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Industry Analysis: U.S. Farming During the COVID-19 Pandemic

The COVID-19 pandemic has changed life in America in many ways. Perhaps more than ever before, Americans have felt the importance of the farming industry, as shelves in grocery stores remained unstocked and food banks were emptied out. This feeling was mirrored in the political arena, where agriculture has been a contentious issue in the trade dispute with China.

This article offers a snapshot of the impact of the pandemic on the U.S. farming sector, focusing on (1) production and supply chain; (2) exports; and (3) bankruptcy.

Falling Output and Rising Income

The impact of COVID-19 has starkly affected farmers. The United States Department of Agriculture (the "USDA") forecasts a $3.5 billion decline in gross agricultural output for the year 2020, largely driven by the pandemic. This shortfall will not be borne equally by all farmers. Producers of animal products are forecasted to suffer a $15 billion loss in output, with the steepest output loss in eggs ($9.2 billion), followed by meat animals ($5.2 billion).[1] On the other end of the spectrum, crop production is actually expected to improve, with a forecasted record $12.7 billion gain.

Surprisingly (or not), American farmers on average are not getting poorer during the pandemic. Net farm income is projected to increase by $18 billion—a 22 percent increase relative to 2019. The boosted bottom line is mostly financed by a $5.8 billion decrease in interest expenses, through forbearance and loan assistance programs, as well as a $14.6 billion increase in direct government payments.

Disrupted Supply Chain

The disruption of production on the farmland was felt by consumers at the dining table. Compared to 2019, consumers are now paying on average 3.1 percent more for the same home-cooked food. The Consumer Price Index (CPI) is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. As **Table 1**: *Percentage Change in CPI, Year-to-Date, 2019 to 2020* shows, consumers are paying upward of six percent more for the same amount of eggs, meats, poultry, and fish; these agricultural commodities posted the largest decline in production during the pandemic. Consumers will also pay more than three percent more for dairy products. Fresh fruit, a non-durable product, with an expectant $4.7 billion surplus this year, is the only food category that became cheaper during the pandemic.

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[1] Value added to the U.S. economy by the agricultural sector, 2011-2020F, Real (2020 dollars). *USDA, Economic Research Service*. <https://data.ers.usda.gov/reports.aspx?ID=17830> (accessed Sept. 25, 2020).

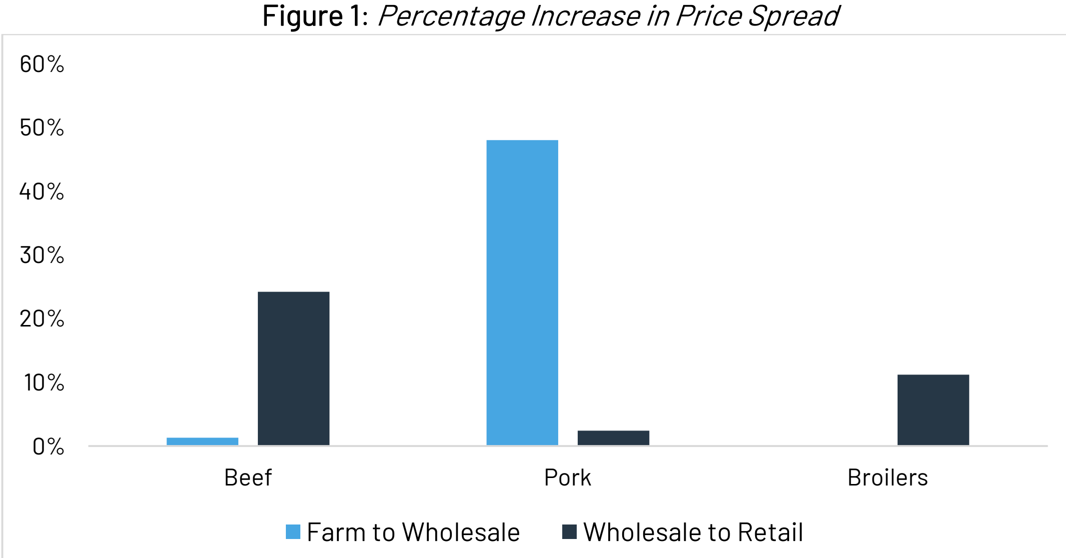
Table 1: *Percentage Change in CPI, Year-to-Date, 2019 to 2020*

Eggs	6.6
Meats, poultry, and fish	6.1
Dairy products	3.7
Nonalcoholic beverages	3.3
Sugar and sweets	2.8
Cereals and bakery products	1.8
Fats and oils	1.4
Fresh Fruit	-1.5

Source: Changes in food price indexes, 2018 through 2021, *USDA, Economic Research Service*. <https://www.ers.usda.gov/data-products/food-price-outlook> (accessed Sept. 25, 2020).

However, higher prices paid by consumers do not necessarily pass through to farmers, as food produced on the farmland does not travel directly to the dining table, but instead goes through a supply chain consisting of food processing, wholesale, and retail. Each link in this food supply chain was severely distorted by the pandemic. **Figure 1**: *Percentage Increase in Price Spread* shows the percentage increase in two types of price spreads: farm to wholesale and wholesale to retail, between March and August 2020 for select commodities. For beef, most of the high price consumers paid was coming from the wholesale-to-retail margin, as opposed to the farm-to-wholesale margin. The opposite was true for pork.

Figure 1: *Percentage Increase in Price Spread*



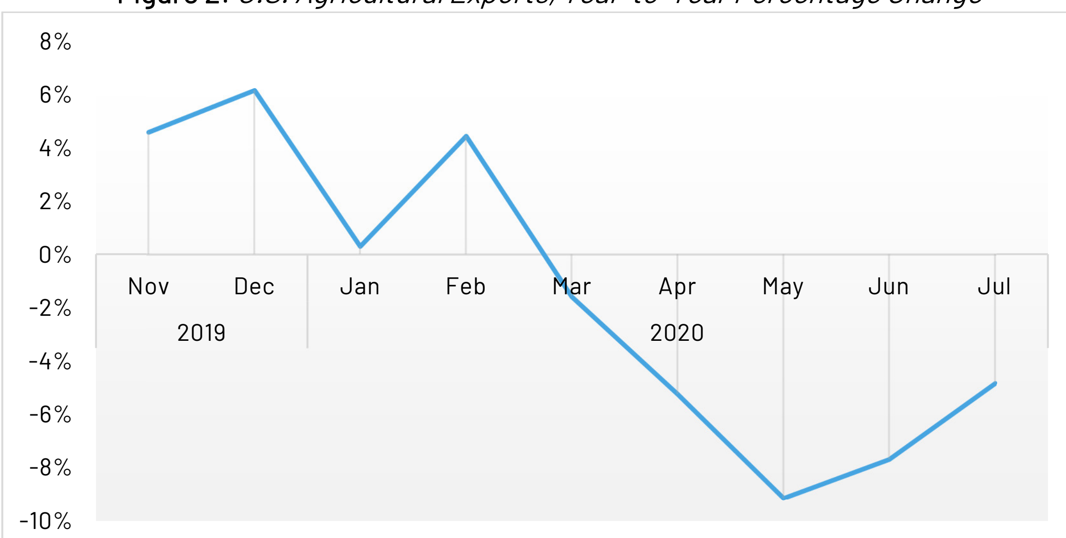
Source: Summary of retail prices and price spreads, *USDA, Economic Research Service*. <https://www.ers.usda.gov/data-products/meat-price-spreads> (accessed Sept. 25, 2020).

Robust Agricultural Exports

Over the last decade, the U.S. exported more than 20 percent of the agriculture produced at home. The global COVID-19 pandemic, and the disruption to trade and transportation that came with it, presented an unprecedented challenge to American farmers. **Figure 2**: *U.S. Agricultural Exports, Year-to-Year Percentage Change* shows that on a year-to-year basis, each month in 2020 since February has seen a decline in agricultural exports relative to 2019. The single biggest year-to-year decline (nine percent) was recorded in May. But overall, U.S. agricultural exports remain robust during this chaotic period. In the first two quarters, total agricultural exports dropped by only three percent on a year-to-year basis.

China is a significant market for American farmers and, in 2019, accounted for ten percent of all agricultural products that the U.S. sold to the rest of the world. The Phase 1 trade agreement with China, signed on January 15, 2020, expanded trade opportunities for American farmers through 2020. On a year-to-year basis, total agricultural exports to China through the first two quarters of 2020 increased by $617 million. If such growth continues for the remainder of 2020, total exports to China are projected to increase by $1.5 billion this year.

Figure 2: *U.S. Agricultural Exports, Year-to-Year Percentage Change*



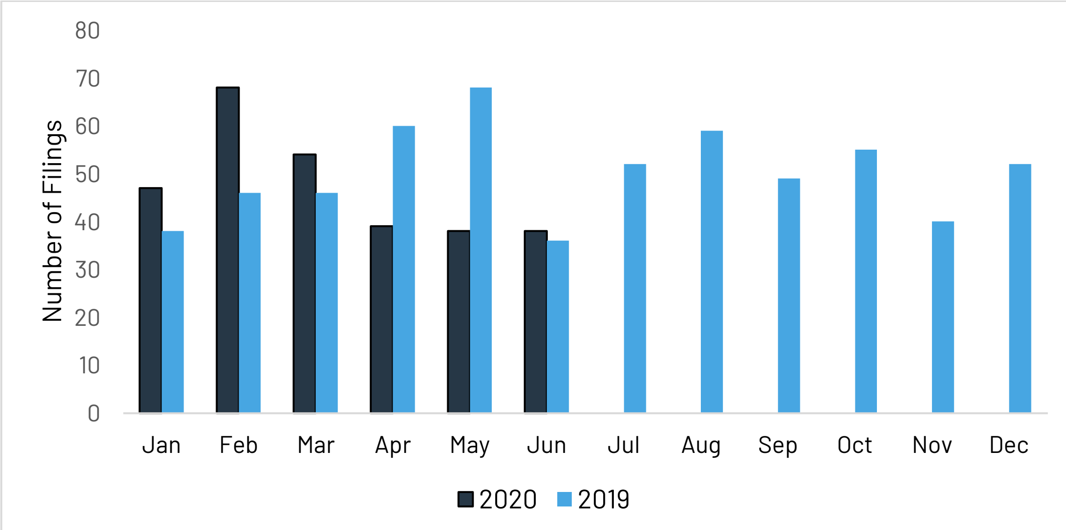
Source: U.S. agricultural exports, year-to-date and current months, *USDA, Economic Research Service*. <https://www.ers.usda.gov/data-products/foreign-agricultural-trade-of-the-united-states-fatus/us-agricultural-trade-data-update> (accessed Sept. 25, 2020).

Staying in Business

Despite the multitude of challenges, the latest bankruptcy data shows that American farmers, by and large, were not resorting to bankruptcy during the pandemic. Chapter 12 bankruptcy is a type of bankruptcy code applicable to "family farmers" and "family fisherman." **Figure 3**: *Number of Chapter 12 Bankruptcy Filings* shows a spike in chapter 12 bankruptcy filings in February, but the number quickly returned to trend level in subsequent months.

Balance sheet data further corroborates the story. Aggregate debt-to-asset ratio is projected to increase only slightly from 13.6 percent in 2019 to 13.9 percent in 2020. Debt service ratio is expected to decline by two percentage points, largely due to reduced interest expenses. There are, however, some signs of short-term financial stress. Working capital is forecasted to drop by $10 billion. As a share of gross revenue, working capital is at its lowest level since 2011.[2]

Figure 3: *Number of Chapter 12 Bankruptcy Filings*



Source: Business and Nonbusiness Cases Filed, by chapter of the bankruptcy code. *U.S. Bankruptcy Courts*. <https://www.uscourts.gov/report-name/bankruptcy-filings> (accessed Sept. 25, 2020).

About Vega Economics

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[2] Farm sector financial ratios. *USDA, Economic Research Service*. <https://data.ers.usda.gov/reports.aspx?ID=17838> (accessed Sept. 25, 2020).