The Feed

Farmer Mac's Quarterly Perspective on Agriculture

Fall 2019

FARMER MAC

FINANCING RURAL AMERICA

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ABOUT THE FEED

The Feed is a quarterly economic outlook for current events and market conditions within agriculture. The report is broad-based, covers multiple regions and commodities and incorporates data and analysis from numerous sources to present a mosaic of the leading industry information, with a focus on the latest information from the United States Department of Agriculture and their Economic Research Service. There are several regularly included sections like weather and major industry segments, but the authors rotate through other industries and topics as they become relevant in the seasonal agricultural cycle. Where the report adds value to readers is through its unique synthesis of these multiple sources into a single succinct report. Please enjoy.

ABOUT FARMER MAC

Farmer Mac is a vital part of the agricultural credit markets and was created to increase access to and reduce the cost of capital for the benefit of American agricultural and rural communities. As the nation's premier secondary market for agricultural credit, we provide financial solutions to a broad spectrum of the agricultural community, including agricultural lenders, agribusinesses, and other institutions that can benefit from access to flexible, low-cost financing and risk management tools. Farmer Mac's customers benefit from our low cost of funds, low overhead costs, and high operational efficiency. In fact, we are often able to provide the lowest cost of borrowing to agricultural and rural borrowers. For more than a quarter-century, Farmer Mac has been delivering the capital and commitment rural America deserves.

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A MESSAGE FROM CURT COVINGTON

FOOD FOR THOUGHT

Recently, there has been a lot of ink spilled over corn, soybeans, USMCA, and tariffs (even more in this issue of The Feed). So let me instead begin The Feed with some lighter fare, and share some interesting facts and trends in the fruits and vegetables industries.

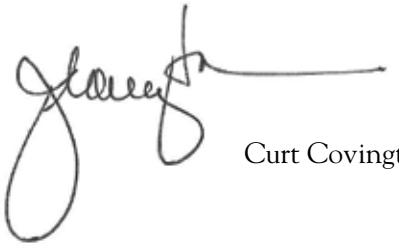
I recently attended a conference on consumer preferences and buying trends in the fruit and vegetable categories. The discussions were fascinating, and provided a good reminder that even when we know the broad strokes of a trend, we can find some unexpected surprises in the details.

In today's eat-healthy society, one would think fruits and vegetables to be a growth category at the local supermarket. I was not surprised to hear that value-added produce, such as pre-chopped vegetables, have both healthy snack and convenient meal-preparation attributes. What I was surprised to learn is that many of the traditional vegetable categories, such as lettuce, carrots, and celery, are being cannibalized by brussels sprouts, collard greens, and kale.

Fruit growers are experiencing a similar phenomenon. Everyday fresh market favorites such as grapes, peaches, plums, oranges, and melons have negative growth rates. Consumers are trading in these traditional fruit purchases for convenient fruits, like berries, and for more exotic fruits like mangos and avocados.

Today's consumer places as much, or perhaps more, value on convenience and "the experience" as they do taste, healthfulness, and cost. Meanwhile, growers of traditional fruits and vegetables are seeing their margins continue to tighten as they look for ways to compete for shelf space in an ever-changing marketplace. To me, these trends highlight that even in a thousands-of-years old industry like agriculture, market participants must always think (and grow) on their feet.

A happy and bountiful harvest season to all,



Curt Covington, EVP-Chief Credit Officer

PRODUCTION AND MARKET PRICE PERCEPTUAL MAP

Summer 2019	Fall 2019
	ALMONDS
	CATTLE/CALVES
	CITRUS
	CORN
	COTTON
	DAIRY
	HAY
	HOGS
	SOYBEANS
	WHEAT
	WINE GRAPES

IMPLICATIONS OF PROLONGED TRADE WAR ON U.S. AGRICULTURAL OUTPUT

(resource 1, 2, 3, 4, 5, 6)

By: Michelle Klieger, Stratagerm Consulting

Key Highlights

U.S. agricultural output is growing faster than domestic demand and making the farm economy more dependent on exports to maintain prices and revenue.

U.S. trading partners have imposed counter-tariffs on U.S. agricultural products, forcing importers to find substitutes; this is increasing U.S. surpluses and depressing prices.

If tariffs aren't removed, U.S. soybean producers may miss out on additional international growth, while other producers may be forced to lower production to reflect the lower demand.

In the United States, most types of agricultural output have grown faster than domestic demand. In 2000, the United States exported $50 billion in agricultural products; by 2018, exports swelled to $138 billion. This increase in exports has mostly been driven by improving market access, which encourages additional international sales and more domestic investment and expansion. Now, more than ever, the U.S. farm economy depends on export markets to maintain prices and revenues.

Global free trade hit a major speedbump in 2017, when President Trump withdrew from the Trans-Pacific Partnership (TPP) agreement and later imposed new tariffs. U.S. trading partners responded to each action with new taxes on U.S. goods, especially on agricultural products. These duties reduce the United States' market competitiveness, and create agricultural surpluses; this results in depressed prices, increased storage costs, and profound impacts to the U.S. agriculture economy.

The soybean trade is one of the biggest chips at stake in the global food market. In 2016, soybeans accounted for 10% of the value of global agricultural trade. Of that big slice of the market, China and the U.S. are major players; China imports 65% of the world's soybeans, while Brazil and the United States account for 83% of the world's exports. Importer concentration at these levels is rare, and makes offsetting trade disruptions difficult. In 2001, China joined the World Trade Organization (WTO) and established a soybean tariff rate of 3%, a fraction of the rate charged to related products. Between 2001 and 2016, Chinese imports increased by 80 million metric tons, or 88% of the growth in global soybean trade. The United States and Brazil increased production to meet China's insatiable demand for soybeans.

In July 2018, China responded to Trump's intellectual property tariffs with a 25% tariff on U.S. soybeans, effectively halting sales. U.S. exports fell 22 million metric tons, or $8 billion. Brazilian imports grew by 11 million metric tons, and Canadian imports grew by 2 million metric tons. Chinese soybean imports fell for the first time in 15 years, as China faced a 9 million metric ton shortage. Meanwhile, the United States increased soybean exports to Argentina, the EU, other Asian countries, Egypt, Iran, and Mexico; but exports still fell by 12 million metric tons, and prices fell accordingly.

Despite these challenges, there are two factors that mean that U.S. soybean production and exports may, at worst, remain stable. First, China's appetite for soybeans is ever-growing: by 2028, the Chinese Academy of Agricultural Sciences expects Chinese soybean demand to increase by 14 million metric tons. Second, the United States and Brazil are still positioned to benefit from increased demand due to their competitive advantages in producing high-yield, low-cost soybeans. Assuming the tariffs remain, the USDA projects Brazilian production will grow by 41% and exports will grow by 52%, while U.S. production and exports remain stable. However, other U.S. agricultural producers don't have the same competitive advantages that soybean producers do, and can expect sustained declines as foreign competitors increase production and capture market share. For example, U.S. raisin exports declined 25% between 2017 and 2018, even as overall Chinese raisin imports increased. China is instead purchasing more raisins from Uzbekistan. The longer the trade friction continues, the more likely the rerouting of trade flows will become permanent.

THE FSA'S UPDATE ON PLANTED ACRES
(resource 7, 8, 9, 10)

Key Highlights

Prevented plant acreage is 19.8 million in 2019, the highest year on record since FSA data is available.

Increases stemmed from flooding earlier in the year; half of corn and soybean prevented plant acres came from four states in the Midwest.

The increase in prevented plant acres came predominantly from corn and soybean acreage.

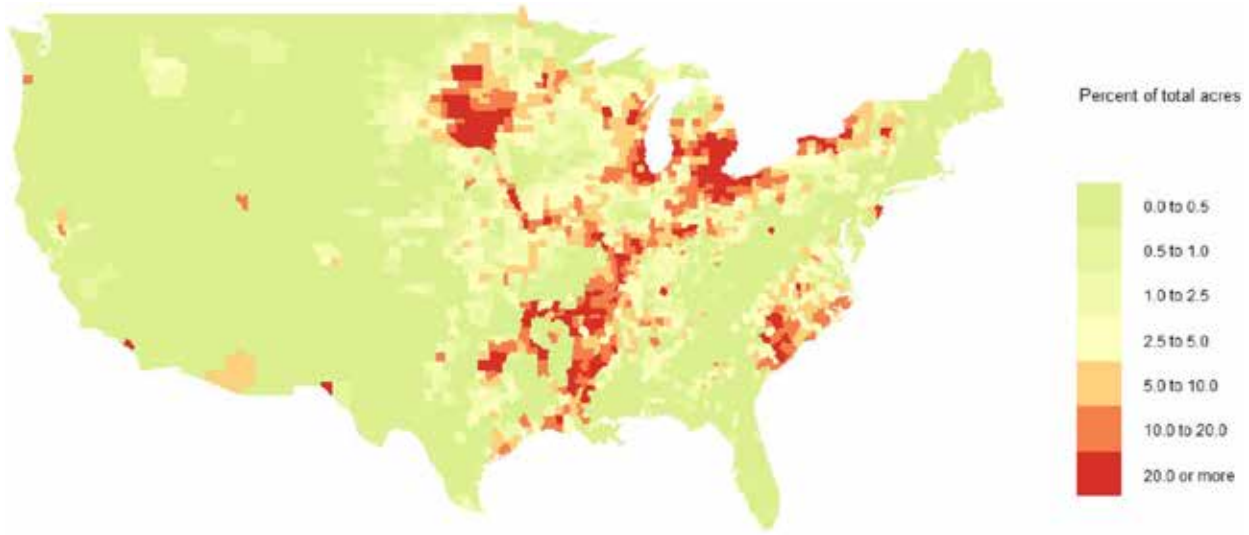
In a year when farmers were already facing uncertainties from ongoing trade disputes, poor weather conditions added additional unwanted risk. Following a wet and cool spring, the number of acres filed as "prevented plant" (i.e., acreage that is unable to be planted due to extreme weather) increased to a record high of 19.4 million acres in 2019. This represented an increase of 17.5 million acres over this time last year, and is nearly four times higher than the average number of acres over the prior decade. This loss of production was partially responsible for the rise in prices for many major commodities between May and June.

This rise generally occurred in the flood plains around the Mississippi, Missouri, and Ohio Rivers, with additional impacts in the Great Lakes region. In South Dakota, nearly one in ten acres was filed as prevented plant. South Dakota, Ohio, Illinois, and Missouri represented more than half of all acres filed in 2019. While these states typically account for a large share of the national total, their average share of total acres between 2009 and 2018 was just 37%. However, not all regions saw these increases. Across many counties in the southeast and in parts of the northern Great Plains, prevented plant acres were down relative to their prior-decade averages.

This regional variation led to variegated impacts on corn and soybean production. Between 2009 and 2018, corn and soybeans represented an average of 50% of total prevent plant acres. In 2019, corn and soybeans will represent 80% of total acres, the highest share since the FSA began reporting in 1996. While the number of prevented plant acres for major commodities like wheat, rice, and sorghum are between 50 and 200% above their prior-decade averages, corn and soybean acreages are above their averages by 540% and 365% percent, respectively. Conversely, crops such as canola and sunflowers, which are produced primarily in the northern Great Plains regions, saw declines relative to their prior-decade averages.

The missed production in some counties is considerable; more than 400 counties reported at least 10% of their total acreage as prevented plant. In total, the lost production from these acres will represent up to two billion bushels of corn and 200 million bushels of soybeans. According to the September USDA forecasts, both corn and soybean production is forecast to be down by 600 and 900 bushels, respectively. While the USDA has not released details of its prevented plant provisions for this year, they are hoping to issue final rules in the coming month. To date, the USDA has declared almost 700 counties as eligible for additional prevented plant payments due to excess rain and flooding, and is considering additional measures to cover flood-damaged grains from this year's extreme weather conditions.

Figure 1: Share of Acres Prevent Plant by Country



Source: USDA Farm Service Agency Crop Acreage

PERSPECTIVES ON THE USDA'S SECOND 2019 FARM INCOME FORECAST

(resource 11, 12)

Key Highlights

The USDA's second Farm Income Forecast for net cash income in 2019 was revised strongly upward, due to changes in direct government payments and reduced production expenses.

The Market Facilitation Program is forecast to account for 10% of national net cash income in 2019, though significant regional variation was estimated for 2018 payments.

Production expenses are flat in real terms, but expenses directly related to production are down, which could signal future declines in cash receipts.

In August, the USDA released its revised forecast for 2019 farm income numbers. Such revisions are common; as a large, complex economic series, these forecasts are subject to change as new data becomes available from the USDA's statistical agencies and their annual surveys of farm finances. In this revision, the USDA updated its 2019 forecast for net cash income (NCI) from $96 billion to $113 billion. Historically, the USDA's second forecast has been much more reliable than their first. Over the last five years, the second forecast of NCI has differed from their first estimate by 6.5%, while their first forecast differed by an average of 13.2%.

GOVERNMENT PAYMENTS AND PRODUCTION EXPENSES DROVE THE UPWARD REVISION.

Generally, NCI closely follows changes to cash receipts. However, the USDA's second forecast revised the 2019 forecast for all crop cash receipts down 4%, and revised animal and animal product receipts down 1.4%. While other farm income was revised 5.3% upward, the bulk of the USDA's revision stemmed from changes to direct government payments and from reduced production expenses.

Almost half of the change to NCI can be accounted for by the inclusion of the second round of farmer-directed Market Facilitation Program (MFP) payments. With the release of program details in July, the USDA revised their 2019 forecast for direct government expenditures from $11 billion to $19 billion, after revising their estimate for miscellaneous program payments from $3.5 billion to $10.7 billion. Much of the residual change to NCI is the result of downward revisions in 2019 forecasts for production expenses. Labor costs, costs for inputs, interest expenses, and other costs were revised down between 4.8% and 18.7%. The new release forecasts 2019 NCI to be above its 2000 – 2018 average, the first time this has happened since 2015.

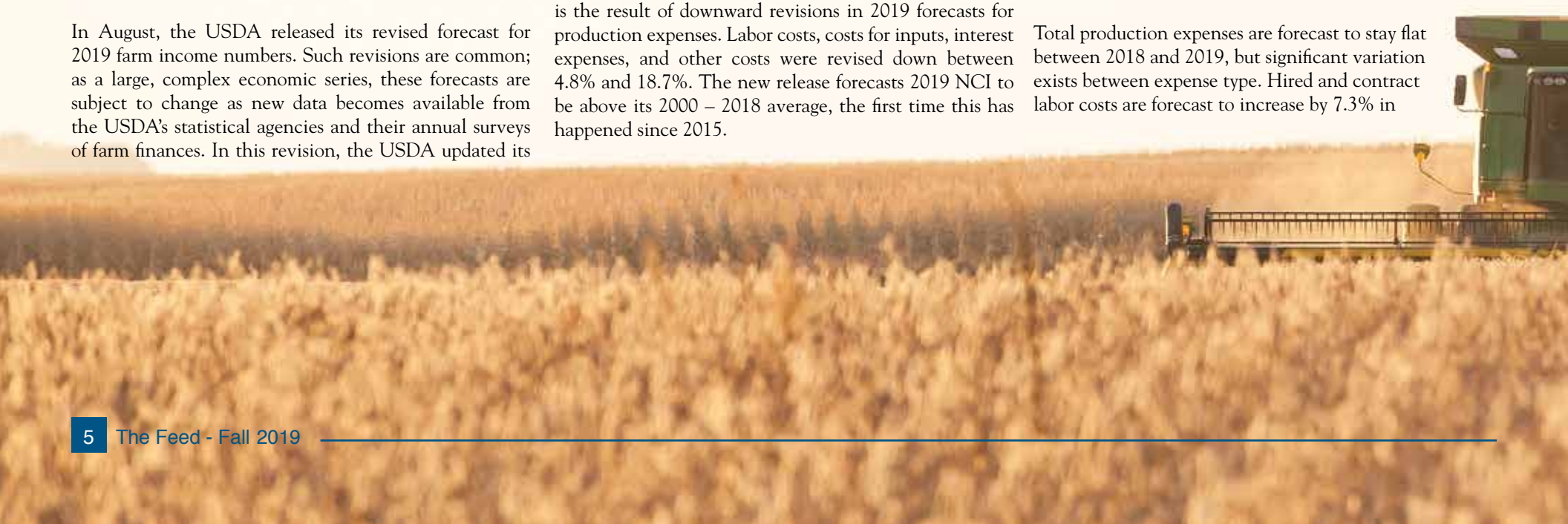
THE MARKET FACILITATION PROGRAM KEEPS NCI FROM FALLING IN 2019.

Between 2010 and 2018, direct government payments made up 10% of NCI on average. With the inclusion of $10.7 billion in MFP payments, total direct government payments are now forecast to make up 17.3% of NCI in 2019. The USDA also recently released its first 2018 estimates, which included its estimates of how these programs were distributed across states. In 2018, MFP payments are estimated to have made up 4.9% of NCI. However, individual states are estimated to have had as much as 15% of their producers' NCI coming from MFP payments.

These payments were often the difference between gains and losses in state-level NCI between 2017 and 2018. Of the 15 states that saw at least 5% of their NCI from MFP payments in 2018, only two saw declines in NCI between 2017 and 2018. Of the remaining 35 states, 23 saw declines in their NCI over the same period. Without MFP payments, an additional 7 states would have seen declines.

TOTAL PRODUCTION EXPENSES REMAIN FLAT, BUT DECLINES ARE SEEN IN FARM-ORIGIN AND MANUFACTURED INPUT EXPENSES.

Total production expenses are forecast to stay flat between 2018 and 2019, but significant variation exists between expense type. Hired and contract labor costs are forecast to increase by 7.3% in



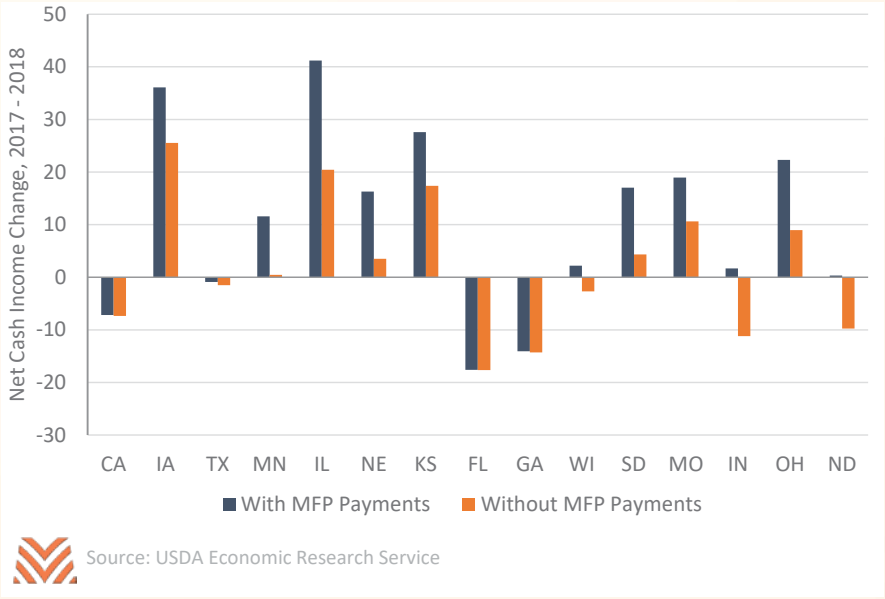
2019, due in part to continued labor shortages. Interest expenses are forecast down, despite rising loan volumes, due to declines in forecasted interest rates. Property taxes and fees are forecast to increase, driven largely by increases in real estate property taxes.

Of intermediate product expenses that are related to farm-origin and manufactured inputs, like seed, pesticides, and electricity, most expenses are forecast to see declines in 2019. In total, farm-origin and manufactured-input expenses are forecast to decline by 3.6% in 2019. Since the beginning of the modern agricultural era, declines in these input expenditures have been weakly correlated with future declines in cash receipts.

Government payments and input expenditures are just two stories that imply some softness in the agricultural sector, despite the USDA's revised 2019 forecasts. Delinquencies for farm real estate and production loans have continued to increase in 2019. Farm bankruptcies have continued to climb, and are now near levels seen during the strain experienced in the wake of the 2008 recession. The USDA's own measures of financial stress (e.g., debt to asset ratios) are forecast to increase, while measures of liquidity like working capital are forecast to fall through 2019. Many of these measures remain stronger than their long-run historical averages, but five years of lower NCI has had a material effect.

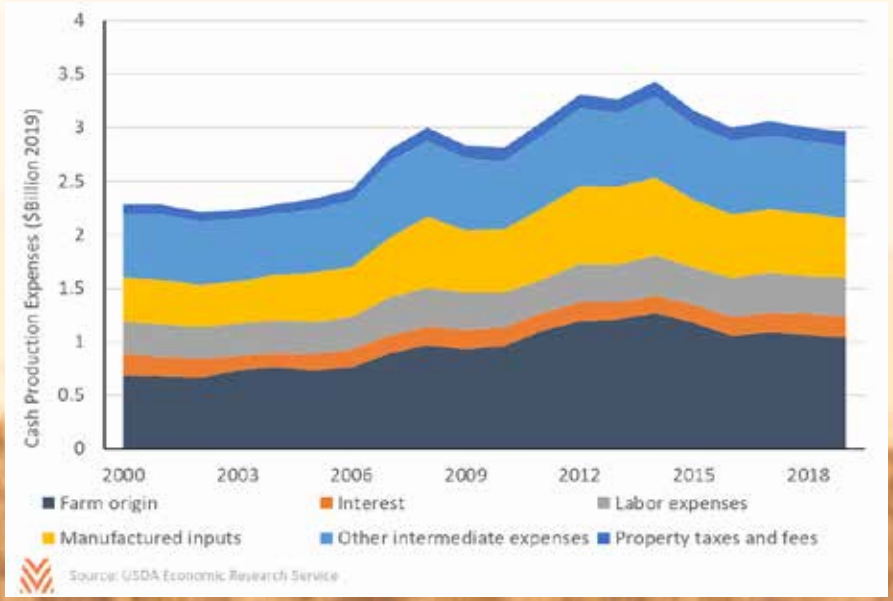
Regardless of why NCI is forecast to increase, the sector will welcome increased incomes, if they are realized. However, it may take several years of higher returns before the agricultural sector fully recovers from the strain is has endured over the last several years.

Figure 2: NCI Growth With and Without MFP Payments for 15 Largest States by NCI, 2018



Source: USDA Economic Research Service

Figure 3: Cash Expenses, 2000 – 2019F



INSIGHTS FROM THE USDA LAND VALUES REPORT

(resource 13, 14, 15)

Key Highlights

Average land values have increased for the tenth year straight, rising to $3,160 per acre in 2019.

While just six states in disparate regions saw declines in average land values in 2019, eight of the nine states that are below their 2015 values are in the Midwest.

The average farm in the U.S. saw an appreciation in its land of $360,000 over this period, but most of this was added between 2010 and 2014.

The USDA's National Agricultural Statistics Service (NASS) estimates that farm real estate values are $3,160 per acre in 2019, up $60 from 2018. This is the tenth year in a row that average land values have increased, with average land values up more than 50% from a decade ago. Average cropland values increased to $4,100 per acre in 2019, up 1.2% from 2018, while average pasture values are up 2.2% to $1,400 over the same period.

Growth appears to be slowing or even reversing in parts of the country. In Iowa, land values fell 1.1%, off 15.4% from their 2014 high. While all but 6 states saw flat or rising land values in 2019, states like Nebraska, Kansas, North Dakota, and South Dakota only saw reversals after multiple years of softening land values. In these states, average values have fallen between 4.4 and 9.2% over the last five years. Of the nine states whose land values were lower in 2019 than 2015, eight of them are in the Midwest.

Over the long term, this trend reverses. Despite recent declines, North and South Dakota have seen average real estate land values more than double since 2010. Land values across the corn belt rose more than the national average over the same period. In Nebraska and Kansas, average land values have increased by 94% and 85%, respectively. This is partially because states like North Dakota and Nebraska had among the lowest average land values in the country in 2010.

These increases have translated directly to increases in the farm sector assets. The USDA's Economic Research Service (ERS) has forecast that sector real estate assets will be $2.6 trillion in 2019, up 54.1% since 2010. At the state level, the average farm has seen an appreciation in land of $360,000 since 2010 in real terms; however, this figure varies significantly across the country. In South Dakota, the average farm saw an appreciation in land value of $1.3 million in inflation-adjusted dollars. The average farm in Georgia saw a $56,000 decline in farmland value over the same period. But even for farms that experienced significant gains, much of that appreciation came during the early part of the decade. While this added value has been helpful during the last few years of lower net cash incomes, farms may not be able to rely on increasing land values over the long term.

Figure 4: Land Value Appreciation for Average Farms by State, 2010 - 2019

Source: Historical NASS June Area Survey Results

Key Highlights

Many areas of the country have dried out after an exceptionally wet winter and spring.

Conditions should generally remain favorable throughout harvest in the Midwest.

The moist conditions that prevailed throughout much of the country from the winter through mid-summer have gradually diminished as late summer and early fall have progressed. This evolution is demonstrated in a comparison of the July 23, 2019 and September 17, 2019 U.S. Drought Monitor reports, which shows that the areal coverage of "no drought" classification has decreased from 90.2% to 65.8%. The expansion of dry conditions (which have generally not reached severe levels) has been primarily focused from the Four Corners to the Ohio Valley and the Southeast. The general outlook for the fall season is for more of the same, with the exception of the Piedmont areas along the East Coast, where tropical activity in the Atlantic Ocean could create areas of above-normal precipitation. The 2019 crop year experienced extraordinary stress through the Midwest, as many areas were forced into prevent-plant programs due to the extreme amounts of winter and spring precipitation. Those that were able to plant crops should generally experience favorable harvest conditions, with the exception of the northern Plains, where cold and wet weather is likely to continue.

California and the West Cost will remain seasonably warm and dry over the fall, with precipitation chances increasing by late fall. Preliminary indications are for a fairly-neutral El Niño/La Niña signature for the coming months, which typically results in drier than normal conditions along the West Coast.

Figure 5: Seasonal Drought Outlook

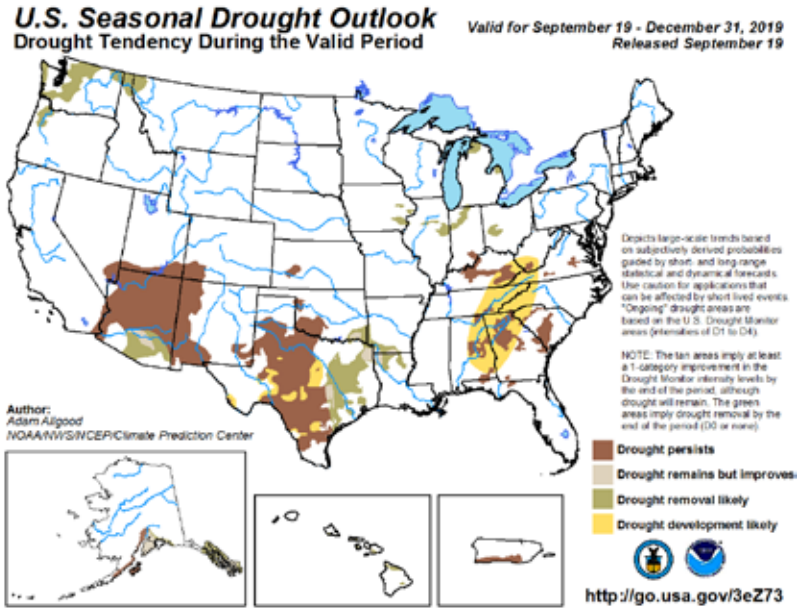
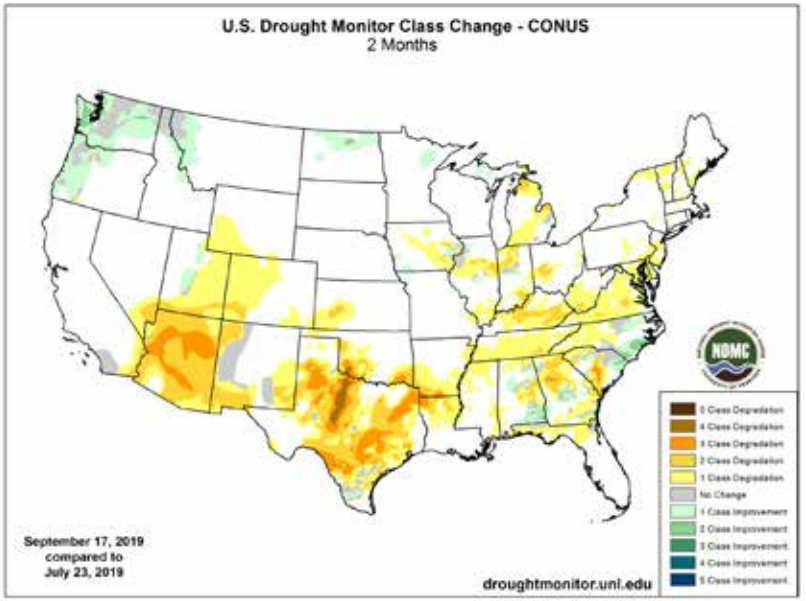


Figure 6: Drought Monitor Change



CORN AND SOYBEANS

(resource 18, 19, 20, 21)

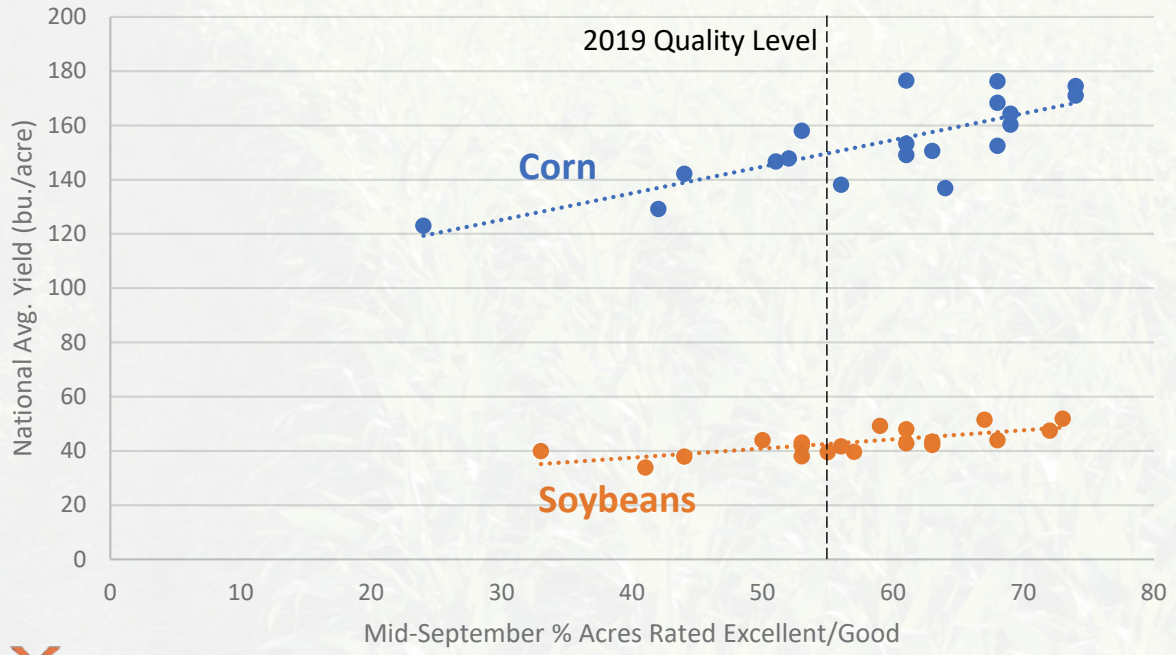
Key Highlights

Many corn and soybean acres still require time to develop, casting uncertainty around 2019 production levels.

Lower demand for grain in 2019 is preventing prices from rising.

Crop condition reports indicate a lower yield for both corn and soybeans compared to September estimates from the USDA.

Figure 7: September Crop Quality Ratings and Yield Implications



Source: USDA NASS QuickStats

The jury is still out on corn and soybean yields in 2019. Two private crop surveys completed in August throughout the Midwest show estimated yields just over 4% below the USDA's September estimate for corn, and 11% lower for soybeans, compared to 2018 levels. These crops still face a long harvest season, with the maturity of the corn and soybean crops being as much as three weeks behind. In early September, a significant portion of the corn crop required more than 35 days to mature, while 8% of the soybean crop had not started setting pods. Without an extended, dry, and warm fall, farmers will face a significant increase in drying costs, and the risk of additional crop losses due to lodging. With a large part of the delayed crops being in the northern sections of the growing areas, a normal first-frost date would pose a big threat.

Demand continues to be the major issue weighing on the markets. Over the past quarter, domestic uses of corn (including ethanol) are estimated to have fallen another 1%, with exports down another 5%. The slightly-lower yields in the U.S. are offset by record production in Brazil, which is finishing up its second corn crop. The dollar remains strong which continues to make U.S. corn prices higher compared to other countries. In the September World Agricultural Supply and Demand Estimates (WASDE) report, the USDA is keeping its estimated price for corn in the 2019-2020 marketing year as similar to last year's average of $3.60. The estimated price of soybeans is little-changed from last year's average price of $8.50, despite a 40% drop in carryover stocks. Over the past quarter, soybean demand has fallen by over 5% due to lower exports. This decrease has been offset with the lower forecasted crop acres and yields in the U.S. Even though U.S. ending stocks for soybeans continue to decrease throughout the 2019 crop year, the continuing tariffs by China, along with the temporary decrease in the use of soybeans for their hog production, have limited, if any, price upside in the short term.

With the unprecedented poor planting conditions on top of significant delays in the planting dates across the Midwest, there continues to be a lot of uncertainty when it comes to estimating the final corn and soybean yields. As Figure 7 demonstrates, there may still be some additional reductions in the final corn and soybeans yields if the weekly crop conditions have any correlation to the final yields. The charts compare the actual final yields for 2000 through 2018 against the crop conditions in mid-September. Based on this historical correlation, the 2019 final corn and soybean yields could come back lower than the USDA's mid-September 2019 estimated yields.

CATTLE

(resource 22, 23, 24)

Key Highlights

Cattle inventories are holding steady and beef stocks are down, two signals of a future downturn in the cattle cycle.

The Holcomb, Kansas, Tyson Foods plant fire disrupted beef slaughter and lowered cattle prices in August 2019.

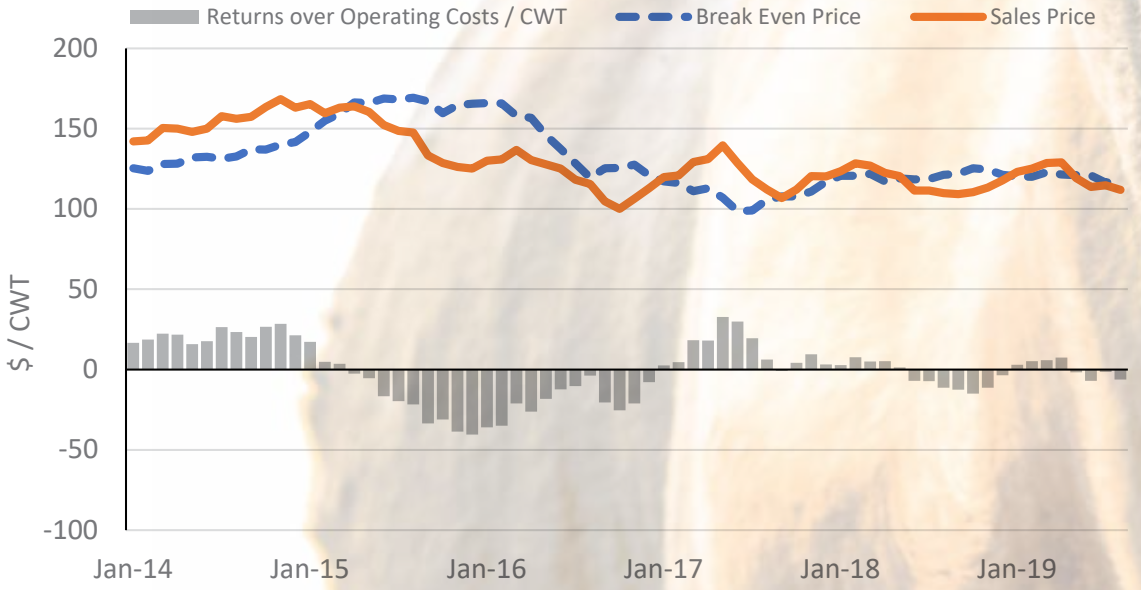
Cattle prices remain lower than in 2018, but have rebounded from Holcomb-fire lows.

Two indicators in cattle are signaling a possible future downturn in that market. First, beef cattle herd expansion slowed in 2019, with the all-cattle inventory holding steady at 103 million head as of July 1, 2019. Of that group, steer inventory (greater than 500 pounds) is up 1.4% in 2019, only a modest increase. Second, frozen beef supplies are down 6% in July 2019 compared to 2018, driven lower by demand for boneless cuts. The decreased supply for both beef products and replacement cattle demonstrate the compression in farm-level beef sector spreads during the last few years.

Another notable disruption in the cattle market occurred with the August 2018 fire in Tyson Foods' Holcomb, Kansas plant, which has taken nearly 6% of all beef slaughter capacity offline. While Tyson is still purchasing fed cattle for slaughter in Kansas, they must reroute the purchased animals to other facilities and work longer Saturday hours to accomplish the same level of production. The increased friction in the cattle markets caused a sharp drop in fed cattle prices, dropping cow-calf and feeder profitability in August (see Figure 8). Prices rebounded in September, after beef slaughter data showed only a small disruption from the Holcomb fire. Beef exports are also down 1% compared to 2018, driven lower by a stronger U.S. dollar.

Although supplies have tapered in 2019, lower cattle and beef demand has led to falling cattle prices throughout 2019. Fed cattle prices firmed in September as the market was slightly oversold on the news of the Holcomb, Kansas Tyson Foods plant fire. Slaughter numbers bounced back in the weeks following the fire, boosting demand expectations for fed cattle. The USDA forecasts feeder cattle prices to close out the year at approximately $133 per hundredweight, an 11% drop from 2018, but up 4% from late-August lows. Demand and supply are in relatively tight step, so the 2020 cattle price outlook is stable to slightly up.

Figure 8: Iowa Feeder Cattle Returns



Source: Iowa State University Extension, Estimated Livestock Returns

ALMONDS

(resource 25, 26, 27, 28, 29)

Key Highlights

Almond production is down slightly, according to the NASS Objective Estimate, at 2.2 billion; trade industry crop estimates were closer to 2.4 billion.

Almond exports continue to be a bright spot, despite tariff tensions.

There is price uncertainty until the size of this year's crop is known.

Entering the 2019 growing year, almonds were expected to continue with record production numbers, with an original almond forecast of 2.5 billion pounds in May. The 2019 USDA National Agricultural Statistics Service (NASS) Objective Estimate came in at only 2.2 billion pounds, which surprised the market. It won't be until some time into harvest and closer to December that it will be possible to get a better handle on the true crop supply. The 2018-19 season had experienced a new record for shipments of almonds, at 2.264 billion pounds. This surpassed the previous record of 2.252 billion pounds, which were shipped in the 2017-18 marketing year. With these increased shipments, the industry saw the lowest ending inventory since 2012, at 318 million pounds, down from 359 million pounds the year before.

Almonds were exported to more than 100 countries around the world in 2018. The top destinations were India, Spain, China, Germany, and Japan; these five countries accounted for around 49% of the total exports. Even with the 50% tariff in place on almonds, China is still the third largest destination. Export shipments were up compared to the previous year, despite significantly lower exports to China and Turkey. Even with that drop, international demand for California almonds remains high, and talk of a new U.S.-Japan trade deal may present even more opportunities. There is also discussion of a partial trade deal with India, which is the largest importer of U.S. almonds.

With the higher shipments and a lower number carrying over into the 2019 crop, prices increased into the end of the crop year. Originally, with the higher forecast, prices were beginning to soften, in anticipation of the larger crop. When NASS announced its objective almond crop estimate, there was a quick jump in prices that settled down quickly in the late summer, as buyers waited for more stability before reentering the market. Once this year's crop is determined, there will be even more price certainty. As Figure 9 illustrates, almond prices have held up well, coming off a high where prices reached $4.00 per pound. Production continues to increase, putting pressure on prices; however, the industry has done an excellent job of moving product.

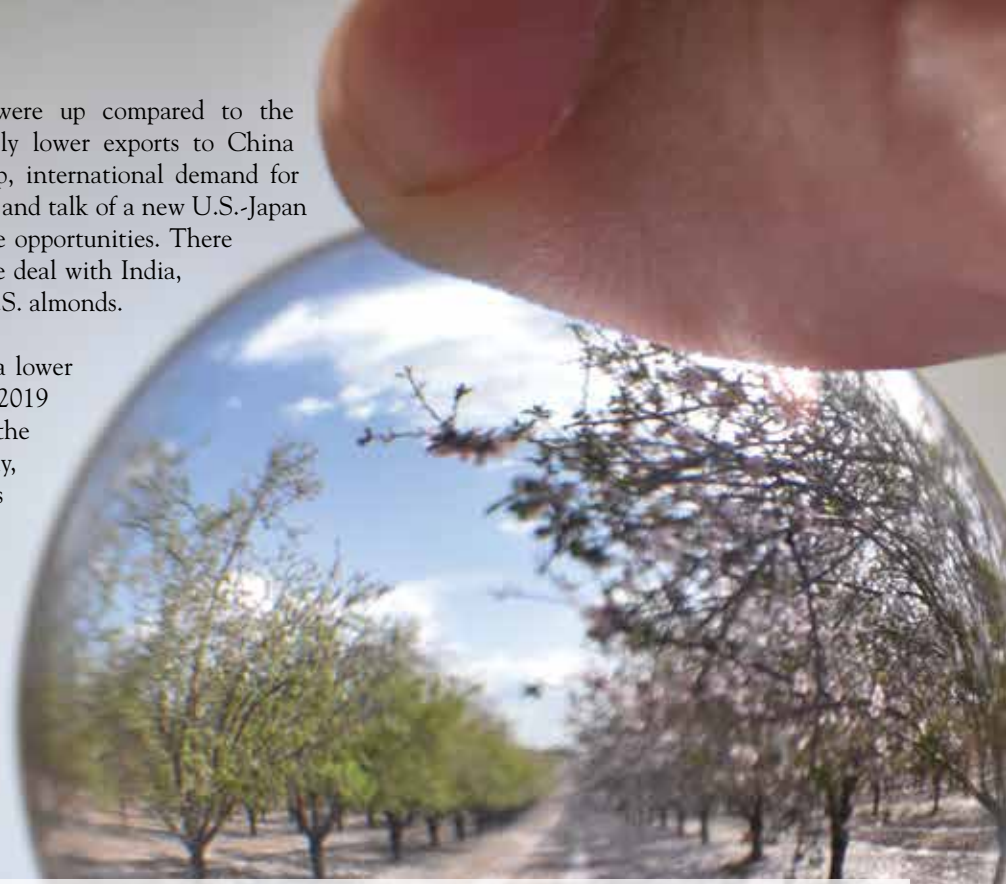
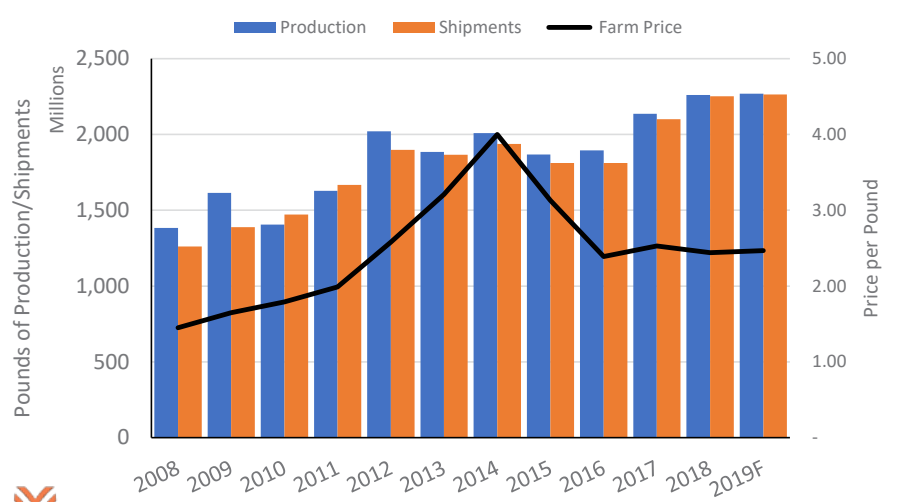


Figure 9: Almond Supply, Demand, and Farm Price Trends



Source: Almond Board of California Position Reports; USDA NASS Quickstats

TIMBER AND FOREST PRODUCTS
(resource 30, 31, 32,33)

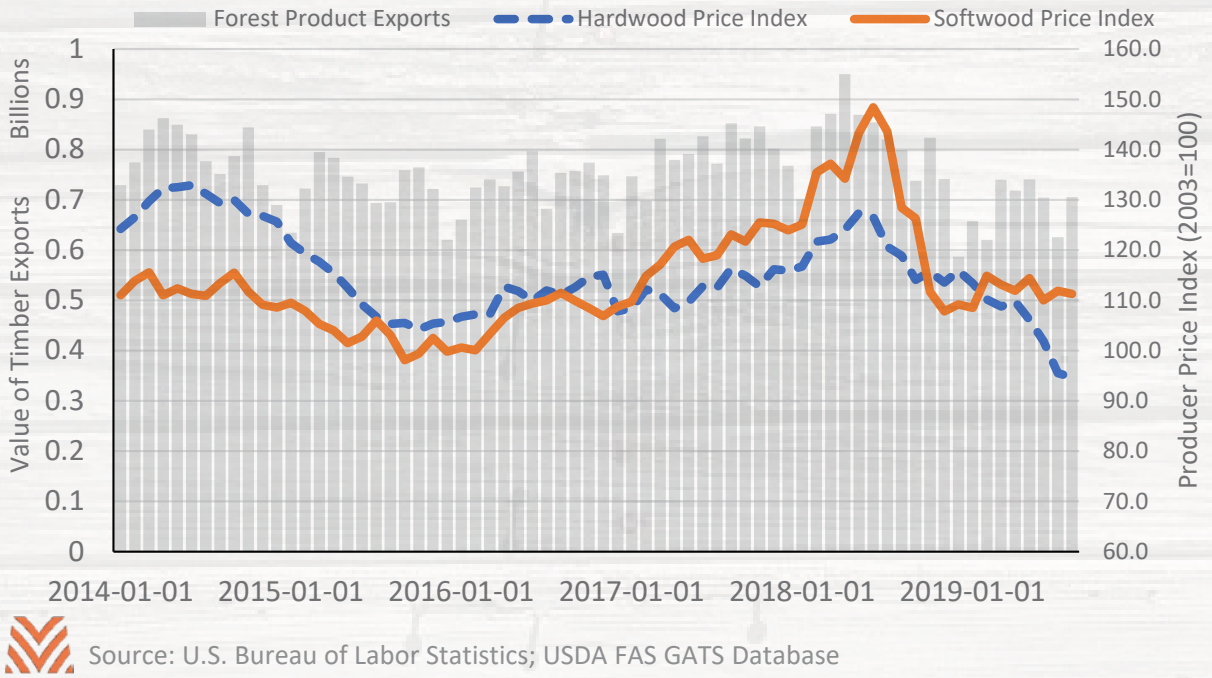
Key Highlights

Slower housing starts are a drag on softwood lumber prices.

Chinese tariffs on U.S. hardwood forest products have caused a sharp decline in timber exports.

Government support programs, like the Market Facilitation Program, do not extend to forest products.

Figure 10: Timber Prices and Export Levels



Source: U.S. Bureau of Labor Statistics; USDA FAS GATS Database

Market conditions for U.S. timber and forest products have been challenging in 2019. One indicator of timber market health is U.S. housing starts, and that leading indicator of economic health has been flat since 2018. From 1959 through 2007, the U.S. added privately-owned residential housing units at an average rate of 1.5 million per year. After bottoming out in 2009 at an annual rate of 0.5 million per year, housing starts have climbed back to 1.3 million per year, and they have stalled at that level since January of 2018. Housing accounts for roughly one-third of all softwood lumber demand, so a permanent shift in demand has a major impact on softwood lumber prices. Softwood lumber prices are down approximately 12% since 2018, falling 25% from peak hurricane prices experience in late 2018.

Export demand is another indicator of timber market health. Foreign demand for U.S. hardwood peaked in 2018, with over $9.6 billion in timber and forest products shipped to overseas markets. China was the number one buyer of U.S. timber, particularly for red and white oak lumber commonly used in higher-quality furniture and flooring. However, China has since enacted retaliatory tariffs on most hardwood varieties, which went into effect on June 1, 2019. As a result, timber exports to China are down 45% in 2019. Total timber exports are down 18% through August 2019, and hardwood timber prices have fallen 13% from January to August 2019 (see Figure 10). This relatively sudden decline in demand and price has put profitability pressure on sawmills and timber brokers, causing some in the industry to cut back output in response.

These conditions are likely to persist into 2020. There are ongoing trade negotiations between the U.S. and China; however, it would take time for the markets to rebound and for trade flows to be fully restored. Many timber industry members are pressing Capitol Hill to be included in USDA trade-related aid packages, like the Market Facilitation Program (MFP), to help offset the losses incurred by the drop in export demand. But as it stands today, there are still no provisions for forest products in the 2019 MFP program.

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Co-Creator - Jackson Takach, Chief Economist, is a Kentucky native whose strong ties to agriculture began while growing up in the small farming town of Scottsville. He has since dedicated a career to agricultural finance where he can combine his passion for rural America with his natural curiosity of the world and his strong (and perhaps unrealistic) desire to explain how we interact within it. He joined the Farmer Mac team in 2005, and has worked in the research, credit, and underwriting departments. Today, his focus at Farmer Mac currently includes quantitative analysis of credit, interest rate, and other market-based risks, as well as monitoring conditions of the agricultural economy, operational information systems analysis, and statistical programming. He holds a Bachelor's degree in economics from Centre College, a Master's degree in agricultural economics from Purdue University, and a Master's of Business Administration from Indiana University's Kelley School of Business. He has also been a CFA Charterholder since 2012.

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