latest Beige Book published by the Federal Reserve, the Sixth District (Atlanta) observed that demand for agricultural products remained strong and that hot weather and dry conditions damaged crop yields, especially corn, in many areas of the District. While prices paid to farmers were higher for most commodities, prices

paid to farmers for both corn and milk fell. Importation restrictions on Chinese cotton led to renewed demand for domestically sourced cotton.

The demand for poultry exceeded supply while the beef market continued to hold steady. Lead times for both machinery and parts remain problematical, forcing many producers to use decommissioned equipment with some smaller farms suffering crop losses due to faulty equipment. In the Seventh District (Chicago), agricultural income for 2022 remained relatively unchanged with most experts expecting most producers to turn a profit in 2022.

Continued next page

What's inside this Issue?

Thoughts on the Ag Economy, Farm Income Forecast, Grain Stock Levels; Fertilizers, Foreign Invest in U.S. Farmland, Inflation Reduction Act, Low River Levels, the Farm Bill, and more!

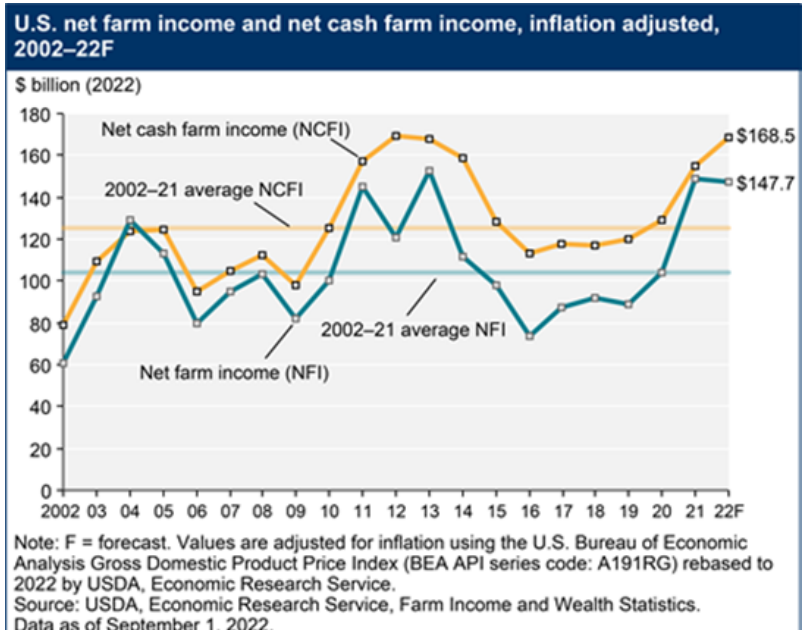
U.S. Farm Sector Income Forecast

In the farm economy, net farm income is one measure (albeit a broad one) of farm profitability. In 2022, net farm income is projected to be \$147.7 billion in 2022, an increase of \$7.3 billion over 2021. This \$7.3 billion increase for 2022 follows an increase in net farm income of \$45.9 billion in 2021 as compared to 2020. According to the USDA's 2022 Farm Section Income Forecast, net cash farm income is set to increase by 15.1% (\$22.1 billion) to \$168.5 billion in 2022. This increase of \$22.1 billion for 2022 follows an increase of \$29.6 billion (25.4 percent) in net cash farm income in 2021. In real terms (accounting for inflation) net farm income in 2022 is set to decrease by 0.6% (\$0.9 billion) while net cash farm income is forecast to increase by 8.7 percent (\$13.5 billion) compared with 2021. It should be noted that net cash farm income is calculated in the year in which sales occur while net farm income is based on the year in which production occurred.

In 2022, farm cash receipts are projected by the USDA in their 2022 Farm Sector Income Forecast to be \$525.3 billion (2022 nominal dollars) which equates to an increase of 21.2 percent over 2021 (\$91.7 billion). Total crop receipts are forecast to be \$247.2 billion in 2022, an increase of 15.3 percent (\$36.4 billion) over total crop receipts for 2021. Receipts for soybeans, corn and wheat are set to increase in 2022 by \$14.9 billion (30.6 percent) for soybeans, \$11.9 billion (16.7 percent) for corn, and \$4.0 billion (33.7 percent) for wheat. These increases account for most of the forecasted growth in crop cash receipts.

To better understand the factors underlying the forecast change in annual receipts from 2021 to 2022, we decompose the change into two separate effects: (1) a "price effect" where we project the change in cash receipts associated with holding the quantity sold constant at 2021 levels and allowing prices to change to forecast 2022 levels; and (2) a "quantity effect" where prices are held constant from 2021 and quantities change to forecast 2022 levels.

Continued on page 4



Federal Reserve (cont.)

Crop progress within the Seventh District lagged due to a late start in planting efforts was catching up. Prices for corn, soybeans, and wheat were down from the previous reporting period along with the prices received for both milk and eggs. Prices for hogs declined slightly from recent levels, while the price for cattle edged upward. As in the Sixth district, lead times for both agricultural equipment and parts continued to be problematic for producers. Agricultural conditions within the Eighth District (St. Louis) seem to have worsened since the publication of the Fed's last report. Crop conditions within the Eighth District have either declined slightly or have remained relatively unchanged. The percentage of the corn, cotton, and soybean crops that rated 'fair' or 'better' sharply declined, while rice experienced slightly increased lead times for deliveries. The Eighth District also stressed that farming conditions remain in a strained state due to input price volatility and shortages in labor, ranking labor as their biggest concern. Agricultural conditions within the Fed's Ninth District (Minneapolis) appear to have strengthened slightly recently with some notable exceptions. A survey of agricultural credit seemed to indicate a trend of continued growth in farm incomes. According to the survey, 80 percent of farm lenders indicated farming incomes in their area increased in the second quarter from a year earlier. While rising production costs continued to be one area of concern for lenders in the Ninth District, lenders felt that commodity prices remained strong enough to offset them. There was some concern as to wheat and small grains production in Montana as that region suffered drought for the second year in a row. In the Fed's Tenth District (Kansas City), conditions regarding the farm economy appeared favorable undergirded by strong commodity prices, despite somewhat recent volatility in certain markets in recent months. Prices for crops remained generally higher than they were a year ago but were lower in August compared to more recent levels. This was evidenced by moderate declines in the prices for both corn and wheat, soybean prices also fell modestly over the past month. With increases in production costs and worse growing conditions relative to other districts, producers within the Tenth District noted that even with elevations in revenue levels for this year, net income levels would be somewhat subdued. Profit opportunities in the livestock sector remain sound as the price for cattle has ticked slightly higher than the previous reporting period, the prices for hogs increased notably. In the Eleventh District (Dallas), drought conditions have improved somewhat over the past six weeks with some areas having received significant rainfall in late August. Many row crops were experiencing high abandonment and low yields resulting in significantly lowered production this year, particularly for cotton. In the Fed's Twelfth District (San Francisco), conditions in the agriculture and resource-related sectors were mixed. Drought conditions in many areas continued to impact the growing season, with some producers letting portions of their farms go fallow to prioritize water usage. Farmers throughout the Twelfth District reported strong international demand for both fresh and processed foods. Shipping bottlenecks eased slightly in recent weeks, but overall supply chain disruptions persisted. Utilities reported continued challenges meeting demand as labor and materials shortages delayed maintenance and expansion projects. Input costs, despite some relief in fuel prices, remained elevated.

USDA September 1 Grain Stocks Report

In the USDA's latest Grain Stocks Report released on September 1st, sentiment was bullish for both corn and wheat while bearish for soybeans. This bearish sentiment for soybeans led to large losses for soybeans while positive sentiment for both corn and wheat helped coax wheat stocks somewhat higher and corn to rally higher as well.

While some in the trade felt that NASS's September Quarterly Stocks report would contain better usage number for corn, few anticipated the measure of traders' surprise when it was revealed that USDA had September 1st corn stock decreasing by 120 million bushels, shy of average trade estimates from a recently conducted Dow Jones survey, news of which could have catapulted the corn market higher on its own merits. When, however, last year's crop was reduced by 41.4 million bushels on reports of both decreasing yield and acreage, this development combined with USDA's revised corn stocks estimate helped bullish sentiments in the corn market go higher with bids for December corn seeing an increase of nearly 27 cents at one point.

With the release of the report, USDA estimated corn stocks to be around 1.377 billion bushels not 1.497 billion (trade estimates). This amount was 148 million bushels below WASDE estimates and amounted to a June through August disappearance of nearly 3 billion bushels. Larger feed and residual use and a 41.4 million bushels downward revision in the 2021-22 corn crop to 15.074 billion bushels, as the result of lower yield and acreage, were reasons for the big change. Planted acreage was 93.3 million, with harvested acres falling to 85.3 million, while yield was reduced 0.3 bushels per acre to 176.7 bushels per acre. The lower-than-expected stocks number was comprised of 510 million bushels on-farm stocks, up 24%, and 867 million bushels off-farm stocks, up just 3%. This development makes way for the possibility that the 2022-23 ending stocks number on corn could inch closer to the 1-billion-bushel mark. Any downward revision in the yield toward 170 bushels per acre, which many experts have suggested as possible, would be a very bullish tightening of supplies.

With the release of the report, estimates for soybean stocks provided the largest surprise as estimates from the Dow Jones survey had stocks at somewhere around 247 million bushels, USDA projections exceeded this by 27 million bushels, placing soybean stocks at 274 million bushels, 17 million bushels higher than last year's ending stocks level of 257 million and 34 million bushels higher than WASDE estimates a month earlier. In addition to soybean stocks coming in higher than initially anticipated, USDA revised the 2021-22 soybean crop higher due to upward revisions in yield to 51.7 bushels per acre, this revision increased the overall soybean crop by 30.2 million bushels to 4.465 billion bushels over 86.3 million harvested acres. Farm stocks for soybeans were estimated at 62.9 million bushels, this represented an 8 percent decrease from levels last year while stocks of soybeans held off-farm were up 12 percent from last year coming in at 211 million bushels. These revisions in soybean stocks and production prompted a decline in bid amounts for November soybeans. Recently released soybean stock data seemed to indicate a disappearance of 698 million bushels of soybeans for the period June through August, this corresponds to a 36 percent increase in disappearance over a year ago. All in all, the revision upward of soybean stock levels comes at a critical time where expert demand has been slack and competition from both Argentina and Brazil has stiffened.



Fertilizer Pricing Dynamics

During the latter part of September 2022, the prices for retail fertilizer, as tracked by DTN continue to show considerable variation as five of the eight major fertilizers were lower in price than the month previous, while three were higher. DTN writer, Russ Quinn indicated that while overall prices for fertilizer prices were lower in recent months, they are considerably higher than what they were just a year ago. Quinn further states, "MAP is 28% more expensive, DAP is 34% higher, 10-34-0 is 36% more expensive, urea is 39% higher, potash is 40% more expensive, UAN28 is 51% higher, UAN32 is 54% more expensive and anhydrous is 78% higher compared to last year." (Quinn, 2022)

As fertilizer production is tied to natural gas supply, U.S. farmers may see some benefit to a squeeze in natural gas availability with prices in Europe surging in response to halted flows through the Nord Stream pipeline, Dow Jones reported. Albert Chu of Newton Investment Management said while low natural gas supplies in Europe will be limited to only heating and electricity, ample natural gas supplies in the U.S. will allow for fertilizer production. U.S. farmers aren't the only ones feeling the impact of Russia's war on Ukraine in their fertilizer prices. Fertilizer prices have doubled or even tripled in Africa with some fertilizer products hard to find, according to Dow Jones. Farmers are turning to maggots, whose digestive system effectively turns food waste into organic fertilizer (Quinn, 2022).

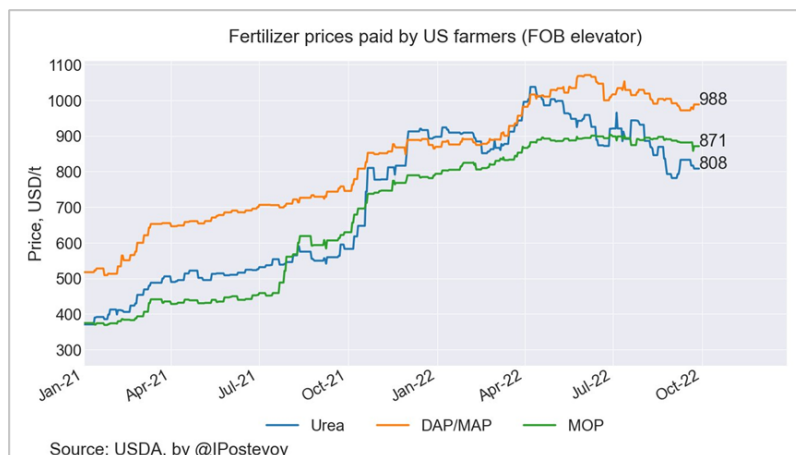
At the recent annual meeting of the West Texas Agricultural Chemicals Institute, fertilizer prices and availability were among the main topics of discussion. Of concern has been the sharp increase in the price for natural gas, the primary ingredient used in ammonia production. "Two years ago, natural gas in the U.S. was \$2.35 per MMBtu. Last Wednesday (Sept. 7), it was \$8.14," said panelist and economist Jason Troendle, The Fertilizer Institute. "Natural gas is dramatically higher in Europe. Troendle goes on to ask the question, "You think it's bad here? About a month ago, it was \$115 per MMBtus for natural gas in Europe. \$115 MMBtu is a record. Absolutely crazy." Troendle went on to explain that natural gas is the key component in ammonia production. This is critical as ammonia is the building block for nitrogen fertilizers. Troendle further explained, "It makes up anywhere between 70% to 90% of the cost of production of ammonia." As Europe has shut down about 70% of its ammonia production, Troendle states, "That means they can't produce the 9% they historically have globally, so they have to turn to the global market and try to buy nitrogen the rest of the world historically has bought. Again, more buyers, same amount of product, natural upward pressure on price." (Huguley, 2022)

With the fertilizer market being a global market, Troendle says, "When we think of cotton, corn, soy, wheat, about a quarter of all of those crops grown globally are exported. For fertilizer, it's almost double that -- 44% of all fertilizer leaves the country where it was produced and moves to another country where food is grown." Any changes in fertilizer prices in the U.S. are, more often than not, attributable to shifts in the global market rather than shifts in the U.S. market. This is glaringly obvious by the example of Belarus, Belarus supplies one-fifth of the world's potash but is currently under sanctions by the western world. Troendle states that, "All of a sudden, you take a fifth of

any product off the market, what is that going to do? It's going to increase the price." This same case is applicable to another major player in the global fertilizers market, China. China recently put in place an export quota on the exportation of phosphates. Why is this significant? It is significant because Chinese share of the global phosphates market is around 25 percent. As in the case with Belarus, when 25 percent of a product is removed from a market, Troendle argues that "it's going to have upward pressure on price." (Huguley, 2022) Also, Russia accounts for 21 percent of the global potash market, according to Troendle and even while the U.S. imports most of its potash (83 percent) from its northern neighbor, Canada, whose share of the global potash market is 39 percent, Russia's share of the U.S. potash market was not insignificant at around 8 percent (Ostendorf, 2022). Combined, Russia and Belarus provided 12 percent of potash used in the U.S. in 2021. Because of the magnitude in potash production in Russia, sanctions on Russia will certainly have a ripple effect on global markets when one considers that Russia and Belarus, combined, control 40 percent of the world's potash supply (Colussi et al., 2022)

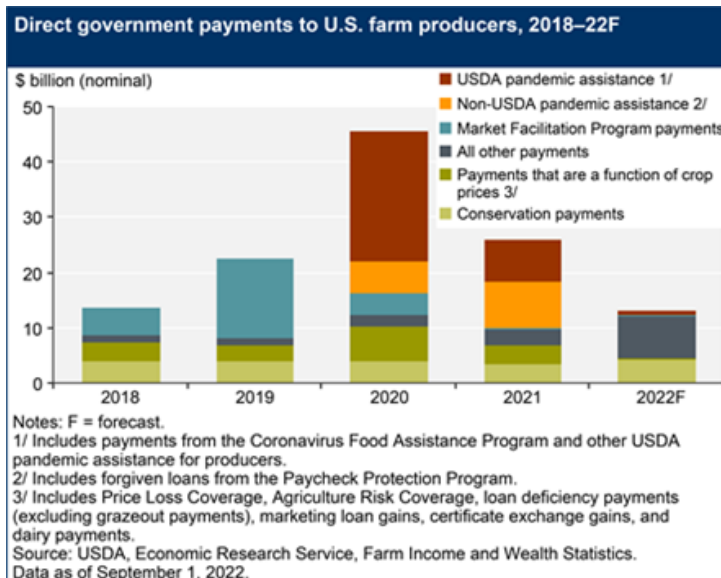
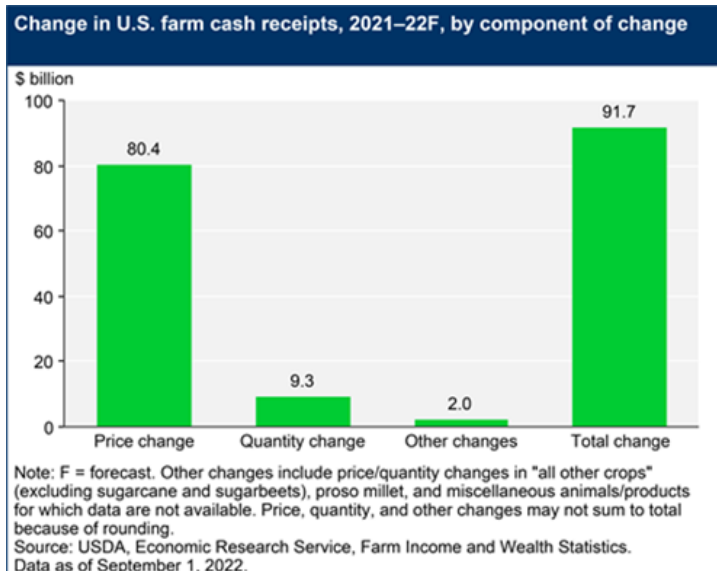
Joe Outlaw, an economist with Texas A&M and co-director of the Agricultural & Food Policy Center (AFPC) also participated in the panel discussion regarding fertilizer prices. Outlaw indicated that based on his 30 years of experience in working in policy and studying markets that it was a lot easier for industry to pass on increases in costs to consumers (agricultural producers) whenever higher prices are anticipated, Outlaw described input costs (e.g., fertilizer costs) as being 'sticky', indicating that input prices don't fall very quickly. Outlaw stated "Anhydrous is the function of corn and natural gas. Those two variables describe about 90% of the variability in anhydrous. Why? Because corn, up until recently, was the biggest crop in this country and used a lot of fertilizer, a lot of nitrogen and obviously natural gas. So, you start asking questions, a lot of questions." (Huguley, 2022)

Undoubtedly, the fertilizers market involves a lot of factors, and right now there seems to be more questions than answers, Outlaw said, "I still fall back to my gut [instinct], which is there's a tendency for prices to move up on all inputs when things are going a little bit better; they were going a little bit better. But you can certainly say there were all kinds of disruptions, weather disruptions and everything else. And if you ask me about the rail system and how fertilizers are going to get to anybody that needs it this year, I have no clue how this is going work." (Huguley, 2022)



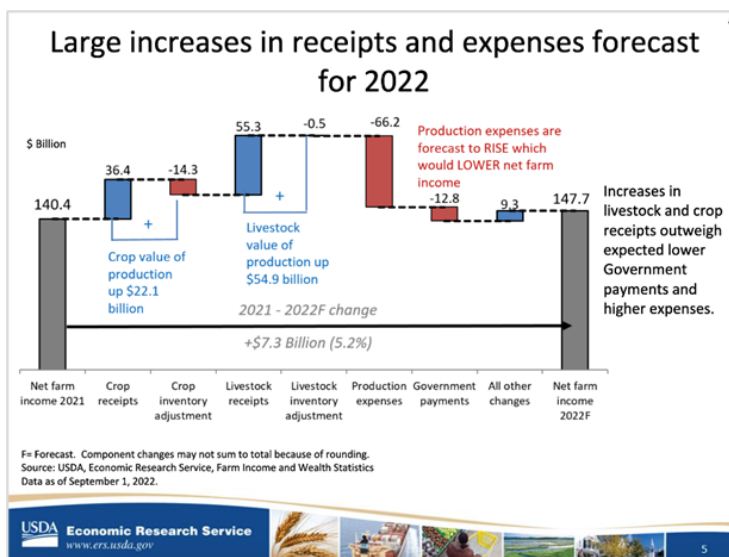
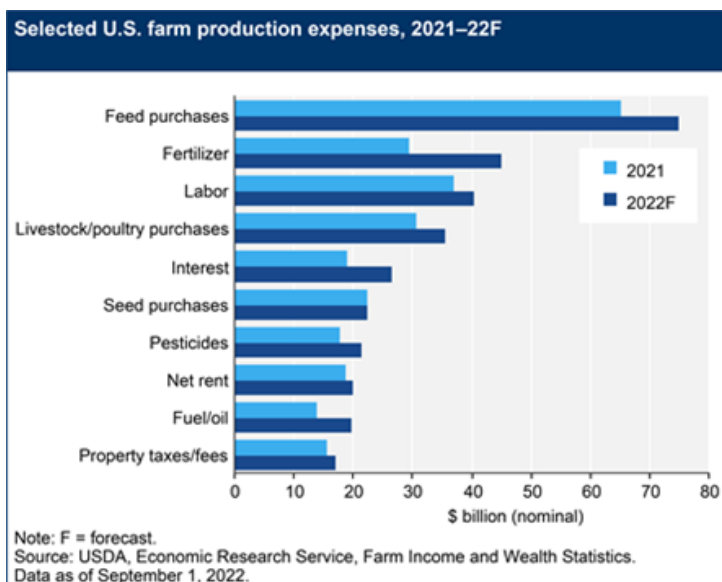
Farm Income Forecast (cont.)

In 2022, increasing prices and quantities sold are expected to have positive effects on cash receipts. Overall, cash receipts are forecast to increase by \$91.7 billion in 2022, with an estimated positive price effect of \$80.4 billion, and a projected positive quantity effect of \$9.3 billion. In addition, an upward shift of \$2.0 billion is from forecasts for commodities whose price and quantity effects cannot be separately determined. Price effects on cash receipts are positive for both crop and livestock commodities, but quantity effects are only forecast to be positive for crop commodities.



Direct Government farm payments (to include Federal farm program payments paid directly to farmers/ranchers excluding USDA loans and insurance indemnity payments made by the Federal Crop Insurance Corporation) in 2022 are projected to be \$13.0 billion, a decrease of 49.7 percent (\$12.8 billion) from 2021 levels. The USDA states that this is primarily due to lower supplemental and ad hoc disaster assistance extended to farmers/ranchers related to COVID 19 as compared with 2021 (USDA-FSIF, 2022).

The USDA projects production expenses to be up across the board in 2022, with the feed and fertilizer-lime-soil conditioners expecting to see the largest increase in purchase prices. The USDA forecasts total production expenses to increase by 17.8 percent (\$66.2 billion) to \$437.3 billion in 2022. This would represent the largest year-to-year dollar increase on record. This spike is only partially due to the economy-wide increase in prices. When adjusted for inflation, production expenses are forecast to increase by 11.3 percent from 2021 to 2022 yet remain below the record-high levels of 2012–14.



Farm sector equity is expected to come in somewhere around \$3.34 trillion in nominal terms, equating to an increase of 10.4 percent in 2022. Following expected increases in the value of farm real estate assets, farm sector assets are forecast to be \$3.84 trillion in 2022, a 9.7 percent (nominal) increase. Farm sector debt is forecast to increase 4.6 percent in 2022 to \$496.0 billion in nominal terms but fall by 1.2 percent when adjusted for inflation.

Continued next page.

Farm Income Forecast (cont.)

Crop cash receipts are forecast at \$274.2 billion in calendar year 2022, an increase of \$36.4 billion (15.3 percent) from 2021 in nominal terms. Combined receipts for corn, soybeans, and wheat are forecast to increase by \$30.7 billion, accounting for most of the net increase, and receipts are expected to fall for potatoes and fruits and nuts. Soybean receipts in 2022 are expected to increase by \$14.9 billion (30.6 percent), because of forecasted growth in both prices and quantities sold. Similarly, corn receipts are forecast to increase by \$11.9 billion (16.7 percent) in 2022, caused by higher expected prices and quantities. Wheat receipts are forecast to increase by \$4.0 billion (33.7 percent), as a large gain in prices will overshadow a negative quantity effect.

On the situation in Ukraine, the University of Missouri's Food and Agricultural Policy research institute (FAPRI) states that due (in part) to the war and because of reduced supplies due to inclement weather conditions (world-wide), agricultural prices have trended upward, while the prices for fertilizer, fuel and other inputs have similarly, akin to agricultural commodity prices, trended upward, spurring increases in farm production expenses. While experts project a downward trend in prices for a range of farm commodities and farm inputs in the years ahead, current nominal prices remain high by historical standards. Owing to these developments, FAPRI, from information gleaned in mid-August 2022, updated their 2022 FAPRI baseline outlook. FAPRI utilized identical 2022 crop production data as released by the USDA in its August Crop Production report. FAPRI's macroeconomic assumptions are based on July 2022 forecasts by S&P Global. Current government policies are assumed to continue, and selected provisions of the recently approved Inflation Reduction Act (IRA) are incorporated along with the 2020-2022 RFS requirements that were finalized in June 2022. The COVID-19 pandemic is assumed to continue to wane and related supply chain disruptions are anticipated to be resolved in the future.

According to FAPRI, key takeaways are: The war in Ukraine has reduced exports by a major grain and oilseed trading country, contributing to higher prices. The baseline assumes the conflict continues to limit Ukraine's production and trade in the year ahead, before an eventual return to normalcy. Weather is another factor pushing up crop prices. Unfavorable weather reduced the South American soybean crop earlier this year and has reduced crop production in the United States and Europe this summer. Tight global supplies result in record prices for wheat and cotton and near-record prices for corn and soybeans. For the 2022/23 marketing year, wheat prices are projected to exceed \$9 per bushel, corn tops \$6 per bushel, soybean prices are more than \$14 per bushel and cotton prices average 96 cents per pound. Prices for fertilizer, fuel and many other farm inputs are also up very sharply in 2022. For example, variable corn production expenses increase by an estimated \$164 per acre in 2022. Projected input costs moderate in the years ahead but remain well above 2021 levels. If better growing conditions result in trendline crop yields in 2023 and later years, crop prices could also decline from current levels. In 2023/24, projected average corn prices drop to \$5.22 per bushel, wheat falls to \$7.11 per bushel and soybean prices decline to \$12.36 per bushel (FAPRI-BASE).

Covid's effects are still being felt in commodity markets. Disruptions stemming from supply chain logistics, increases in overall inflation (food particularly), on-going conflict between Russia and Ukraine, and weather-related events (worldwide) have all played a part in market disruption. FAPRI goes on to state that "Volatility in these markets in the near term is to be expected and it is important to note that the path these markets take will be more unpredictable than what is projected here." FAPRI cautions that their numbers represent projections and are not estimates or forecasts. FAPRI assumes normal weather, current policy and economic conditions in their most current projections and do not assume any further COVID-19 associated disruptions.

Global prices surged and stocks tightened in 2022 driven by multiple factors including the war in Ukraine, adverse weather conditions, and lingering COVID-19 supply chain effects.

From 2016/17 to 2020/21, 29% of global exports of barley, corn, and wheat were supplied by Ukraine and Russia. This share is expected to drop to 22% in 2022/23 and return to a five-year average of 25% by 2027/28 assuming hostilities come to an end.

Ukraine and Russia supply an outsized global share of sunflower seed and co-products. Ukraine has supplied the largest global share of sunflower seed co-products and with the war restricting processing capacity their share of these net exports is expected to drop by 30% or more in 2022/23.

Supply chains have been further disrupted by Russia's invasion of Ukraine resulting in decreased exports of energy resources and other important components of agricultural production such as fertilizer which contributes to decreased global supplies in 2021/22 and gradually recovering by 2026.

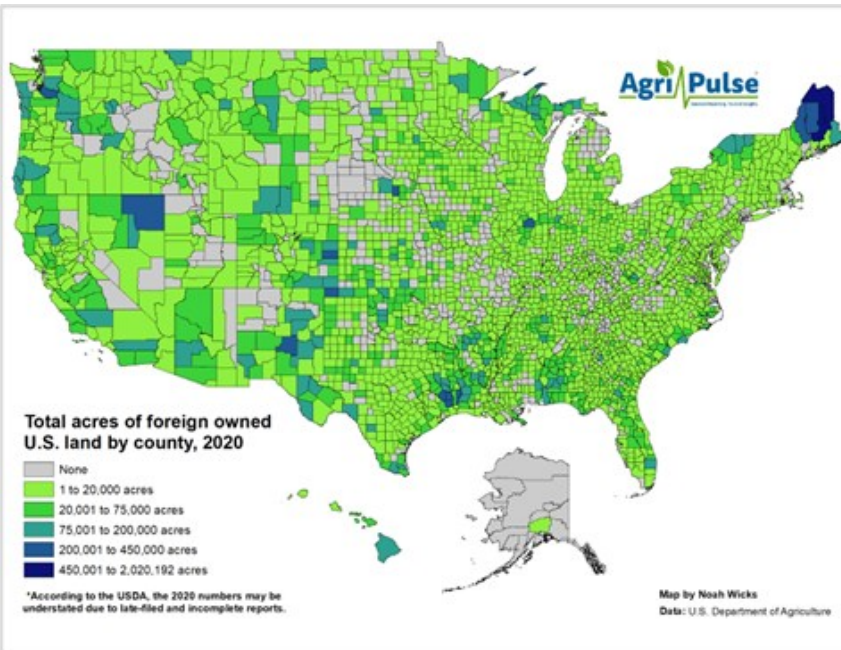
Major exporters of grain and oilseeds – Argentina, Brazil, U.S., and Canada - experienced adverse weather resulting in lowered grain and oilseed production. At the same time, major importers of grain for food - particularly in the Middle East and North Africa – have been experiencing severe drought, resulting in tens of millions of people slipping further into food insecurity.

China continues as the world's largest importer of grains and oilseeds despite a projected drop in 2022/23 corn imports of approximately 40% relative to the previous year. (FAPRI-BASE, 2022)



Foreign Investment in U.S. Farmland

Lawmakers have recently expressed increased feelings of unease over the amount of foreign investment in the U.S. agricultural landscape, especially the foreign purchase of U.S. farmland. According to a recent article in AgriPulse, foreign holdings of U.S. agricultural land had increased by 2.4 million acres in 2020 with 40 percent of growth occurring in just three states: Oklahoma, Texas, and Colorado (Wicks, 2022b). Some states did see declines in foreign ownership interest of agricultural land. Oregon saw a decrease of 47,931 acres

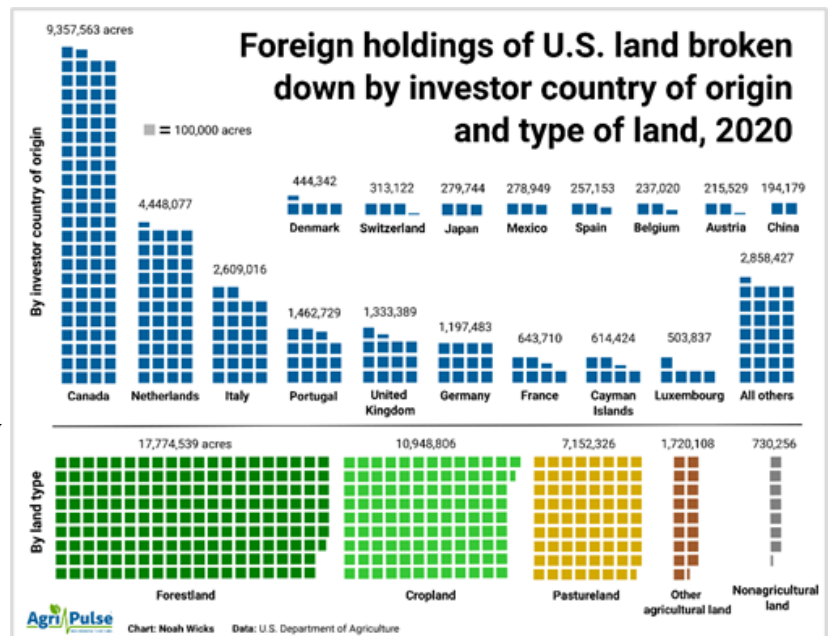


under foreign ownership and New Hampshire saw 3,145 acres come out from under foreign ownership/interest (Wicks, 2022b). The article goes on to say that these holdings are relatively small in comparison with overall farmland holdings that are foreign owned. According to a 2020 report released by the USDA's Farm Service Agency entitled Foreign Holdings of U.S. Agricultural Land Through December 31, 2020, foreign investors held an interest in approximately 37.6 million acres of U.S. agricultural land (both forest land and farmland). This was a 2.4 million acre increase over acres reported in its December 31, 2019 report and represents 2.9 percent of all privately held agricultural land in the United States (USDA-FHAL, 2020). The report goes on to state that forest land accounted for 46 percent of all reported foreign-held acreage, cropland for 29 percent, pasture and other agricultural land for 23 percent, and non-agricultural land for 2 percent.

The report states that foreign holdings of U.S. agricultural were modest from 2009 through 2015, increasing

at an average rate of 0.8 million acres per year. The report states that foreign acquisition of U.S. agricultural land have jumped at an increasing rate since 2015, increasing at an average rate of 2.2 million acres annually (USDA-FHAL, 2020). It is interesting to note that this report is reported under the aegis of The Agriculture Foreign Investment Disclosure Act of 1978 (AFIDA). AFIDA requires all foreign persons holding U.S. agricultural land as of February 1, 1979 to file a report of their holdings with the U.S. Secretary of Agriculture (USDA-FHAL, 2020).

According to the USDA report, Canadian investors, to include both entities entirely owned/controlled by Canadians and U.S. corporations with Canadian shareholders, held 12.4 million acres of land, which represents nearly one-third of all foreign controlled agricultural land in the U.S. Following Canada, the Netherlands (13%), Italy (7%), the United Kingdom (6%), and Germany (5%) round out the top five countries with ownership interests in foreign agricultural lands in the U.S. China saw an increase in U.S. agricultural land from 191,000 acres in 2019 to just slightly over 194,000 acres in 2020. The last significant increase in Chinese acquisition of U.S. farmland acres occurred between 2012 and 2013 after the privately owned Chinese company Shanghui, now known as the WH Group, purchased U.S. pork giant Smithfield Foods. Even with the slight increases in Chinese acquisition of U.S. agricultural lands, Chinese investors still hold less than 1 percent of all foreign-held acres in 2020 (Wicks, 2022b). Analysts caution that even though Chinese acquisition of U.S. agricultural lands has appeared to remain virtually unchanged, the data on foreign ownership of U.S. agricultural land is two years old. Also clouding the picture of who owns what are the ways in which companies are incorporated and listed and also relatively lax efforts by the USDA on enforcing reporting provisions under the act may mean that current data on Chinese ownership of U.S. land may be not entirely accurate. Experts caution that foreign land ownership by Chinese investors is not only a growing domestic issue but a global one as well with major advancements in land procurement by China occurring in Australia and Africa.



Continued next page.

Foreign Investment (cont.)

With this in mind, a provision that would bar businesses that are controlled by the Chinese government from purchasing U.S. farmland and from participation in USDA sponsored programs cleared the U.S. House in August. This was part of the fiscal 2022 funding bill for USDA. However, there is no corresponding provision in the Senate's version of the appropriations bill that has been approved by the Senate Appropriations Committee in August (Wicks, 2022a). Lawmakers' are concerned that China could gain undue control over the U.S. food system through large purchases of U.S. farmland.

The House amendment would extend the same ban onto the state-owned businesses of three other U.S. adversaries. However, lead author, Rep. Dan Newhouse, R-Wash., designed it with China in mind. Newhouse shared with Agri-Pulse that he intended the introduced legislation to serve as a preventative measure, a way for Congress to keep the Chinese government from acquiring U.S. land in the future (Wicks, 2022a). Newhouse stated that "We know that there is a stated goal of the Chinese communist government to accomplish the control of not just agricultural assets, but many different kinds of assets around the globe," Newhouse said. "This was a preemptive effort on our part to prevent important, critical parts of our supply chain from being under the control of the Chinese." While China has encouraged investment in foreign markets expanding the nation's influence throughout the world thus shoring up national food security, a report released by the USDA-ERS suggested that Chinese investments were diverging from land acquisition to acquiring existing companies (Wicks, 2022a). "Most Chinese agricultural investment has bypassed the United States," the report's authors wrote. "North America has received the smallest share among all continents of China's outbound agricultural investment, despite being top supplier [sic] of China's agricultural imports and a top destination for China's nonagricultural investments."

When Newhouse introduced his amendment during a House Appropriations Committee markup on June 30th, legislators from both parties expressed concerns about the potential ramifications of allowing Chinese ownership of U.S. land.

James Talent, a former U.S. senator from Missouri and a current member of the U.S.-China Economic and Security Review Commission, spoke with Agri-Pulse in his personal capacity and said Chinese ownership of farmland can be concerning, particularly because the Chinese government is "sophisticated in using economic leverage" to further its own goals. He also questioned the accuracy of foreign ownership data.

"Part of the difficulty here is that we're not certain how reliable our own figures are, because there's a requirement that foreign entities report when they buy agricultural land, but there's really no means for enforcing that," Talent said. "And it's not like the Chinese are very honest about other economic statistics, that's another well-known fact." But Talent said right now, the Asian nation appears to be more focused on feeding its own people than on disrupting the U.S. food supply. "I think, in general, it's fair to say that their buying to this point is designed to secure their own food supply chains, rather than to gain leverage over ours," he said. "That could change."

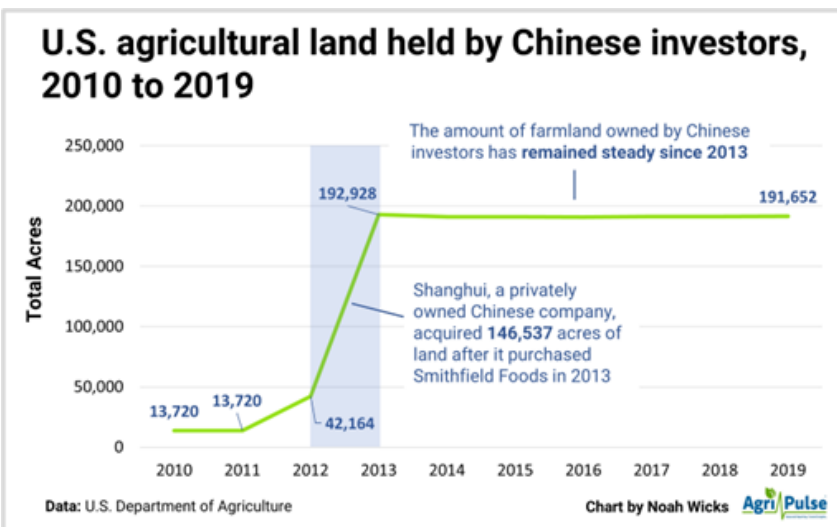
Of Chinese ownership of U.S. agricultural lands, Agri-pulse through a Freedom of Information Act request learned that 76 percent of U.S. agricultural land (146,537 acres) owned entirely by Chinese entities in 2019 belonged to Smithfield Foods. Smithfield controls more than 49,000 acres of land in North Carolina, more than 42,000 in Missouri, just above 33,500 acres in Utah, over 13,000 in Virginia, more than 3,800 acres in Colorado and about 2,500 acres in Oklahoma. It also owns land in Texas, South Carolina and Illinois, but far fewer acres than in other states. After purchasing Smithfield in 2013, Shanghai took control of several properties in Iowa, including processing plants, at least one livestock buying station, a feed mill, an office facility in Ames, a parcel of land near Manning where construction of a feed mill was planned, and leases of approximately 50 barn structures from local farmers near Algona, according to a series of letters exchanged between Smithfield representatives and the Iowa Attorney General's office.

But because of the state's laws restricting foreign-owned or leased farmland, Shanghai informed the attorney general's office of its decision of leasing 40 percent of the leased barns under their control to U.S.-based Christensen Farms whilst converting the remainder into traditional contract finishing and custom feeding arrangements by the end of 2015. According to the letters, Smithfield's other properties were not on agricultural land.

Other states with Smithfield operations, like Oklahoma and Missouri, have some restrictions on foreign farmland ownership, but none that prevent the company from operating in them.

Oklahoma's statute allows foreign corporations to own agricultural land for swine, poultry or livestock feeding

operations. Missouri previously had a ban on foreign ownership, but state legislators changed it in 2013 — 15 days before the Smithfield acquisition — to allow foreign investors to own up to 1% of the state's agricultural land.

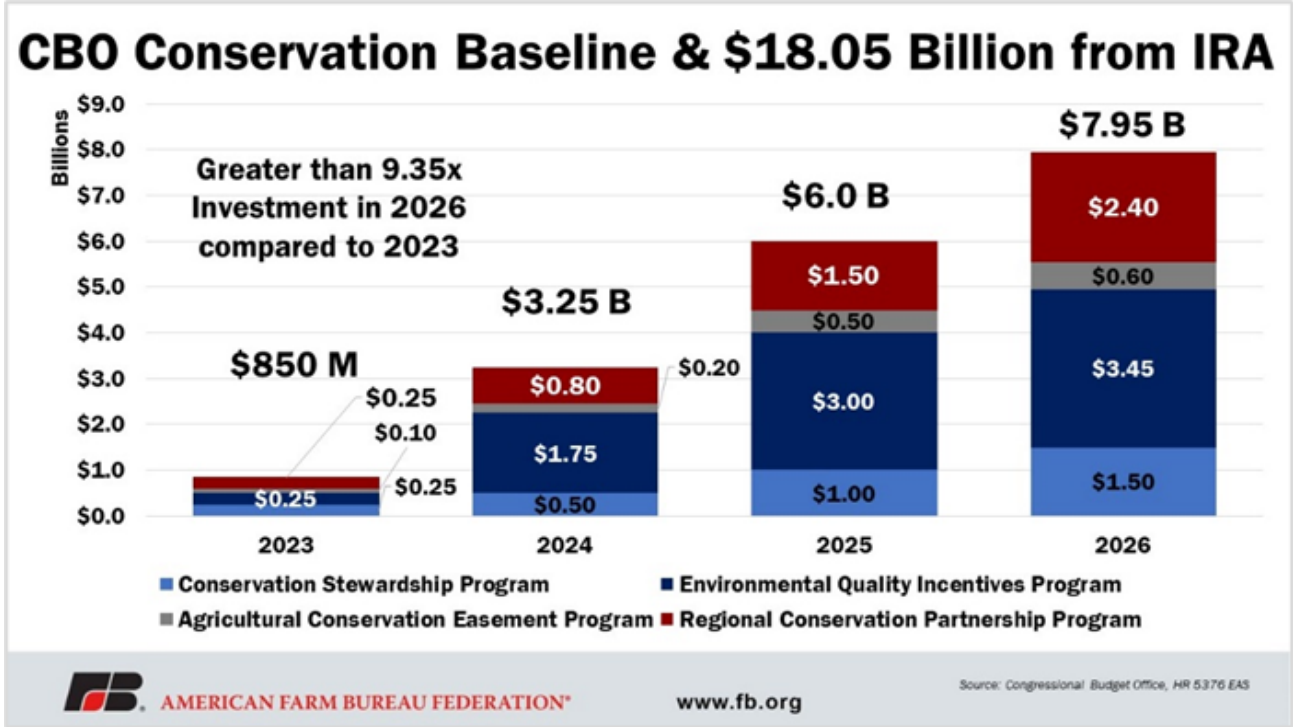


The Inflation Reduction Act

The Senate passed the Inflation Reduction Act of 2022 (IFRA) on August 7, 2022, as a substitute to the House-passed Build Back Better Act (BBBA, H.R. 5376). Both bills are budget reconciliation measures, which allow for an increase in spending pursuant to the FY2022 budget resolution. Programs in the jurisdiction of the House and Senate Agriculture committees are included in each bill. The BBBA would have increased agriculture spending by \$82 billion over the 10-year period FY2022-FY2031. A subset of nearly \$38 billion was included in the Senate’s version for agricultural conservation, credit, renewable energy, and forestry. Funding would remain available only through FY2031. The Senate bill excludes entirely BBBA sections for agriculture research and facilities and rural water. IFRA contains \$19.5 billion for agricultural conservation, adding over \$18 billion to existing farm bill conservation programs, including the Environmental Quality Incentives Program (EQIP; \$8.45 billion), Regional Conservation Partnership Program (RCPP; \$4.95 billion), Conservation Stewardship Program (CSP; \$3.25 billion), and Agricultural Conservation Easement Program (ACEP; \$1.40 billion), cumulatively \$4.25 billion less than proposed in the BBBA. These programs provide financial and technical assistance to private landowners to voluntarily implement conservation practices on agricultural land. Program funds would be directed to climate change-related goals and would prioritize mitigation activities. The Senate bill would also extend some of these programs’ authorities beyond their current expiration in FY2023, to FY2031. Some program authorities would not be extended, such as payment and income limits. Additional funding would

also be provided for conservation technical assistance (\$1.0 billion), a carbon sequestration and greenhouse gas emissions quantification program (\$300 million), and administrative expenses (\$100 million).

IFRA also contains debt relief provisions for distressed farm borrowers and underserved farmers and ranchers. These provisions would



replace similar provisions from the American Rescue Plan Act (ARPA; P.L. 117-2, §§1005-1006) which has subsequently been blocked by the courts because it was found to be race-based and not narrowly tailored to meet a compelling state interest. It would use budgetary offsets of about \$6 billion would be rescinded or repurposed from the ARPA funding.

The new debt relief program would provide \$3.1 billion for debt modifications, including debt forgiveness, for “distressed borrowers” of U.S. Department of Agriculture (USDA) Farm Service Agency direct or guaranteed farm loans “whose agricultural operations are at financial risk.” The Senate bill also includes nearly \$2.9 billion to help underserved farmers, ranchers, and forest landowners, defined to include those living in high poverty areas, veterans, limited resource producers, and beginning farmers and ranchers. Most of this assistance (\$2.2 billion) is intended to go to individuals who experienced discrimination before 2021 in USDA farm lending programs. Individual payments for discrimination would be limited to \$500,000 and are to be administered by nongovernmental entities selected and overseen by USDA. The bill also would provide \$125 million for technical assistance, outreach, and mediation; \$250 million for land loss assistance, such as heirs’ property and fractionated land; \$250 million for agricultural education emphasizing scholarships and career development at historically Black, tribal, and Hispanic colleges; and \$10 million for equity commissions at USDA.

IFRA also supports renewable energy initiatives, primarily by providing \$13.3 billion for farm bill energy title programs. IFRA would provide \$1 billion for electric loans for renewable energy under the Rural Electrification Act. USDA may use the funding to make loans for electric generation from renewable energy resources, including for projects that store electricity. The bill would provide approximately \$1.7 billion for eligible projects under the Rural Energy for America Program (REAP; 7 U.S.C. §8107) and approximately \$304 million for grants and loans for underutilized renewable energy technologies and technical assistance with REAP applications.

Continued next page.

Inflation Reduction Act (cont.)

The bill would amend 7 U.S.C. §8103 to provide \$500 million for grants to increase the sale and use of agricultural commodity-based fuels through infrastructure improvements for blending, storing, supplying, or distributing biofuels. For rural cooperatives, it would provide \$9.7 billion—for financial assistance (e.g., loans) to eligible entities for the long-term resiliency, reliability, and affordability of rural electric systems through the purchase of renewable energy, renewable energy systems, zero-emission systems, carbon capture and storage systems, and more.



ABC News.

System (NFS, administered by the U.S. Forest Service), including funding for hazardous fuel reduction or vegetation management projects on NFS lands, for inventorying and protecting old-growth and mature forests on NFS lands, and for improving environmental reviews. Subtitle D would also include \$2.75 billion to support grants and other financial assistance for nonfederal forest management, including funding for urban and community forestry programs. The grant programs would support climate mitigation activities on non-federal forests, facilitate participation in forest carbon markets, and support the development and application of innovative wood products. Several of the grant programs would be specifically targeted to support the participation of “underserved forest landowners.”

On August 12th, the House passed, on a party-line vote, the \$750 billion Inflation Reduction Act after the Senate also voted along party lines to pass the bill on August 7th. The bill includes provisions to use fiscal year 2022 reconciliation instructions to raise revenue and the bill’s stated goal is to lower prescription drug costs, fund new energy, climate, and health care initiatives and reduce budget deficits. Provisions specific to agriculture include nearly \$40 billion for spending on programs and initiatives ranging from farm bill working lands conservation and technical assistance to renewable energy and biofuels. There are also funds provided for rural development and drought mitigation. As Congress moves on from this bill, questions are being raised about provisions that impact farm bill programs and whether or not it changes the policy conversations and/or political landscape for the 2023 farm bill.

U.S. Seasonal Farm Price Outlook

The following table represents national seasonal average farm prices (\$/unit), as per the USDA WASDE report.

Crop	2019/20 Estimate	2020/21 Estimate	2021/22 Estimate	2022/23 September	2022/23 October
Corn	\$3.56	\$4.53	\$6.00	\$6.75	\$6.80
Cotton	\$0.596	\$0.663	\$0.914	\$0.960	\$0.900
Rice (LG)	\$12.00	\$12.60	\$13.70	\$16.50	\$16.50
Rice (Southern MG)	\$11.60	\$13.00	\$14.10	\$17.00	\$17.00
Sorghum	\$3.34	\$5.04	\$5.94	\$6.65	\$6.65
Soybeans	\$8.57	\$10.80	\$13.30	\$14.35	\$14.00

Fruit and Vegetable Interests Seek Additional Farm Bill Funding

The call for increased funding from the producers of fruits, vegetables, and other specialty crops will come to lawmakers as they begin to draw up legislation framing a new farm bill. This increased funding will be used to fund new research into automation and new-crop protection products. The sector is also devising new risk methodologies dealing with outbreaks of pests and foodborne illnesses not covered by traditional crop insurance products. Whether the funding will be there or not remains uncertain as it is not certain if there will be any new funding in the next farm bill. Industry leaders remain confident that policymakers' have an interest in improving Americans' nutrition and reducing diet-related diseases which could help the sector foster political support for its farm bill recommendations.



The Specialty Crops Farm Bill Alliance intended to have its farm bill recommendations ready by the end of September, but, as they say, the devil is in the details. Details such as the amount of new funding the coalition will be seeking as well as the proposal for new risk management tools remain to be worked out. Lawmakers' and aides' reaction to calls for increased fundings are that farm groups should not expect any increases in farm bill funding. Dave Puglia, president/CEO of the Western Growers Association, recently told members of the International Fresh Produce Association that he refuses to accept that.

Puglia stressed the importance of maintaining alliances between various industry groups citing the example of cooperation between the fruit and vegetable sector with nutrition advocates stating that by working together the fruit and vegetable sector had successfully cemented the support of both urban and suburban lawmakers in past farm bills. Not to disparage all of the farmers who grow the other stuff that gets most of the ag portion of the farm bill, but the nutrition advocacy crowd looks very favorably on us, and so all the more reason to keep us tied together," said Puglia.

The White House's release this week of a national strategy for nutrition and health could help put a focus on the importance of the specialty crop sector heading into the farm bill debate, said Mollie Van Lieu, IFPA's vice president for nutrition and health. "This is the industry that can answer the problem of dietary quality," she said.

The 2018 farm bill funded the Specialty Crop Research Initiative at \$100 million, up from \$80 million in the 2014 law. "We want to see increased investment in new biologicals and alternatives to crop protection tools that have been taken away from us," Puglia said.

California, other states and the federal Environmental Protection Agency "are moving quickly to take crop protection tools out of the toolbox without alternatives available ... And we're seeing increased pest pressures in places where we haven't seen them before," likely as a result of climate change, Puglia said.

He also said the industry needs USDA to fund more research on automating the harvesting of crops. It's hard, Puglia noted, for the sector to attract private investment in developing equipment that serves limited, niche markets.

The need for automation has become more acute with the industry's inability to get Congress to pass ag labor reforms. The House-passed Farm Workforce Modernization Act, which would expand the H-2A program and provide a path to legal status for existing works, remains bogged down in the Senate.

Puglia said lawmakers need to be reassured that the industry isn't trying to shed workers but rather is attempting to move employees into better jobs than what they have now. Future jobs will involve "operating equipment up on the platform, in the shade," he said.

The coalition also is likely to seek more funding for the Specialty Crop Block Grant program, which provides funding to state departments of agriculture to fund local and regional priorities.

As with the SCRI, successive farm bills have steadily increased the funding for the block grant program, from \$45 million a year in the 2008 farm bill to \$75 million in the 2014 law. The 2018 farm bill funds the program at \$85 million a year.

Leaders of the alliance continue to hash out proposals for expanding the availability of risk management products.

There is continuing interest in the sector for an insurance policy that would protect producers' revenue when there are marketing disruptions due to outbreaks of foodborne illnesses. Some producers also would like protection from the market impacts of trade disruptions, pests and quarantines and other events.

Although USDA already has the legal authority to consider new crop insurance policies, the new types of coverage that specialty crop producers are seeking will likely require new language in the farm bill, said Robert Guenther, chief public policy officer for IFPA.

Crop Market Situation for the 2022 Marketing Year

The information that is presented in this market update reflects current information as of October 12, 2022.

Corn

The 2022/23 U.S. corn outlook is for reduced supplies, greater feed and residual use, lower exports and corn used for ethanol, and smaller ending stocks. Corn production is forecast at 13.895 billion bushels, down 49 million on a reduction in yield to 171.9 bushels per acre. Corn supplies are forecast at 15.322 billion bushels, a decline of 172 million bushels from last month, as lower production and beginning stocks are partially offset by higher imports. Exports are lowered 125 million bushels reflecting smaller supplies and slow early-season demand. Projected feed and residual use is raised 50 million bushels based on indicated disappearance during 2021/22. Corn used for ethanol is lowered 50 million bushels. With supply falling more than use, corn ending stocks for 2022/23 are cut 47 million bushels. The season-average corn price received by producers is raised 5 cents to \$6.80 per bushel.

The USDA report was a little negative for corn versus pre-report expectations. USDA reduced average corn yield this month to 171.9 bushels per acre from 172.5 last month and near the average analyst estimate of 171.8. The total crop is seen at 13.895 billion bushels, down from 13.944 billion last month and also a little above expectations. The reduction was driven by the western Corn Belt, as USDA lowered its projected South Dakota yield by 8 bushels per acre, Kansas by 7, and Nebraska by 4. The only state with a notable increase was Illinois, where the yield estimate was raised by 6 bushels per acre.

Soybeans

Soybean production is forecast down 65 million bushels at 4.3 billion on account of lower yields. Harvested area remains unchanged at 86.6 million acres. The soybean yield is projected at 49.8 bushels per acre, down 0.7 bushels from the September forecast. With lower production partly offset by higher beginning stocks, supplies are reduced 31 million bushels. Soybean exports are reduced 40 million bushels to 2.05 billion with increased competition from South America. With lower exports partly offset by increased crush, ending stocks are unchanged from last month at 200 million bushels. The U.S. season-average soybean price for 2022/23 is forecast at \$14.00 per bushel, down 35 cents. Soybean meal and oil prices are unchanged at \$390.00 per short ton and 69 cents per pound respectively.

For soybeans, USDA projects the crop at 4.313 billion bushels on an average yield of 49.8 bushels per acre, down from 4.378 billion and average yield of 50.5 bushels last month. The trade was on average expecting USDA to come in at 4.381 billion at an average 50.6 bushels per acre. The soybean carryout was surprisingly left unchanged at 200 million bushels, whereas analysts were on average expecting it to be raised to 248 million bushels. It lowered projected soybean exports by 40 million bushels. USDA reported 526,000 metric tons of soybeans sold to China, for the current marketing year.

Rice

The outlook for 2022/23 U.S. rice this month is for slightly increased supplies, unchanged domestic use, lower exports, and larger ending stocks. Supplies are raised slightly as the NASS October 12th Crop Production report increased the all rice yield 13 pounds to 7,599 pounds per acre. The 2022/23 export forecast is lowered 2.0 million cwt to 75.0 million, all long-grain rice, as relatively higher U.S. prices contribute to a slow pace of sales this marketing year. If realized, this would be the lowest all rice export total since 1991/92. Ending stocks are raised 2.3 million cwt to 33.2 million, which would still be down more than 16 percent from the prior year. The season-average farm price for all rice is unchanged at \$19.40 per cwt.

The 2022/23 global rice outlook this month is for lower supplies, consumption, trade, and ending stocks. Supplies are lowered by 3.6 million tons to 689.3 million for 2022/23, primarily on decreases in production for India and Pakistan. India's production is lowered 2.5 million tons to 124.0 million based on the government's first estimate of the 2022/23 kharif crop. Production in Pakistan is lowered 1.0 million tons to 7.4 million as widespread and prolonged flooding, particularly in the Sindh province, reduced harvested area and yields. Global exports are lowered 0.4 million tons to 53.2 million as decreases for India and Pakistan are partly offset by increases for Vietnam, Thailand, and Brazil. Global 2022/23 ending stocks are lowered 2.4 million tons to 171.2 million, primarily due to a decrease for India, and would be the lowest level since 2017/18.

Cotton

Estimates for 2022/23 U.S. cotton supply and demand project slightly lower exports and higher ending stocks compared with last month. Production has remained virtually unchanged at 13.8 million bales, less than 1 percent lower than a month earlier. With world trade projected to be lower, the export forecast is 100,000 bales lower at 12.5 million bales, while ending stocks are 100,000 bales higher. The 2022/23 season-average price for upland cotton is forecast at 90.0 cents per pound, 6 cents lower than last month and slightly below the final 2021/22 record-high price of 91.4 cents. In the 2022/23 world balance sheet this month, consumption is 3.0 million bales lower and ending stocks are 3.1 million bales higher. China's historical consumption estimates are revised back to 2019/20, with the largest change in 2021/22, which is revised down 2.0 million bales. China's projected 2022/23 consumption is 1.0 million bales lower this month, as is India's. Pakistan's is 500,000 bales lower, and consumption is also lower for Turkey, Mexico, and Vietnam. World trade is projected nearly 1 million bales lower than it was in September, with declines in imports by China, Pakistan, Mexico, Turkey, and Vietnam. Exports are lower for Australia, Brazil, India, Benin, Cote d'Ivoire, Greece, and Mexico, as well as the United States.

In-depth Crop Market Update (Cont.)

The information that is presented in this market update reflects current information as of October 12, 2022.

Sugar

Recently, the U.S. Department of Agriculture's Commodity Credit Corporation announced sugar loan rates for CY2022 (FY2023). The raw cane sugar loan rates in cents per pound of cane sugar, raw value are: Florida – 18.93, Louisiana – 20.65, and Texas – 19.49. Sugar beet and sugarcane allotments and processor marketing allocations for the fiscal year 2023 domestic sugar program were announced as well. Commodity loans are made available to both processors of sugar beets and domestically grown sugarcane. The intention of the loans is to provide producers with short-term financing allowing for the storage of sugar after harvest when market prices are typically at their lowest. Processors are freer in their marketing of sugar. The national average loan rate was increased in the 2018 Farm Bill to 19.75 cents per pound for raw cane sugar and 25.38 cents per pound for refined beet sugar. These rates are adjusted regionally to reflect marketing cost differentials. Loans are available beginning October 1, 2022, and the term runs for a nine-month period starting on the first day of the first month after the month in which the loan is made, or the end of the fiscal year in which the loan is made, whichever is earlier. Producers have the option to deliver the pledged sugar collateral to CCC as full payment for the loan at maturity. Sugar beet and sugarcane processors who receive CCC loans in FY2023 are required to make minimum grower payments for all sugar beets and sugarcane received from growers. Processors failing to meet the required minimum grower payment will be ineligible for loans. Sugar beet grower minimum payments are the amount specified in the grower/processor contract.

Sugarcane processors must, at minimum, pay growers for their share of production from molasses and sugar per ton of cane as specified here. State minimum payments are: Florida – \$27.92 per net ton, Louisiana – \$30.78 per gross ton, and Texas – \$28.78 per gross ton.

CCC also announces the fiscal year 2023 overall sugar marketing allotment, which is established at 10,646,250 short tons, raw value (STRV). The overall sugar marketing allotment is set at 85% of the estimated quantity of sugar for domestic human consumption for the crop year of 12,525,000 STRV as forecast in the September 2022 World Agricultural Supply and Demand Estimates report. By law, a fixed percentage of the overall sugar marketing allotment is to be assigned to the beet sector and the cane sector. CCC will distribute the fiscal year 2023 beet sugar allotment of 5,786,237 STRV (54.35% of the overall sugar marketing allotment) among sugar beet processors and the cane sugar allotment of 4,860,013 STRV (45.65% of the overall sugar marketing allotment) among sugarcane States and processors.

By law, CCC must allot 325,000 STRV of the cane sector allotment to sugarcane producing states located outside of the continental United States ("offshore States"). CCC has determined that there are currently no offshore states. As a result, CCC is reassigning the 325,000 STRV of offshore cane sector allotment to the mainland States of Florida, Louisiana and Texas.

CCC determined that farm-level proportionate shares are not necessary in Louisiana in fiscal year 2023, the only state eligible for proportionate shares, because the cane sugar sector is not expected to fill its allotment. USDA will closely monitor stocks, consumption, imports and all sugar market and program variables on an ongoing basis. USDA will continue to administer the sugar program as transparently as possible using the latest available data and adjust as necessary to ensure adequate supplies of both raw and refined sugar in the domestic market.

Continued next page

FY 2023 OVERALL BEET/CANE ALLOTMENTS AND ALLOCATIONS (short tons, raw value)	
Distribution	Initial FY2023 Allotments and Allocations
Beet Sugar	5,786,237
Cane Sugar	4,860,013
TOTAL OAQ	10,646,250
BEET PROCESSORS' MARKETING ALLOCATIONS:	
Amalgamated Sugar Co.	1,238,877
American Crystal Sugar Co.	2,128,113
Michigan Sugar Co.	597,577
Minn-Dak-Farmers Co-op.	401,848
So. Minn Beet Sugar Co-op.	780,958
Western Sugar Co.	590,415
Wyoming Sugar Company, LLC	48,449
TOTAL BEET SUGAR	5,786,237
STATE CANE SUGAR ALLOTMENTS:	
Florida	2,612,146
Louisiana	2,020,789
Texas	227,078
TOTAL CANE SUGAR	4,860,013
CANE PROCESSORS' MARKETING ALLOCATIONS:	
Florida	
Florida Crystals	1,075,489
Growers Co-op of FL	469,887
U.S. Sugar Corp.	1,066,770
TOTAL	2,612,146
Louisiana	
Louisiana Sugar Cane Products, Inc.	1,402,896
M.A. Patout & Sons	617,893
TOTAL	2,020,789
Texas	
Rio Grande Valley	227,078

In-depth Crop Market Update (Cont.)

The information that is presented in this market update reflects current information as of October 12, 2022.

Sugar Cont'd

U.S. 2022/23 sugar ending stocks are increased by 161,933 short tons, raw value (STRV) on increases in imports, beginning stocks, and production. On September 15, the USDA established the fiscal year (FY) 2022/23 refined sugar TRQ at 220,000 metric tons, raw value (MTRV), and on September 19 USTR allocated the in-quota quantity of the TRQ among supplying countries. USDA's action results in an increase in 2022/23 TRQ imports of 217,206 STRV. Added to this amount are imports amounting to 77,437 STRV from the 2021/22 raw sugar TRQ that did not enter in September as forecast but are forecast to enter in 2022/23 after USDA extended the period for entry until December 31, 2022. Arrayed against these increases is an increase in the raw sugar TRQ shortfall by 155,424 STRV to 254,632, due mostly to the decision of officials in the Philippines to allocate all production to domestic consumption and reduce exports to zero. Also, sugar imported under calendar year FTA TRQs are reduced by 10,201 STRV mostly because that sugar entered earlier in 2021/22 than originally forecast.

The net effect of beginning stocks on the 2022/23 supply and use balance results from stronger-than-expected Louisiana cane sugar production in September and from increases in 2021/22 high-tier tariff imports and imports from Mexico. Based on NASS sugar crop yield changes in the October Crop Production report, 2022/23 cane sugar production in Louisiana is increased and more than offsets a small reduction in beet sugar production. Texas cane sugar is reduced on processor reporting. The 2022/23 ending stocks-to-use ratio is projected at 14.8 percent, up from 13.5 last month. Mexico sugar production for 2022/23 is reduced 100,000 MT to 5.900 million. Area harvested is expected to remain above 800,000 hectares for a second consecutive year as good domestic returns in 2021/22 have incentivized growers to maintain area planted to sugarcane. Nonetheless, yields are expected to be lower than last year due to lower rainfall in certain growing areas, higher prices for fertilizers and other inputs, and some field labor shortages. Lower production is matched by lower exports on a one-to-one basis. Total exports forecast at 1.403 million MT only slightly exceed exports of 1.385 million projected for shipment under export license to the United States.

U.S. Sugar Supply and Use 1/

	2020/21	2021/22 Est.	2022/23 Proj. Sep	2022/23 Proj. Oct
	<i>1,000 Short Tons, Raw Value</i>			
Beginning Stocks	1,618	1,705	1,753	1,773
Production 2/	9,233	9,117	9,141	9,154
Beet Sugar	5,092	5,078	5,119	5,106
Cane Sugar	4,141	4,039	4,021	4,048
Florida	2,090	1,933	1,968	1,968
Louisiana	1,918	1,982	1,950	1,984
Texas	134	124	103	96
Imports	3,221	3,644	3,481	3,610
TRQ 3/	1,749	1,579	1,562	1,691
Other Program 4/	292	298	250	250
Non-program	1,180	1,767	1,669	1,669
Mexico	968	1,379	1,619	1,619
High-tier tariff/other	212	388	50	50
Total Supply	14,072	14,465	14,375	14,537
Exports	49	35	35	35
Deliveries	12,277	12,657	12,630	12,630
Food	12,161	12,550	12,525	12,525
Other 5/	116	107	105	105
Miscellaneous	40	0	0	0
Total Use	12,367	12,692	12,665	12,665
Ending Stocks	1,705	1,773	1,710	1,872
Stocks to Use Ratio	13.8	14.0	13.5	14.8

Barge Traffic on The Mississippi River Threatened

Amid current harvesting efforts for corn and soybeans across the country, transportation experts are anticipating a steep increase in demand for grain transportation in the coming weeks. For the week ending September 25, 2022, major grain-producing states have harvested 12 percent of the corn crop and 8 percent of the soybean crop. In 2022, grain shippers and receivers have dealt with a myriad of transportation challenges from port congestion to poor rail service.

At the forefront of grain transportation efforts is the domestic U.S. barge industry. It has been a difficult time for domestic barge operators as they have had to balance tight supplies with increases in demand for their services throughout the year. Severe storms and icy conditions this past winter limited barge traffic on the Upper Mississippi River. In the spring, rising coal exports to replace reduced Russian coal and gas from the war in Ukraine—along with high waters levels—reduced barge capacity and increased demand for the use of barges. For example, from March 1st to May 31st, total downbound non-grain volumes on the Mississippi River reached 14.3 million tons, 7 percent higher than the 5-year average and 3 percent higher than last year (same time). In the summer, hot temperatures throughout the Midwest and low river levels in the lower Mississippi River led to draft and tow restrictions. At the same time, the barge industry, like the rail industry, has felt the effects of the labor shortage.

Tight barge supply has resulted in low grain barge volumes and high rates, especially recently. For the week ending September 24th, year-to-date downbound grain volumes on the Mississippi river reached 23.9 million tons, 4 percent lower than the 5-year average and 10 percent lower than the same period last year. Similarly, barge freight rates have increased steadily since early August. According to USDA's Grain Transportation Report released September 29th, that since the beginning of September 1st, 890 grain barges had unloaded in New Orleans. This is 39 percent fewer unloadings than the 5-year average (USDA-AMS, 2022). As of September 27th, the St. Louis barge rate for export grain was a record 1,250 percent of tariff (\$49.88 per ton), 95 percent higher than the 5-year average, and 58 percent higher than same period last year. Heading into harvest, tight barge supplies will be problematic for grain shippers. Unless barge supply improves, the increased demand for barges from grain shippers during harvest will likely place barge rates under even more upward pressure.

On the local front, the Louisiana Farm Bureau forwarded a story written by Advocate writer Jim Salter entitled 'Low Water in the Mississippi River Impacts Barge Traffic.' In the article, Salter writes that parts of the Mississippi River are currently so low from weeks of drought that barge traffic is being curtailed at a time when it is most needed as crop harvests begin. The article goes on to say that communities on the Mississippi River from between St. Louis and New Orleans may see record low water levels in the coming days. The National Weather Service is reporting that water levels on the Mississippi at Memphis will reach their second lowest level on record by October 13th. Water levels on the Mississippi are so low that officials with the U.S. Army Corps of Engineers recently said that tows, normally comprised of 36 barges, would be reduced to 25 barges by barge operators who agreed to the move voluntarily.

Lower production and reduced exports will both translate into lower grain demand for rail and barge, which should make harvest transportation demand more manageable, despite ongoing supply issues. National Weather Service meteorologist Matt Beitscher in suburban St. Louis said nearly all of the Mississippi River basin, from Minnesota through Louisiana, has seen below-normal rainfall over the past 30 days. The basin from St. Louis south has been largely dry for three months, and the forecast calls for the drought to continue, along with warmer-than-normal temperatures. "Hot and dry does not spell good news for the rivers," Beitscher said. Though the Mississippi River is low, there is no evidence that barges or other vessels have grounded, said Lance Engle, dredging project manager for the Corps in St. Louis. He said dredging of the river bottom continues in several spots to help keep traffic flowing. The river has not been forced to close at any locations, but Joan Stemler, the chief of water control operations in St. Louis for the Corps, warned that the flow from the Missouri River, which feeds into the Mississippi north of St. Louis, is expected to drop enough in December that the Mississippi could go up to 3 feet lower if dry conditions continue. The low water level is having other impacts, too.



Newsletter Information

A group of growers inquired about a quarterly newsletter being delivered to them containing relevant market news and agricultural policy events. As a result, this publication will be delivered electronically per the release schedule. Please contact Dr. Mike Deliberto at mdeliberto@agcenter.lsu.edu to be added to the email distribution list. As always, subscription is free of charge.

QUARTER	Reporting Period	Release Date
1	January 1 through March 31	April 15
2	April 1 through June 30	July 15
3	July 1 through September 30	October 15
4	October 1 through December 31	January 15

Please direct questions and comments to Dr. Michael Deliberto, Department of Agricultural Economics and Agribusiness, LSU AgCenter. Mailing Address: 101 Martin D. Woodin Hall, LSU Campus, Baton Rouge, LA 70803. Office Phone: 225-578-7267. Email: mdeliberto@agcenter.lsu.edu

Staff Report 2022-50. October 2022.

