The Feed

Farmer Mac's Quarterly Perspective on Agriculture

Fall 2020

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. For more than a quarter-century, Farmer Mac has been delivering the capital and commitment rural America deserves.

Contacts

To subscribe to The Feed, please visit:
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For media inquiries:
Megan Pelaez
Director – Marketing & Communications
MPelaez@farmermac.com | 202.872.5689

For business inquiries:
Patrick Kerrigan
Vice President – Business Development
PKerrigan@farmermac.com | 202.872.5560

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@JacksonTakach

FROM THE DESK OF THE CHIEF ECONOMIST

Redefining "Normal"

The collective vocabulary of the rural and global economies is searching to redefine "normal" in the face of COVID-19. The 2020 pandemic has changed how many of us work, how we shop, where and what we eat, where we want to live, where and how we educate our youths, and, on a foundational level, how we communicate with one another. Millions of Americans remain out of work heading into the heart of fall, casting uncertainty on the strength of the post-COVID recovery and forcing economists to think about the future of labor markets and industries in the coming decade. Interest rates look to remain near zero for the not-so-near-term future, driven by accommodative monetary policies from the Federal Reserve. Google data on national mobility shows that we continue to spend more time at home, at grocery stores, and outdoors, and less time in retail establishments, transit stations, or workplaces.

While each community may have confronted the disease in different ways, virtually all communities (by early October, only six out of 3,141 U.S. counties had recorded no cases of COVID-19) have experienced at least some of the indirect effects, from cities to rural towns, from the heartland to Hawaii. However, the full resiliency of the agricultural and rural economies has been on display throughout this challenging year. Shifting food products and labor from the eatery to the grocery and retooling factory floorplans to increase worker safety are two of the remarkable examples of how America's food supply chain survived through adaptation.

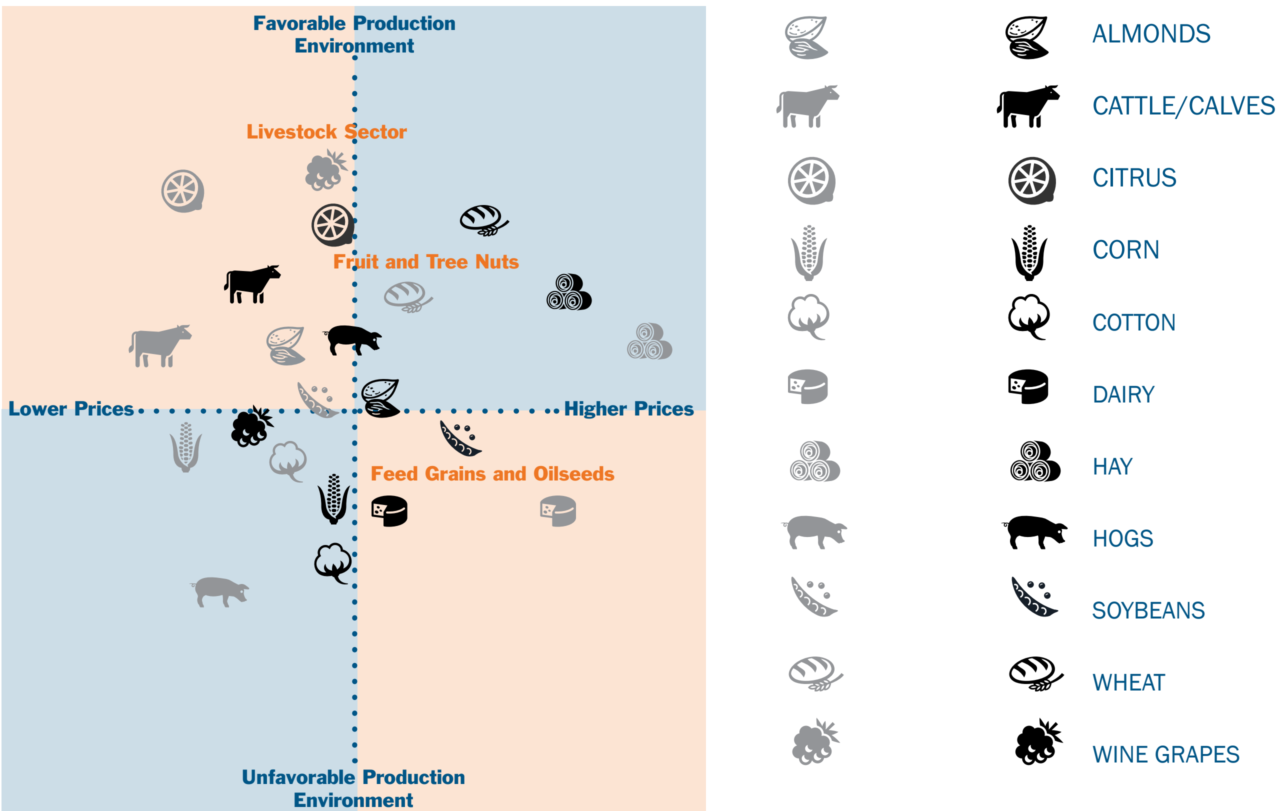
That leads us back to the original question, "What is the new normal?" That is the fundamental question that drove the rich analysis of the issue in front of you. It may take years to unpack that question fully, particularly for health, travel, and social interaction. However, there are several trends and threads that we can start pulling on today to understand what might happen tomorrow. Farm finances are key among them, but also important are the impacts of COVID on where we live and what we eat. These choices could impact a generation of rural Americans and may drive additional economic development in rural areas and increased connectivity through rural broadband. The disease may not have a hard end date, but the time has come to think about life after. And we hope this issue is a good place to start.

A happy, healthy, and bountiful harvest to all,

Jackson Takach, Chief Economist

PRODUCTION AND MARKET PRICE PERCEPTUAL MAP

Summer 2020 Fall 2020



ZOOMCAST ZINGERS

(resource 1)

By David M. Kohl, Ph.D.

Key Highlights

Liberal monetary and fiscal policy could be creating financial bubbles; commercial real estate in urban areas may face the largest risk.

Most economists believe the recession will end sometime in 2021, though basic goods like food and health may be able to recovery more quickly.

Many agricultural banks are making permanent changes as a result of the pandemic, but a majority are optimistic about the future of the industry.

Editor's note: The legendary Dr. Dave Kohl, Ph.D, Hall of Famer in the College of Agriculture at Virginia Tech, writes a bi-monthly blog called Dave's GPS and Dashboard exclusively for Farmer Mac. To read past, present, and future Dave's GPS articles like "Zoomcast Zingers," and see his full ag economy dashboard, be sure to follow Farmer Mac on Facebook, LinkedIn, or Twitter. You can also find it on Farmer Mac's website, www.farmermac.com/daves-gps.

BUBBLES. Many of the participant questions that were asked recently during meetings at the Graduate School of Banking at Colorado and the Ag in Motion event hosted by the Royal Bank of Canada centered on financial bubbles that have been created by governments' fiscal stimulus and central banks' monetary policy both here in the United States and abroad. The bank school faculty stated that there were probably very few farmland and residential real estate bubbles. If present, these real estate bubbles would be in certain regions or areas. However, the faculty was concerned that commercial real estate, particularly in urban areas, may see severe valuation corrections. The migration of the urban population coupled with the demand destruction and social distancing created by the COVID-19 pandemic may create long-term devaluation in many urban areas.

Next, all of the faculty member panelists agreed that the stock market valuations are being influenced by both fiscal and monetary policy. These programs have resulted in risk-taking by both institutional and retail investors attempting to post gains on stock market investments versus alternative investments. Investors choosing stocks because other asset classes offer even worse returns can result in the "TINA Effect." This situation and the subsequent decisions of investors can cause the stock market to rise only because "There Is No Alternative" for investors. These risk takers are also active in the bond market as well as moving towards gold and silver investments.

In a survey of participants, 86% indicated that the Dow Jones Industrial Average would be between 20,000 and 28,000 points by year-end. However, they were also optimistic for the future, with 70% predicting that the Dow Jones Industrial Average would be between 25,000 and 30,000 points at year-end 2021. It will be interesting to see how these results play out.

RECESSION. Moving to the U.S. and global economy, the panelists and participants were both asked about the expected length of the recession. Both groups felt that the recovery would begin sometime in 2021. However, 11% of the participants and one faculty member expressed that the recession could extend into 2022 and possibly 2023. Global recession forecasts were much more dire, with 57% of the participants indicating that the recession would end in 2021. However, 35% stated that it would be 2022 and beyond.

This recession may have a disjointed impact on certain regions and segments of the economy, both in the United States and abroad. Consumer service sectors may be in for an extended recession. Basic goods such as food, health, and modes of distribution aligned with convenience and favorable customer experiences may rebound quickly, as they appeal to the consumer. As one faculty member stated, lenders must assess their largest accounts to determine how vulnerable they are to certain segments of the economy. Do these companies have the business and financial strength and management skill set to navigate the new economic environment?

CONSOLIDATION: USA AND CANADA. Participants from both sides of our northern border inquired whether COVID-19 would further accelerate the consolidation trend for farms, ranches, and agribusinesses, or whether the pandemic would reverse the trend.

The answer is yes and no. The movement toward consolidation will accelerate with the business objectives of efficiency and optimization. However, a movement towards smaller, entrepreneurial operations that will serve certain local, regional, national, or international niche markets will emerge. In some cases, the hybrid model will be interspersed both here and abroad.

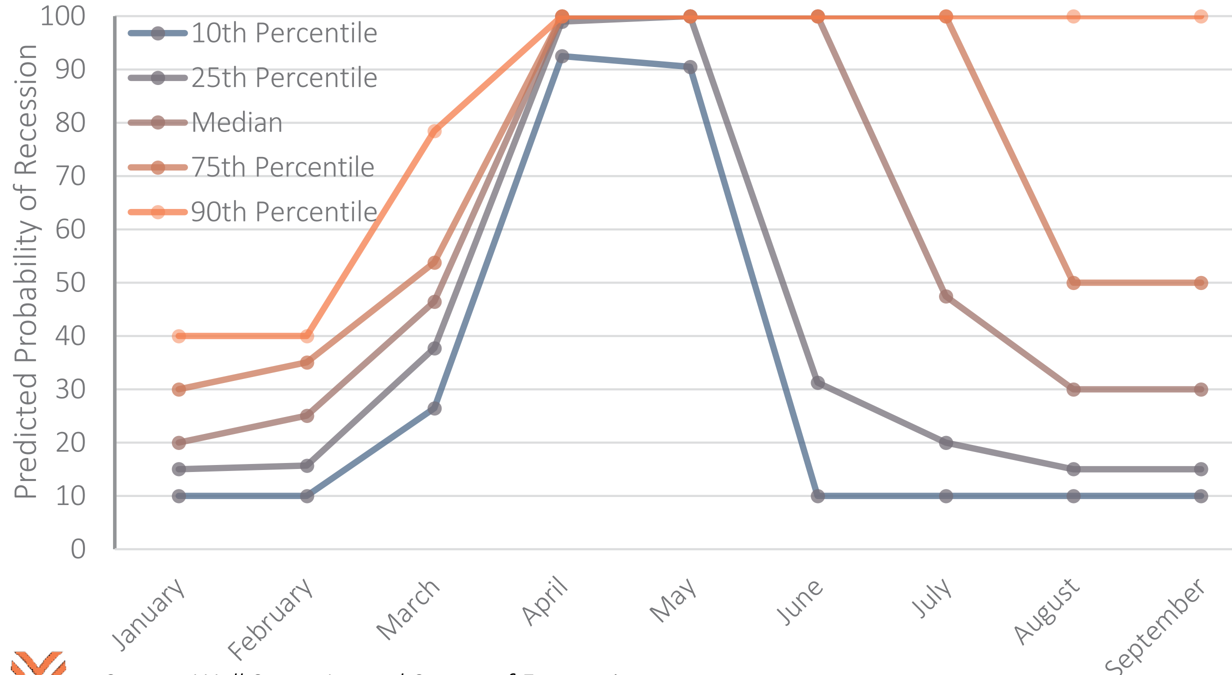
Local, state, and national government, societal trends, and the consumer will be the drivers of the change concerning all of these business models. The niche market model will require managers to adjust their strategy every four to six months as trends, opportunities, and challenges occur. Regardless of the model or market served, more businesses will be owned and managed by women, minorities, and others who aspire to be involved in agriculture and live in rural areas.

Speaking of rural areas, the importance of broadband internet access can either create a renaissance, if available, or demise, if not available. Technology, with a balance of natural amenities such as a lake, river, mountain, or viewshed will be talent magnets in this decade.

CUSTOMER PARADIGMS: WORK CULTURE SHIFTS. One of the survey questions centered on changes in bank delivery options and possible shifts in work culture.

Improvement of mobile banking products and improvement of online banking was at the top of the list, with 50% to 65% of participants reporting modifications and ongoing changes. Curbside service and user-friendly technology, particularly for the baby boomer customers, is being instituted. Of the participants polled, 16% were closing branches, while 35% were reducing staff, specifically at the branch level. Surprisingly, 23% have seen very little sustained impact as a result of COVID-19.

Figure 1 – Economists' Predictions of Recession in 12 Months



Source: Wall Street Journal Survey of Economists

More participants indicated that working remotely was more than a temporary shift. This was perceived to be a challenge for many banks, as Generations Y and Z are pushing for more remote work opportunities. However, senior management and board members are often Generation X, baby boomers, or members of the veteran generation, who are reluctant to change. The aversion to change positions on this issue could create recruitment and retention problems moving forward.

On a final note, the agricultural lenders were specifically asked about their opinions on the future of young people in the agriculture industry, regardless of the level. Wow! Nearly 40% of respondents were optimistic or very optimistic. As a matter of fact, it was almost a two to one ratio of positive to negative responses, which is encouraging for the agriculture industry. These zoomcast zingers are just the tip of the iceberg of some of the perspectives and foresight from virtual interactions. In future columns, we will continue to take the pulse of the industry based on some of the responses from polls and participant engagement.

NET FARM INCOME UPDATE

(resource 2, 3)

Key Highlights

Net farm income has been revised up since the March update and is above historic averages since 2000, though income estimates for 2019 fell.

Government support is forecast to reach an all-time high, and the November release will likely revise these payments higher due to the second round of CFAP payments.

Not all producers are forecast to see income gains; while most crops saw increases, animal product producers saw average income forecasts revised down 30%.

On September 2, the USDA's Economic Research Service ("ERS") released their first set of estimates and forecasts for farm income and wealth since the start of the ongoing pandemic. With this release, the USDA released their first set of final estimates for 2019 farm income and their second forecast of farm incomes for 2020.

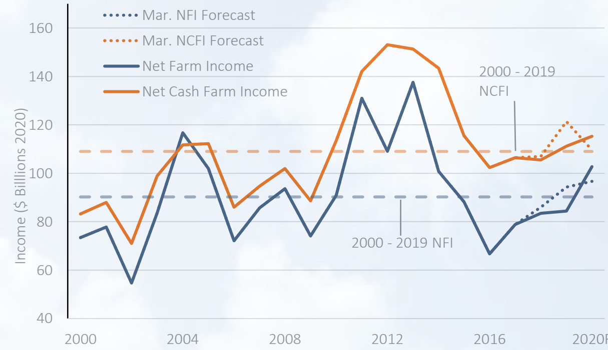
OVERVIEW. Farm income forecasts for 2020 are generally up, despite the ongoing pandemic. Net farm income ("NFI"), the USDA's primary measurement of farm well-being, was revised up 6% from the pre-pandemic forecast to $109.6 billion. Net cash farm income ("NCFI"), a simpler measure that reflects producers' cash on hand, was revised up 5% to $115.2 billion. In inflation-adjusted dollars, these incomes were at or above those in 2015, the final year of the commodity supercycle. These increases mean that incomes for 2020 are forecast to be above their inflation-adjusted averages since 2000. However, farm incomes were revised down by more than $10 billion for the period between 2017 and 2019.

Strong government support was the primary reason that income forecasts were revised up in 2020. Certain segments of the agricultural sector also had some luck that helped boost incomes after the government programs were created. The USDA NASS' June acreage report led to almost a billion-bushel decline in forecasts for U.S. corn production. National heat waves led to tight milk supplies that helped boost prices. Even U.S. hog producers, who saw the biggest hits to income, could see relief if September's outbreak of African Swine Fever in Germany leads to a surge in demand for U.S. pork. These modest improvements in market conditions are critical, as they are more sustainable than the current atypical government support.

GOVERNMENT PAYMENTS. The USDA forecasts that direct government support will total $37.2 billion in 2020. This dwarfs even the substantial volume of payments in 2019 that stemmed from the Market Facilitation Program. Direct payments will be the highest in U.S. history even in inflation-adjusted terms, surpassing events like the 1980s agricultural crisis and the severe weather years in the early 2000s. 2020 direct payments will be double the average seen from 2000 to 2019, but still make up a smaller share of net farm income than was the case during the severe weather years of the early 2000s.

The assumptions that the USDA ERS makes about government programs can give us some indication of the intentions for the department through the

Figure 2 – Net Farm Income and Net Cash Farm Income, 2000 – 2020 Forecast



Source: USDA ERS Farm Income and Wealth Statistics

end of 2020. The ERS assumes that $16 billion in Coronavirus Food Assistance Program ("CFAP") payments will be distributed in 2020, even though program disbursements had slowed and were just over $10 billion through early September. The ERS also makes no assumptions around the use of the $14 billion replenishment of the Commodity Credit Corporation ("CCC") that happened with the CARES act.

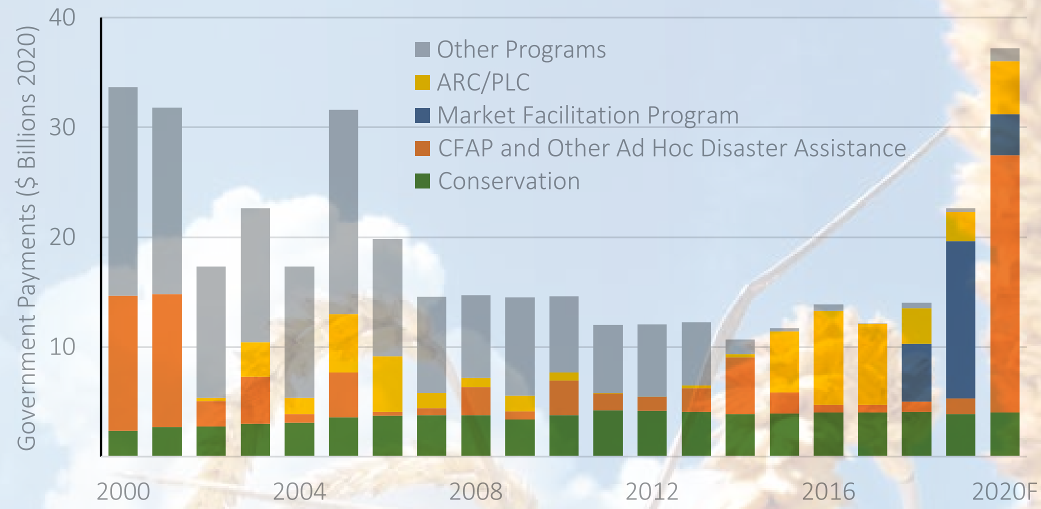
These historic numbers are likely to be revised up in the ERS' November release. The second round of CFAP payments pledge to send up to $14 billion to producers in a manner similar to the first CFAP round. If both programs are fully used, direct government support in 2020 could surpass $50 billion. Congress' replenishment of the CCC also means that USDA will have excess authorities going into 2021. Should conditions require it, the USDA will be able to create another round of ad-hoc programs to bolster producer incomes if lower price environments persist through 2021.

COMMODITY VARIATION. The increase in NFI between the March and September releases masks a considerable variation in outcomes based on producer commodity. Across animal and animal product producers, the USDA forecasts significant income declines. Hog, dairy, and cattle and calf producers all saw the forecast for their average incomes fall 30% between the March and September releases. For cash grains, only corn saw significant pressure, due to its unique exposure from ethanol. Corn producers saw their forecast incomes fall 14%, while soybeans and wheat both saw their forecast incomes rise. Despite expected pressure on consumer-oriented goods, specialty crop producers also saw forecast incomes rise in the September release.

A full accounting of CFAP funds may help address some of the deviations in changes to average expected incomes for producers in 2020. Cattle and calf operations have received $4.2 billion through early September, making up more than 80% of forecasted declines in cash receipts. However, other commodities may see challenges. Hog producers have received $600 million in payments, making up just over 15% of the decline in cash receipts forecasted between 2019 and 2020. Some of this variation can be attributed to the specifics of the CFAP program; the consolidated nature of hog and dairy production means those producers are more likely to be subject to CFAP caps than the more diffuse cattle and calf industry.

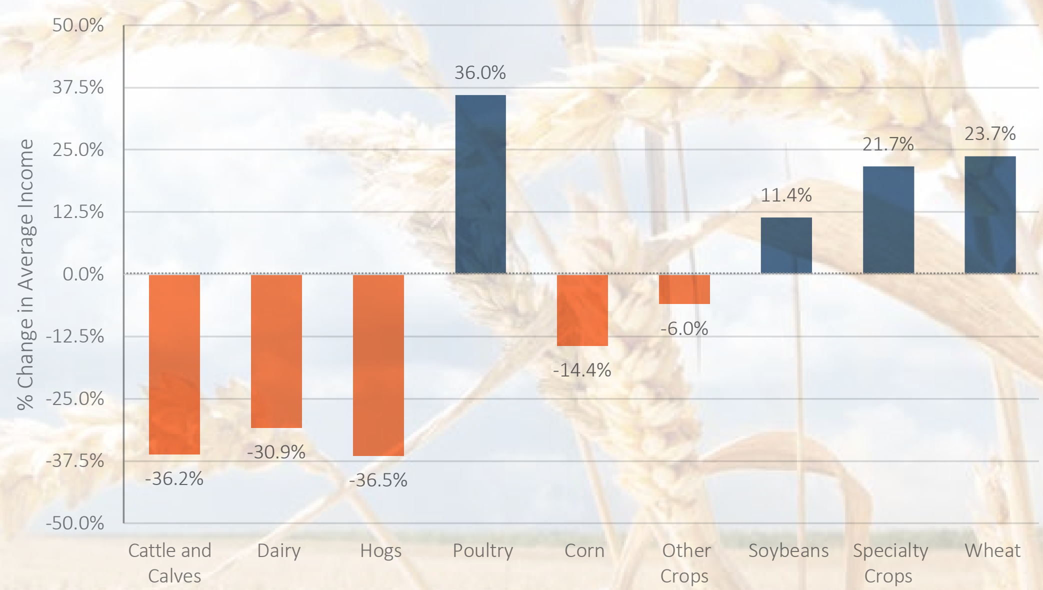
Despite the coronavirus pandemic, many producers will not see their incomes decline in 2020. This is largely due to government support, but a small amount of luck has also improved market conditions for many commodities. As of early September, hog producers remain exposed due to their consolidation and poor market conditions. However, most producers can start thinking about 2021. The University of Missouri's Food and Agricultural Policy Research Institute issued a release shortly after the USDA's September income forecast that forecast a 15% decline in NCFI between 2020 and 2021. Continued poor market conditions for many commodities may threaten producer incomes in 2021. Producers should be confidence that the USDA's excess authorities mean that it can continue to step in if market conditions dictate a response.

Figure 3 – Direct Government Payments by Major Group, 2000 – 2020F



Source: USDA ERS Farm Income and Wealth Statistics

Figure 4 – Change in Expected 2020 Producer Income Between March and September Forecast



CONSUMER FOOD PURCHASES DURING A PANDEMIC

(resource 4, 5, 6)

Key Highlights

As a result of COVID-19, consumers have spent an increasing amount of their food dollars at grocery and food stores compared to away from home dining.

Consumers are likely to continue at home dining preferences for the near term.

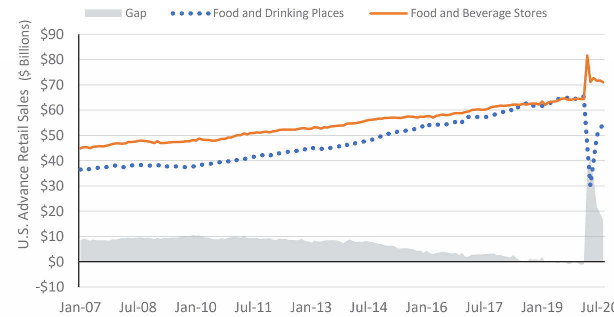
Farmers and ranchers earn five times more of the at-home food dollar compared to the away from home food dollar.

One of the sweeping changes in consumer behavior resulting from COVID-19 is in how and where we buy our food. Advance retail sales data highlight an extreme break in consumer behavior that started in April 2020. From 1992 through 2014, U.S. consumers spent $10 billion more per month in food for home consumption compared to food purchased and eaten away from home. That gap slowly eroded between 2015 and 2019 until consumers were routinely spending more on food outside the home than in-home. The convenience and variety of food choices, combined with higher post-recession incomes, rapidly transformed food demand heading into 2020. Things were looking up for dining and drinking venues—until the restaurants suddenly and almost universally shuttered. As Figure 5 shows, sales at food and beverage stores (like grocery stores) spiked in March as consumers prepared for quarantines. Simultaneously, sales at food and drinking places (e.g., restaurants) started to slip, and plummeted 54% in April. Restaurant reservations in the U.S. on the online platform OpenTable fell 100% by March 29, and they remained near zero until May 1. By August, restaurant sales rebounded considerably, but the gap between at-home and out-of-the home food sales remained at an all-time high.

It's difficult to predict how long social distancing and COVID precautions will keep consumers away from restaurants, and how much of the bounce back may be lost as colder temperatures start to make al fresco dining less and less appealing. However, according to data from Yelp, thousands of restaurants have already permanently closed as a result of the sharp decline in demand. Furthermore, shopping habits tend to tighten during economic slowdowns. The amount of food consumed away from home tends to rise and fall with incomes, so a prolonged and slow economic recovery could keep shoppers at grocery stores through much of 2021.

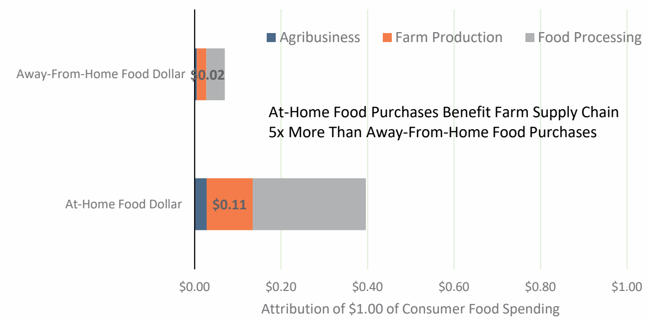
Consumer food choices have an important role in farm revenues. Analysis from the USDA demonstrates how the food dollar gets distributed along the food supply chain. Much more of the food dollar is allocated in marketing, packing, transportation, and service costs compared to food production and processing. Figure 6 highlights the stark difference between the farm production share of the food dollar in at-home versus away-from-home spending. For every $1 spent on food at home, $0.11 is allocated to farm production; but for food away from home, that figure is only $0.02. Because farm producers and processors receive a much higher share of the at-home food dollar, the resurgence in grocery sales and in-home dining could provide support to the ag sector.

Figure 5 – Comparing U.S. Consumer Food Purchases at Home and Away From Home



Source: U.S. Bureau of Labor Statistics

Figure 6 – Farm Share of the Consumer Food Dollar



Source: USDA ERS Food Dollar Series

Key Highlights

Favorable fall fieldwork conditions are being seen throughout the Midwest.

A moderate to strong La Niña weather pattern is likely for fall and winter.

The 2020 crop season is wrapping up throughout much of the country as attention turns toward harvest. For the fall and winter, one of the biggest stories will be the evolution of a moderate-to-strong La Niña across the equatorial Pacific and its ramifications for the weather across the country.

Temperatures and precipitation have generally been typical for late summer and early fall across the Midwest, and this overall trend is expected to continue as we progress into harvest season. Therefore, fieldwork conditions should generally be good. As we progress into late fall, there could be a greater chance for chilly and wet conditions from the northern Rockies into the Great Lakes states.

Abnormally warm and dry conditions in the Southwest are likely to continue through the fall and may expand eastward into the southern Plains. Late summer brought abnormally wet weather from the Gulf Coast into the Southeast, largely due to a very active tropical weather season in the Atlantic and Gulf basins. By late fall, this influence should diminish, while drier conditions are expected to develop across the Southwest.

Figure 7 – Seasonal Drought Outlook

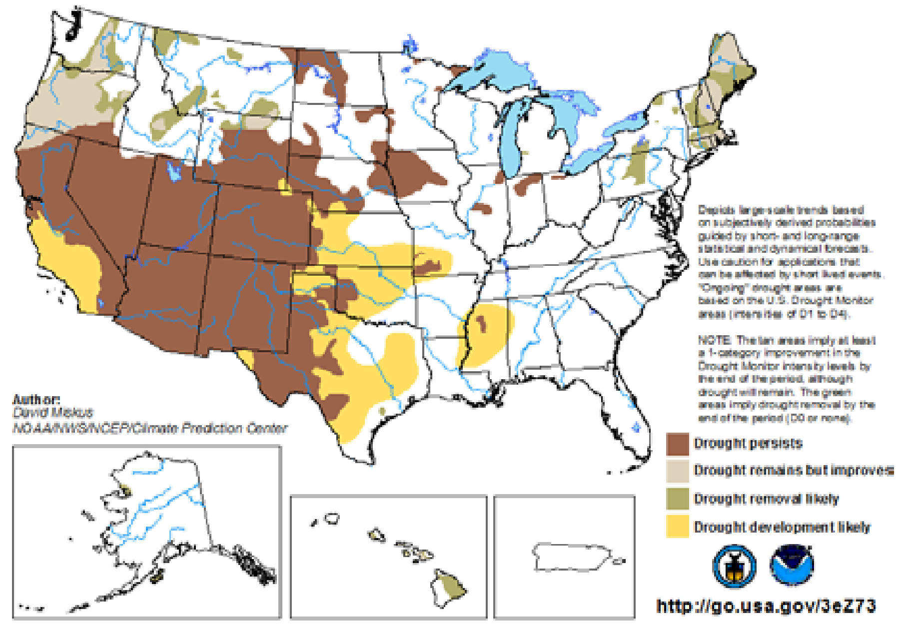
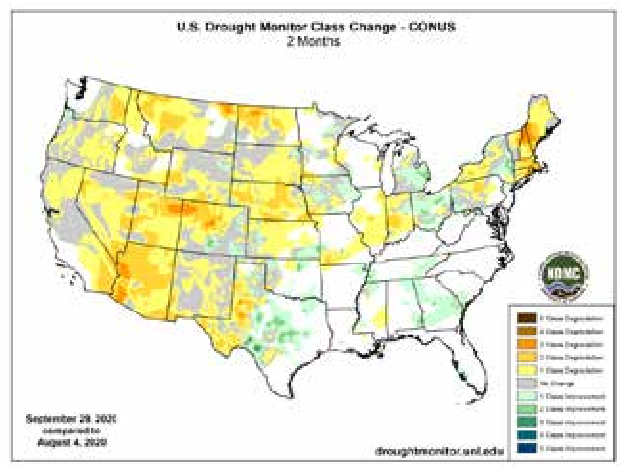


Figure 8 – Drought Monitor Class Change



The development of La Niña does not portend favorably for the parched and burning areas of California. Dry and warm weather is anticipated deep into the fall, and La Niña is typically not correlated with wet seasons. Therefore, drought conditions are likely to persist and intensify in much of the West.

FARM REAL ESTATE VALUES

(resource 9, 10, 11, 12)

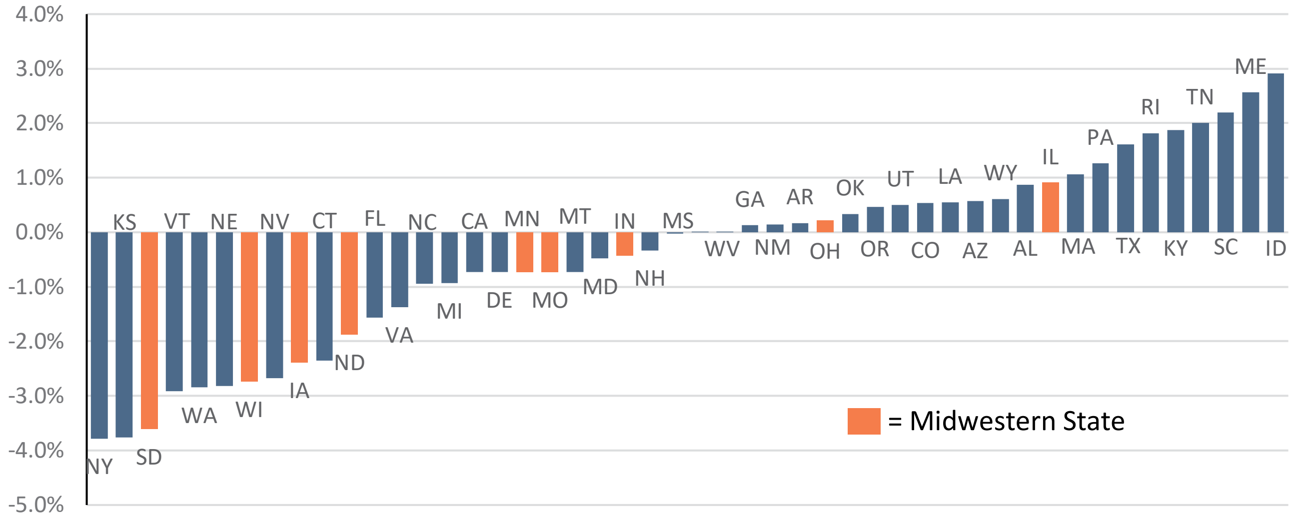
Key Highlights

Overall, farm real estate values held steady in 2020, with some regional variations.

Cash rents also held firm in 2020, dropping only $1 per acre on average between 2019 and 2020.

A low interest rate environment and steady demand could provide support to land values heading into 2021.

Figure 9 – Inflation-Adjusted Returns to Average Farm Real Estate Values by State



Source: USDA NASS June Area Survey Results, 2020

National farm real estate values held firm in 2020, though values varied by state. According to USDA data from the 2020 NASS June Area Survey, the average acre of farm real estate is worth $3,160, unchanged from the 2019 survey. Twenty-three states experienced an inflation-adjusted decline in values during the year, while 22 states experienced increased values. Many of the states experiencing a decrease in the value of farmland are in the Midwest, largely caused by the continued pressure on grain sector profitability (see Figure 9). The biggest declines come from Northern Plains states such as South Dakota and North Dakota and Lake States like Wisconsin and Minnesota. The declines are a function of both tighter cropland economics as well as weaker pasture demand. Mountain States like Idaho and Colorado exhibited the most strength, followed by Southern Plains states Texas and Oklahoma. These increases are a result of increased demand for farm and rural properties with 10-year returns catching up to neighboring states.

One driver of farm real estate values is the cash flow generated through rental rates. In addition to land value, the USDA surveys landowners and operators about the level of cash rental rates paid for irrigated and non-irrigated farmland. Figure 10 is a Midwestern heatmap of average rental rate percentage changes from 2019 to 2020. Red indicates warming, or increases, in rental rates, while blue indicates cooling, or decreases, in rental rates. Much of the map is green, indicating no change in rates from 2019. However, there are hot spots in Minnesota and northern Missouri, where rates increased more than 15% annually. There are also cool spots, particularly in the southern parts of Kansas, Missouri, and Kentucky, where rental rates declined significantly from the prior year. Rental rates generally trend with the profitability of the underlying land, but they tend to rise faster than they fall. Like a dividend, the level of rental income influences the value of the underlying asset.

In addition to rental rates, interest rates are another major factor in the level of asset values. The rate paid by the U.S. Treasury on 10-year bonds has traditionally been a good benchmark for long-term assets like farmland. It represents the risk-free rate an investor can choose to get a stable return for an extended period. Farmland owners should expect a higher return (e.g., rental rate) as the asset is not risk-free. Since 1994, the implied required return for farmland owners in Iowa is approximately 3.5% above 10-year U.S. Treasury rates. Using a simple dividend discount model with this required return and the average cash rental growth rate of 3.3% per year, Figure 11 shows how closely the actual reported average land value per acre in Iowa tracks the implied level of asset values. If cash rents hold firm into 2021, the low-interest-rate environment is likely to put significant upward pressure on land values, particularly in the Midwest, where the land is most similar, and the relationship between cash rents and values are the strongest. Federal Reserve Chair Jerome Powell indicated several times in September that Federal Reserve policy will aim to keep rates low through 2022, and the market-based expectations show 10-year U.S. Treasury rates below 1.0% through September 2022.

While there are many other factors that influence local land value markets, most current economic factors are also supportive of values. The supply of high-quality land remains limited. According to data from Farmers National, Midwestern farm auction activity slowed in the second and third quarters of 2020, likely a result of COVID-related constraints. Demand for metro-adjacent properties is also likely to continue to be supportive of land markets as some migration out of urban areas is expected to continue post-COVID. Water access is likely to be the most significant headwind to value accretion in the near term, particularly in Western states like California, where drought conditions and regulatory requirements decrease the economic viability of some farm acres.

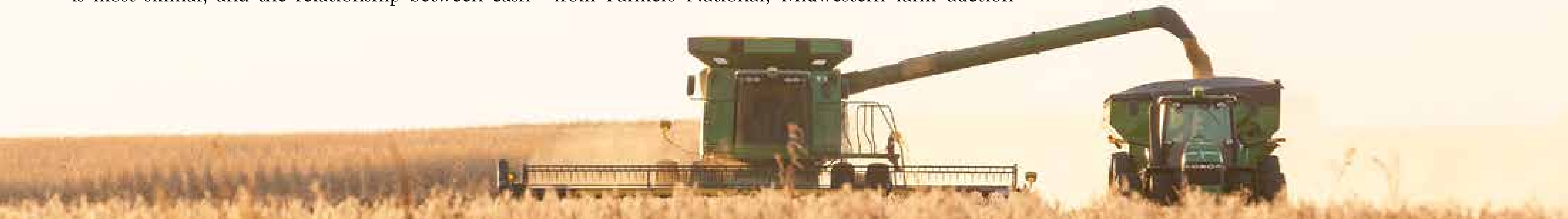
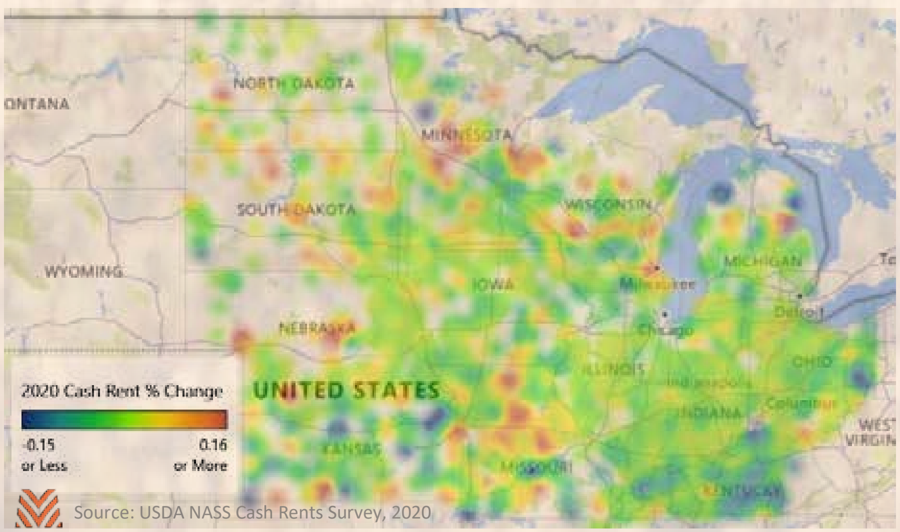
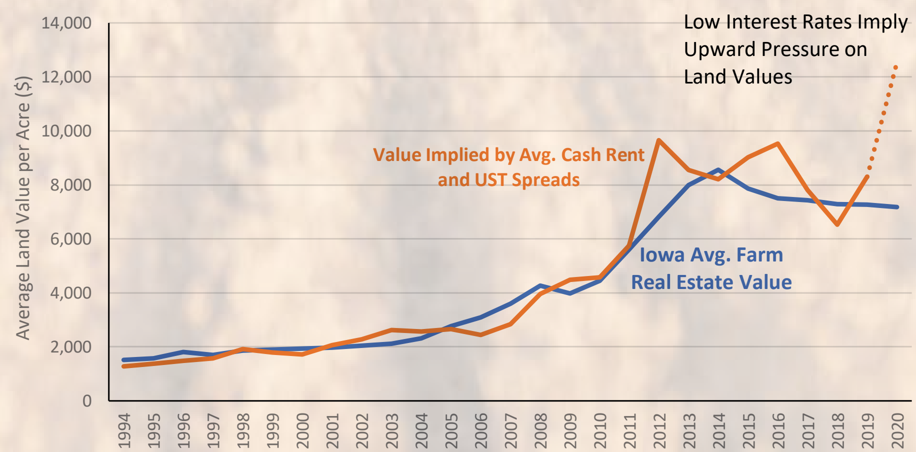


Figure 10 – Heat Map of Non-Irrigated County Cash Rental Rate Percent Change



Source: USDA NASS Cash Rents Survey, 2020

Figure 11 – Relationship of Interest Rates on Land Values in Iowa



Source: USDA NASS June Area Survey Results, 2020; Federal Reserve Bank of St. Louis FRED Data

COMMERCIAL BANK RESPONSES AND CHANGE FROM THE PANDEMIC

(resource 13, 14, 15)

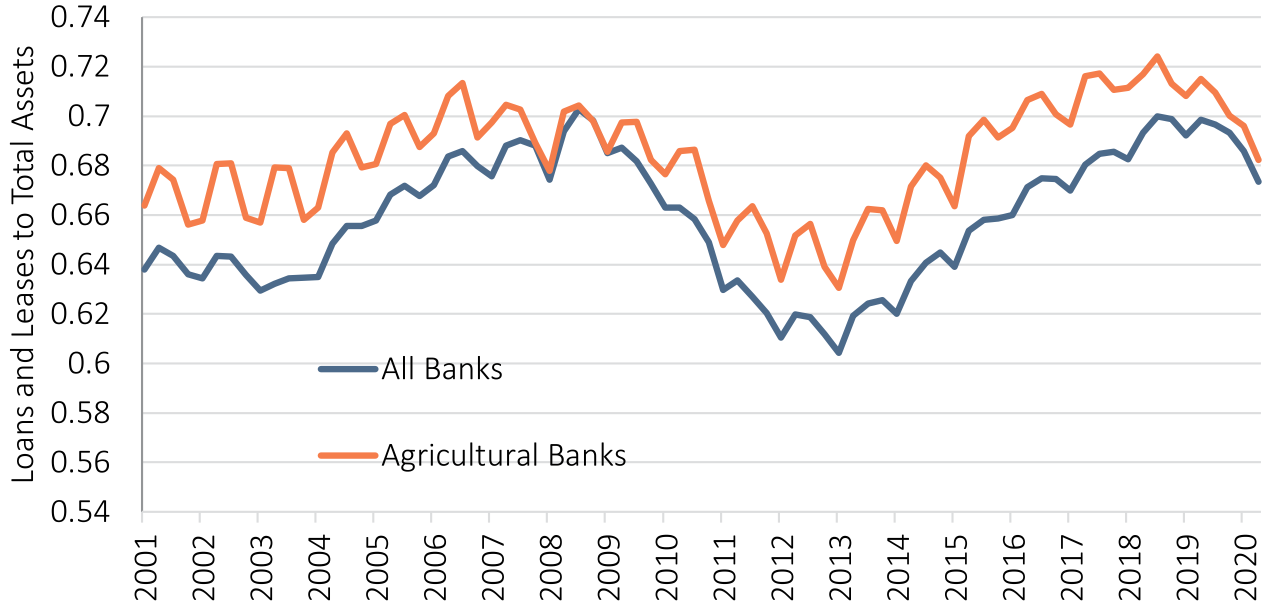
Key Highlights

Agricultural banks bolstered their liquidity between calendar Q1 and Q2; net loans and leases shifted away from non-agricultural real-estate backed volumes towards commercial and infrastructure loans.

Through June, branch closures remain slow in rural America, and the pandemic has fueled robust deposit growth across the country.

M&A activity has been historically slow for agricultural banks through September; activity may remain slow until more is known about the pandemic's impacts on assets.

Figure 12 – Median Total Loans and Leases to Total Assets, 2001 – 2020 Q2



Source: Federal Financial Institutions Examination Council Bulk Call Reports

The coronavirus has introduced a level of uncertainty in banking that many institutions haven't seen since the financial crisis in 2008. This article will cover three specific areas that may see longer-term change: bank portfolio makeup, consumer banking habits, and merger and acquisition activity.

BANK PORTFOLIO CHANGES. The risks associated with the pandemic meant that banks had to consider their liquidity positions. This isn't reflected across the board; in aggregate, some common measures of liquidity, like loan-to-deposit ratios, were unchanged between the June 30, 2020 call report release and the prior year release. However, most commercial banks reacted to the pandemic with a sharp reduction in their reliance on loans and leases as a share of total assets. This represents a serious departure for agricultural banks: between 2000 and 2019, the median agricultural bank always saw increases in their share of loans and leases between the first and second quarters due to the cyclical nature of farming. But between the first and second quarter of 2020, the median agricultural bank reduced their share of loans and leases by 1.4%.

Agricultural banks made many changes to alter their risk profile between the first and second quarter of 2020. The share of cash and balances due from depository institutions rose from 7.2% in Q1 to 8.4% in Q2, its highest point since 2014. Within the loans and leases that make up the bulk of commercial bank assets, agricultural banks also showed significant changes in composition between Q1 and Q2. Reliance on non-agricultural loans secured by real estate declined, though agricultural real estate reliance remained flat. The Paycheck Protection Program also caused significant movement: commercial and industrial loans rose from 11% to 15% of loans and leases, the highest point in over a decade.

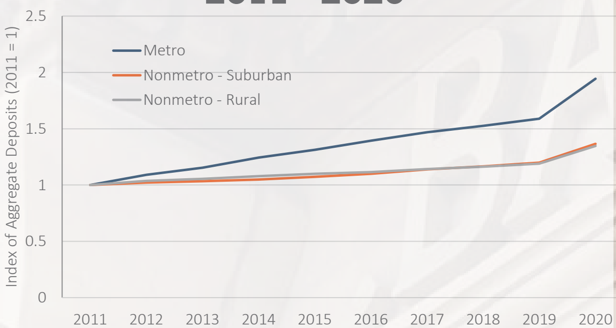
There is an outstanding question of whether uncertainty in the general market will cause a renewed interest in the relative safety of agricultural lending.

During the 2008 financial crisis, many large financial institutions increased their volume of agricultural holdings as a hedge against broader market risk. These same organizations had been unwinding these portfolios over the last several years, seeking higher returns in other sectors. If risk remains elevated, we may once again see interest in agricultural volumes from lenders who typically eschew them.

BRANCHES AND DEPOSITS. The pandemic has also had the potential to have a sizable impact on rural community banks. Between 2018 and 2019, more than 1,600 bank branch locations closed nationwide, out of roughly 80,000 locations. Almost all these branch closures were in metro counties, while completely rural counties saw almost no decline in their number of branch locations. Through the first six months of the pandemic, this trend held: while an additional 1,400 banks branches closed between 2019 and 2020, completely rural bank branches closed at slower rates than more urban counties.

However, one unintended consequence of the pandemic was its impacts on deposits. Nationally, deposits rose 20% between 2019 and 2020, after rising 4% between 2018 and 2019. This growth was also spread across the country: 97% of counties saw a growth in total deposits between 2019 and 2020. There is some evidence that new deposit growth was fastest in metro counties. Metro county deposits rose by 22%, while nonmetro county growth was just above 13%. However, this surge is still an important source of deposits for rural counties that had seen sluggish growth in deposits since the financial crisis.

Figure 13 – Growth in County-Level Deposits by Urban/Rural Status, 2011 - 2020

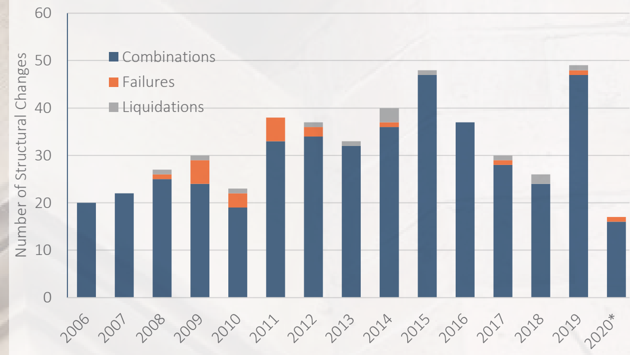


Source: FDIC Summary of Deposits; USDA ERS Rural-Urban Continuum Codes

MERGERS AND ACQUISITIONS. Through the first six months of the pandemic, the additional uncertainty has not led to an acceleration of bank consolidation. Through the first nine months of the year, just one agricultural bank has failed and 16 were acquired by other institutions. This is far behind the 2019 pace when 49 agricultural banks failed, were liquidated, or were acquired by another bank. While structure changes for all commercial banks also lag their 2019 pace, banks relying on agriculture have been even less likely to see structural change. If the current pace continues, 2020 will have fewer structural changes than any point in the last 20 years.

This does not mean that M&A activity will not accelerate through the final months of the year. Many commercial banks have increased their cash balances, making them more attractive acquisition targets. As M&A activity has picked up, there has been anecdotal evidence of well-positioned institutions acquiring other banks for near book value. This trend will likely continue as there becomes greater acceptance around what assets have permanently lost values as a result of the pandemic. However, the relative health of the farm sector during the first nine months of this year means that agricultural banks will likely be subject to different forces than the rest of the financial services sector.

Figure 14 – Agricultural Bank Structural Changes by Year, 2000 – September 15, 2020



Source: FDIC Reports of Structure Changes

In short, many of the same forces that have been impacting commercial banking will likely continue to impact the agricultural banking sector, though perhaps to a lesser extent. Aggregate bank liquidity was at its tightest point since the 2008 financial crisis and had shown signs of a turn even before the pandemic. Branch consolidation is expected to continue, but the pandemic may have changed how even the most reticent borrowers accessed financial services. Mergers and acquisitions will continue, but the pace might be slower among agricultural banks until better accounting of how asset values have changed is known. Despite how different life has been in 2020, the permanent impacts of agricultural banking are likely to be somewhat muted as compared to the broader impacts on commercial banking.

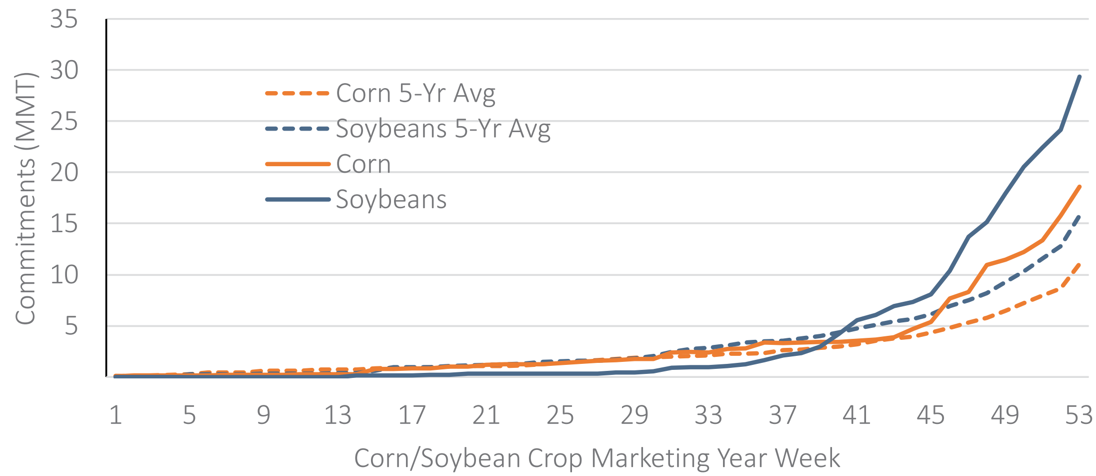
Key Highlights

Commitments for the 2020-21 corn and soybean crops have reached historic levels, aided by a weakening U.S. dollar.

Both commodities saw bullish surprises from USDA releases over the third quarter, from lower expected acres to lower stocks.

Crop conditions have deteriorated from robust expectations at the start of the year, leading to further declines in forecast production and higher prices.

Figure 15 – Next Crop Marketing Year Commitments, 2019-20



Source: USDA FAS Export Query Sales System

Corn and soybeans have had a turbulent year. One month into the pandemic, national average cash prices for corn settled as low as sub-$3.00 per bushel. By October, national December corn futures prices were as high as $3.80 per bushel, near pre-pandemic levels. Soybeans also fell—though never as far as corn did—and rebounded, spending the last weeks of summer with cash prices at their highest point since early 2018. The story of how these two commodities bounced back involves a lot of underlying good news in a year dominated by the pandemic.

One reason for this stunning turnaround is a historic level of new crop commitments from our trading partners. As expected, Chinese commitments for the 2020-21 Crop Marketing Year ("CMY") are very robust and represent more than half of all commitments. However, China very infrequently commits to the next CMY corn. At the height end of the commodity supercycle, China made unprecedented commitments exceeding 3 million metric tons ("MMT"), which reverted to zero commitments the following year. This year, China has committed to the purchase of more than 8 MMT of corn. China's twin challenges of drought and the repopulation of its hog herds have led to the immense demand for foreign corn.

Both commodities are also benefitting from the pullback of the U.S. dollar. At the onset of the pandemic, a surging dollar put additional pressure on commodities beset by declines in foreign demand and decreased biofuels use. This issue was critical for corn and soybeans, as crucial currencies like the Brazilian real fell against the dollar more than 30% since January. In recent months, corn and soybeans have both received support from the specific relationship between major agricultural importer currencies and the U.S. dollar. Currencies like the Chinese Yuan, Japanese Yen and South Korean Won have strengthened relative to the U.S. dollar. This strength is part of the reason behind the very strong commitments seen heading into the new crop marketing year.

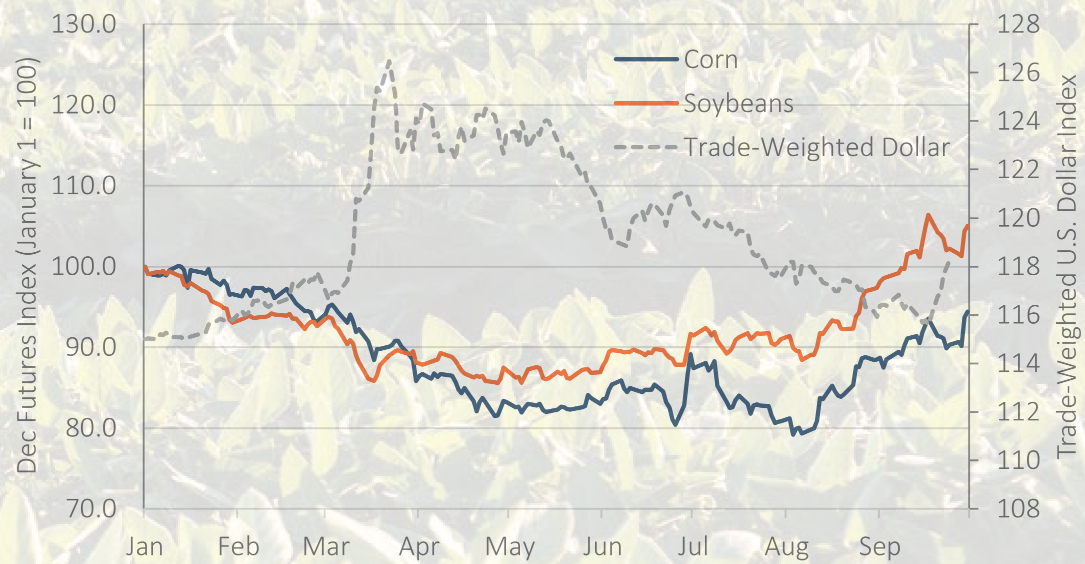
Both commodities have also seen unexpected support due to changes in USDA forecasts. The third quarter stocks report was bullish for both corn and soybeans, with all-position corn and soybeans stocks both lower than industry expectations by 10%. September 1 corn stocks were lower than four of the last five years despite marked decline in use for ethanol this year. This follows a year of bullish revisions for the commodities. Acreage reports lower production expectations for corn and soybeans, late-season challenges have lowered forecasts for yields and production, and crop conditions have come off their high points from the start of the growing season. Between the August and September USDA World Agricultural Supply and Demand Estimate release, forecasts for average farm price rose 40 cents per bushel for corn and 90 cents for soybeans. With the new stocks report, both forecasts have the potential to rise even further.

Corn benefitted from these revisions more than soybeans. The U.S. corn crop for the 2020-21 CMY, once forecast near 16 billion bushels, is now forecast at 14.9 billion. National crop conditions plummeted right before harvest and are only modestly better than the rain-drenched crop from 2019. Meanwhile, drought and high winds are lowering expectations across much of the upper Midwest, further driving up price. Corn is also performing well as an export, outperforming Brazilian corn due to tight supplies in Brazil and a weak dollar. While foreign production is expected to increase for harvests during the 2021 calendar year, increased animal production is forecast to partially offset these increases.

The story for soybeans is similar, though more dependent on changes in export expectations. National conditions have fallen in the weeks before harvest, leading to declining production forecasts. Given expectations for 2.1 billion bushels in exports, ending stocks-to-use ratios are just above 10%. These levels are above use ratios seen during the commodity supercycle but are generally favorable. There is also some limited evidence that Chinese hog repopulations from the African Swine Fever are ahead of schedule. After a year of record purchases from South America, Brazil is facing a shortage of soybeans, pushing China to purchase more U.S. goods.

The long-term trend for corn and soybeans is still a cause for concern. Foreign production increases every year. Despite poor weather heading into harvest, this year's corn crop will likely set another record. Protein demand often suffers during recessions, implying less demand for feed through the recovery. Continued investments in infrastructure in major competitors like Brazil will narrow the price gap between nations. However, the good news from 2020 is almost enough to make up for the direct challenges corn and soybeans have faced from the pandemic.

Figure 16 – Futures Prices and the Trade-Weighted Dollar



Source: Barchart commodity futures; FRB FRED database

NUT COMMODITY UPDATE

(resource 20, 21, 22)

Key Highlights

Forecasts for average specialty producer income have risen 20% from the start of the pandemic; nut prices have held through July.

Exports are not as robust as in 2019, but are on pace with 2018 totals; wealthier nations saw increases, while middle- and lower-income nations saw declines.

There is some indication that consumers in wealthy nations are now focusing on healthy eating; tree nuts may be benefitting alongside more typical produce, like oranges.

At the start of the pandemic, tree nuts looked like they would face considerable risk. Tree nuts are highly exposed to trade, and trade of high-value consumer-oriented goods, like almonds, has fallen in prior recessions. The decline in money spent at restaurants also threatened value-added goods, like cheeses and some nut products. The USDA's Coronavirus Food Assistance Program ("CFAP") payment structure for nut producers was very generous in anticipation of significant headwinds for the industry. However, when the USDA released their forecasts for income in early September, forecasts for average specialty producer income in 2020 went up almost 20%.

This is borne out in data collected by the USDA National Agricultural Statistics Service ("NASS"). National average prices for almonds, hazelnuts,

Figure 17 – Producer Price Index by Month for Tree Nuts, 2016 – July 2020

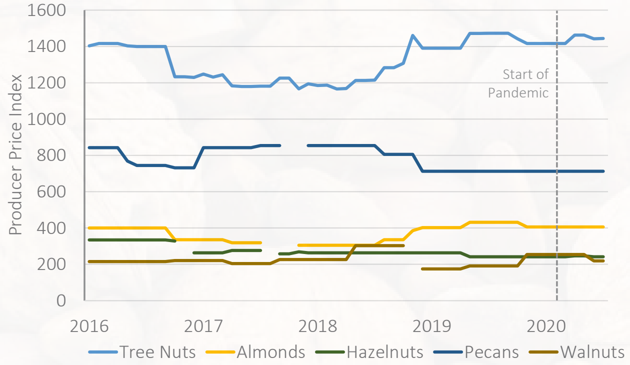
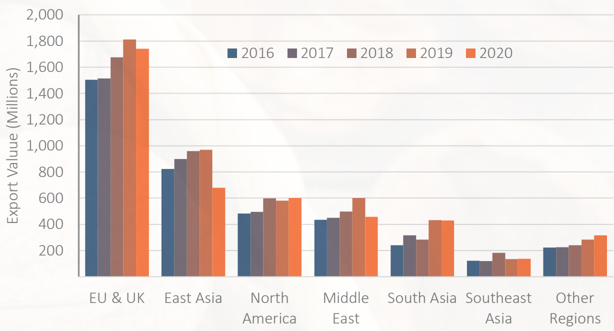


Figure 18 – Value of All Tree Nut Exports Between January and July by Region, 2015 - 2020



pistachios, and walnuts in June 2020 were all within 1% of their June 2019 values. This is despite improved production information showing that yields of most tree nuts had rebounded to 2018 levels after broad declines in 2019. Measures of prices received have been flat for all tree nuts since the start of the pandemic.

One clue suggesting why tree nuts have held steady comes from export data. Exports are critical to many nut manufacturers: 80% of cash receipts that almond producers received in 2019 came from exports. Between January and July, exports of tree nuts were down 9% from the same period a year earlier. However, the 2020 totals to date are in line with 2018 export values and are robust by historic standards.

Some of this could be due to the habits of the wealthier trading partners who make up the bulk of tree nut exports from the U.S. The EU and UK make up more than 40% of tree nut exports from the U.S., despite making up less than 10% of total U.S. agricultural exports. Many wealthy nations important to the nut trade, like Germany, Canada, and Japan, saw increased exports between 2019 and 2020, despite the ongoing pandemic.

The increase in exports to wealthier nations may be in part because of, and not despite, the pandemic. One survey of Americans from the International Food Information Council indicated some potential positives for consumer-oriented goods like nuts. More than 30% of Americans in this survey indicated that they want more fresh produce and are snacking more than they did pre-pandemic. Over 20% indicated that they are eating healthier as a result of the pandemic. This follows evidence from other wealthy nations where the pandemic has led to a greater focus on healthy eating.

There are still potential pitfalls for tree nut producers to navigate. Exports to middle- and lower-income nations largely fell through the first half of the year. Even wealthier nations may ultimately come to reduce their nut imports. However, the large backstop from the CFAP programs should provide some solace to nut producers, even if current market conditions deteriorate.

URBAN FLIGHT AND AGRICULTURAL LAND VALUES

(resource 23, 24, 25, 26, 27)

Key Highlights

Since the start of the pandemic, there has been considerable coverage around urban flight; increasing demand for suburban land could support metro-adjacent farmland values.

Suburban flight is only evident around the NYC metro region, but it is unclear whether New York is an anomaly or a leading indicator.

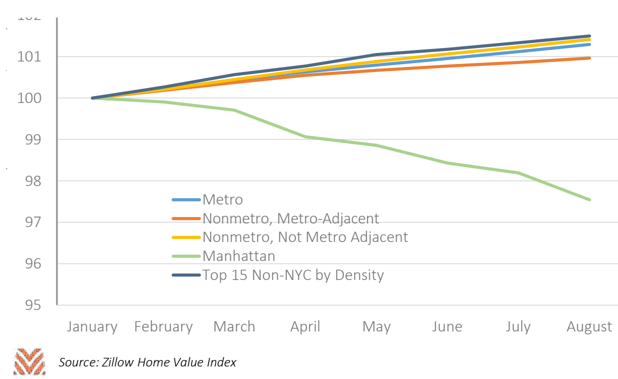
Suburban growth would also lead to other changes that could boost agriculture, such as increased personal gasoline use.

Since May, many media outlets have written extensively about new urban flight. If the pandemic permanently increases the acceptance of remote work, they posit that many Americans will choose yards over cramped apartments. This trend would also have implications for agriculture. Prior literature has shown that urban premiums can account for as much as 40% of the value of farmland in metro-adjacent counties. If the pandemic of 2020 becomes the start of a permanent shift in where Americans live, producers on the outskirts of cities from Fresno to Fargo could see a boost in their land values.

The only challenge with this story is that there is limited evidence in the data so far to support the idea of nationwide urban flight. If the story is generally true, demand for suburban and metro-adjacent land would put pressure on those home prices. However, home prices in metro-adjacent counties have in fact seen the least upward movement since the start of the pandemic. Metro counties have continued to see home price increases despite the prognostications about the end of the American city, though rural counties have seen the fastest gains.

The reason for the intense coverage of a trend that is not currently playing out on a national level may be an artifact of where these stories are coming from. New York City has seen a seismic shift, and the sharp decline in home prices there indicate that some residents may be opting for the Manhattan in Kansas over the one in New York. However, no other dense metro center has seen this trend. Chicago, Washington, D.C., San Francisco, and other metro centers have seen some of the fastest increases in home prices since the start of the pandemic. The question is whether New York is fundamentally different than these other cities, and whether the individuals leaving Manhattan are going 10, 100, or 1,000 miles away to look for new homes. The extreme impact the pandemic had on the city and its overall density could mean it is a unique case, but it is too early to say that it is not a leading indicator of what will happen to other urban cores.

Figure 19 – Zillow Home Value Index by County Metro Code, January 2020 – August 2020



There are many ways that a flight to the suburbs could impact agriculture. Producers near urban centers could see boosts to their land values; a welcome reprieve after land value growth was flat in 2020. Suburban Americans also drive more, leading to more personal gasoline consumption and ethanol use. Rural households also are much more likely to eat at home, and a greater share of food dollars spent at home goes to producers. Whether these benefits become a national story or something unique to New York remains to be seen.

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ABOUT THE AUTHORS

Lead Author - 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.

Lead Author - Greg Lyons is an economist who joined the Farmer Mac team in 2019. Prior to joining Farmer Mac, Greg was an economist with the USDA, Economic Research Service, where he created estimates of farm sector income and researched topics related to agricultural finance, beginning farmers and farm households. Greg's interest in rural America stems from his time growing up in upstate New York, where he spent many hours on his family's dairy farm. At Farmer Mac, he spends most of his time researching topics related to credit access, land values, and farm financial conditions. Greg has a bachelor's degree in Policy Analysis and Management from Cornell University, and a Master's of Public Policy degree from Georgetown University.

Contributing Author - Brian Brinch joined Farmer Mac in 2000 as a Financial Research Associate. Since then, he has held various roles within the company and currently serves as Senior Vice President – Rural Infrastructure, where he is the business unit head of the company's rural infrastructure division. Brian continues to follow agricultural and rural utility industry trends and risks as he regularly contributes to the company's stress testing and strategic planning processes. Brian received both his undergraduate degree in meteorology and his master's in Agriculture and Applied Economics from Penn State University. He is a CFA Charterholder and FRM Certified.

Guest Author - David M. Kohl, Ph.D. (Professor Emeritus, Virginia Tech), is an academic Hall of Famer in the College of Agriculture at Virginia Tech, Blacksburg, VA. Dr. Kohl has keen insight into the agriculture industry gained through extensive travel, research, and involvement in ag businesses. He has traveled nearly 10 million miles; conducted more than 6,500 presentations; and published more than 2,250 articles in his career. Dr. Kohl's wisdom and engagement with all levels of the industry provide a unique perspective into future trends.

Riley Croghan, Editor-in-Chief
Betsy Urso, Copy Editor & Design

1999 K Street, N.W. Fourth Floor
Washington, DC 20006
Phone: 800.879.3276
Fax: 800.999.1814
www.farmermac.com

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