

Agricultural Finance
Fall 2018

Ag Quarterly Newsletter

Economy

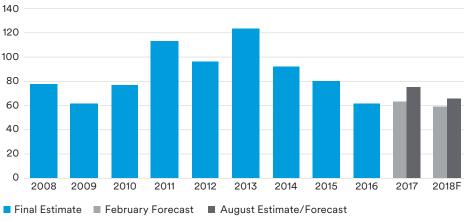
International trade took center stage this summer as the current administration instituted tariffs on goods from the EU, China, Canada, and Mexico. The U.S. farm sector has been an easy target for foreign retaliation due to its dependence on export markets. In response to foreign retaliatory tariffs on agricultural commodities, the USDA announced an aid package to help farmers. Recently though, tensions with many of these nations have eased. In late September, Canada, Mexico, and the U.S. reached an agreement to modernize NAFTA, now known as the United States-Mexico-Canada Agreement (USMCA). In addition, trade tensions with the EU have also eased.¹ Despite the progress made, retaliatory tariffs on U.S. Ag products remain in place and the outlook for the dispute with China remains unclear. Much uncertainty surrounds U.S. agriculture but the USDA's latest outlook for the farm sector points towards continued resiliency.

In August, the USDA provided a first glimpse of its projected impact of tariffs on the farm sector's financial well-being in 2018. Figure 1 graphs sector-level Net Farm Income (NFI). The most recent USDA forecast predicts a 13% decrease in NFI this year. However, we believe this forecast likely overstates the impact, because it does not include payments from the \$6.1 billion aid package announced in late August.²



Of the three programs within the package, a majority (\$4.7 billion) of the funds will be distributed directly to producers who have been most affected by the trade disputes. Furthermore, the USDA also indicated there could be a second round of payments later in the year, contingent upon progress made in trade negotiations.

Figure 1 | Net Farm Income (Historical & Projected, \$ billions)



Source: USDA, Haver, MIM

Despite underwhelming incomes, real estate values have been a bright spot for the farm sector. The USDA forecasts the value of farm real estate will increase 2% in 2018,³ which is roughly in line with overall inflation expectations.⁴ Most farmland value indicators point to either stabilization or modest increases.⁵ Although these aggregate figures mask pressure on valuations in some areas of the Midwest, they speak to continued strong demand for farm real estate assets and are anchoring the sector's healthy solvency position. This is best illustrated by comparing today's market environment to similar periods during the 1980's Farm Crisis.

Figure 2 shows how the sector's interest coverage ratio—which measures how many times interest payments can be made with farm incomes—has decreased in recent years. While the recent decline has not been as prolonged or severe as in the 1980's, a recovery in incomes is still clearly needed. However, farmland values have remained resilient and supported the sector's debt to asset ratio (Figure 3). As we detailed in our Winter 2018 Newsletter,⁶ low debt to asset ratios in the sector and a flat yield curve have allowed borrowers and lenders to extend debt maturities while simultaneously supplementing working capital. This is not a long-term solution to low commodity prices and farm incomes, but it helps explain the stability of the sector during this period.

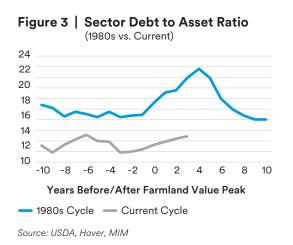
Figure 2 | Interest Coverage Ratio
(1980s vs. Current)

10
9
8 7
6 5
4 3
2 1
0 -10 -8 -6 -4 -2 0 2 4 6 8 10

Years Before/After Farmland Value Peak

— 1980s Cycle — Current Cycle

Source: USDA, Haver, MIM





Annual Crops

Trade disputes and favorable growing conditions pressured soybean prices throughout the summer, but the aid package and tightening global inventories may offer some reprieve. Meanwhile, global production woes have caused wheat prices to soar, offering a bright spot in annual crop markets otherwise battered by trade tensions.

The soybean market outlook began 2018 with a bullish tone due to an expected tightening in supply and demand conditions. However, U.S. optimism began to fade when China applied a 25% import tariff to U.S. soybeans. The USDA subsequently reduced their soybean export projection by 11% for 2018.⁷ The bearish sentiment has been amplified by this year's large projected harvest due to near-record yields.⁸ These factors are expected to cause the domestic soybean stocks-to-use ratio to reach 20% (Figure 4). Soybean prices generally fall as the stocks-to-use ratio rises.

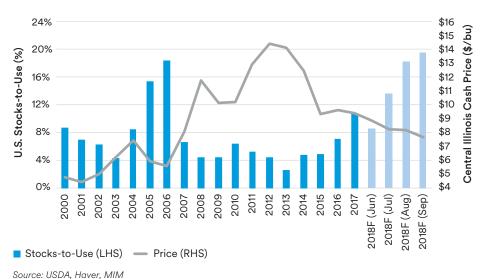


Figure 4 | Soybeans - Stocks-to-Use Ratio & Price

However, the global soybean stocks-to-use ratio is forecast to remain unchanged compared to last year, which calls into question the durability of current, low soybean prices. This suggests China may face difficulties meeting its soybean demand without purchasing from the U.S.

later in the year when South American supplies are unavailable. Additionally, the aid package announced by the USDA in late August could also offer some near-term reprieve to soybean farmers. The USDA will distribute 77% of the \$6.1 billion directly to producers via the Market

Facilitation Program—\$3.6 billion of which will compensate soybean growers.

Wheat market conditions stand in stark contrast to soybeans. Dry weather across Australia, Europe, and the Black Sea region have reduced global wheat production this year and

driven an 11% rally in wheat prices. This development bodes well for U.S. growers, who have experienced a five-year deterioration in prices and seen their share of global wheat exports decline from 30% to 13% between 2007 and 2017.9 Surging exports from Ukraine and Russia over the last decade contributed to the decline, but production concerns in the Black Sea region this year have improved the competitive landscape. As a result, U.S. wheat exports are expected to rise 8% this year, which should help reduce inventories and support prices.¹⁰

Permanent Crops

With harvest for most permanent crops underway, Chinese retaliatory tariffs have clouded the outlook for a segment of the Ag economy otherwise experiencing positive fundamentals. However, demand from other nations has significantly mitigated the negative impact thus far.

Apple production in 2018 is projected to remain flat year-over-year (yoy), as a 4% decline in Washington State will be offset by higher production in Michigan.¹¹ The impact of tariffs on U.S. apple producers has been muted by strong demand from other markets. Chinese imports of U.S. apples have declined 25% yoy in 2018,12 due partially to the 15% increase in import tariffs enacted earlier this summer. Despite fewer sales to China, higher exports to India, Vietnam, and Mexico have led to a 17% increase in total U.S. apple exports compared to last year.¹³

In California, early season growing challenges had minimal impact on almond and pistachio production, which are both forecast to increase in 2018.14 Out of the major tree nuts produced in the U.S., pistachios are most dependent on the Chinese market, which imports approximately 25% of annual U.S. production. 15 Pistachio exports to China have declined 24% yoy through July, but exports to Canada, Germany, and Spain have offset the reduced shipments to China. 16 As a result, total U.S. pistachio exports are down just 1% year-to-date through August, compared to last year.¹⁷ However, China imports most of their pistachios during the holiday months (Figure 5), so any significant change in demand will be revealed later this year.

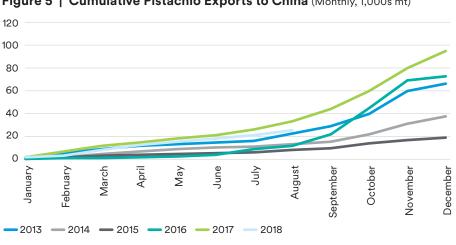


Figure 5 | Cumulative Pistachio Exports to China (Monthly, 1,000s mt)

Source: U.S. Census, MIM

Tight global pistachio supplies may further complicate matters for China. Iran and the U.S. account for approximately 72% of global pistachio production. Iran's crop is projected to decline 30% this year due to water shortages and high temperatures.¹⁸ As a result, China will likely struggle to source pistachios outside of the U.S.



Livestock

Since 2014, low feed costs and strong global demand have motivated expansion in the livestock sector. The expansion will likely continue this year, with total U.S. meat production set to increase 3% yoy.19 However, building inventories of red meat in cold storage are weighing on prices and could signal a peak in the sector's expansion.

Market hog inventories reached record levels in June while the domestic beef cattle herd grew to its largest since 1976.²⁰ As discussed in our recent Cattle Market insight,²¹ strong export demand has been a driving force in the expansion of the U.S. livestock sector during recent years. Exports have remained robust through August of this year, rising 9% by volume compared to last year.²²

Still, record export volumes in 2018 have been unable to counteract supply growth, causing inventories of red meat in cold storage to rise 6% yoy and pressuring livestock prices (Figure 6). Recent shocks such as a swine disease outbreak in China and lower feed costs due to trade disputes could provide short term relief.23 However, we expect the sector's expansion to peak in 2019 as low prices motivate farmers to pull back production.

(YOY Change) 30% 20% 10% 0% -10% -20% -30% Jul-14 Jan-15 Jul-15 Jan-16 Jul-16 Jan-17 Jul-17 Jan-18 Jul-18 Livestock Prices — Red Meat in Cold Storage

Figure 6 | Livestock Prices and Inventories of Red Meat in Cold Storage

Source: Haver, LMIC, MIM

Agribusiness

Although the trade dispute is also a headwind for agribusiness, the sector is benefitting over the near term from retaliatory tariffs. Profit margins have improved as input costs (farm-level prices) have fallen while processed food prices have remained flat. This trend will likely be

short lived if the trade dispute persists, as aggressive competition by food retailers suggests they will be eager to pass along cost savings to consumers.

The Census Bureau's Quarterly Financial Reports provide financial performance information of U.S. food manufacturers and serve as a proxy for overarching conditions in the agribusiness sector. Profit margins²⁴ were boosted in Q2 as trade tensions pressured farm-level prices but did not impact the prices food manufacturers receive for their finished goods. Figure 7, which displays food manufacturer profit margins and the Producer Price Indices (PPI) for farm products and processed foods, illustrates this relationship. The farm products PPI fell compared to Q2 2017, while the processed food PPI remained stable.

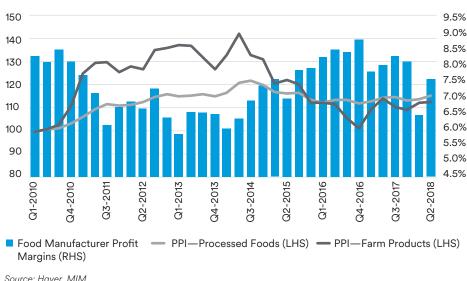


Figure 7 | Food Manufacturer Profits and Food Price Indicies (2010 Q1 = 100)

Source: Haver, MIM

However, the competitive landscape in the food retail space suggests this benefit will ultimately be passed along to consumers. Supermarkets and grocery stores—which represent the largest food retail channel in the U.S.—have faced increased competition from warehouse clubs and supercenters, online platforms, and new entrants focusing on private label products.²⁵ In response, grocery chains have slashed prices to drive foot traffic and will likely capitalize on further opportunities to do so.

Timber

Log markets were generally characterized by strong domestic and export demand in the first half of 2018. However, U.S. softwood logs did not escape China's retaliatory tariffs and now face a 25% import tax in their largest export market.²⁶ Still, U.S. housing is the sector's primary demand driver. We expect a strong U.S. economy in combination with limited Canadian log supplies to continue to support the industry and drive investment in wood processing facilities in the U.S. South.

The U.S. housing market continued its recovery in Q2 2018. Housing starts rose 7% yoy to an annualized rate of 1.25 million²⁷ and are on pace to meet our forecast of 1.3 million starts in 2018.²⁸ Strong demand from housing was matched by markets abroad as well. Softwood log export volumes in Q2 2018 increased 25% yoy.²⁹ A majority of the increased exports were sourced from the U.S. South, which saw volumes increase a staggering 93% yoy.³⁰

These positive factors have caused U.S. lumber prices to rise 27% since the beginning of 2017³¹ despite news of Chinese retaliatory tariffs. The impact of higher lumber prices has been mixed. In the Pacific Northwest (PNW), where log inventories are tight, log prices have risen

29% since the beginning of 2017. Yet, log prices in the U.S. South have remained relatively flat³² due to limited processing capacity and an oversupply of logs. This has led to a deluge of announced investment aimed at increasing mill capacity in the U.S. South, largely by Canadian-owned companies hoping to capture the strong processing margins in this region. Processing capacity in the U.S. South is forecast to increase over 5% in 2018.³³

Endnotes

- 1 "Trump secures concessions from EU to avoid trade war", Wall Street Journal, July 25, 2018.
- ² USDA U.S. and State Farm Income and Wealth Report, August 2018.
- ³ USDA U.S. and State Farm Income and Wealth Report, August 2018.
- Bureau of Labor Statistics Consumer Price Index, Haver Analytics, September 2018.
- MIM internal estimate using data from: Hertz Farm Management, Farmers National Company, Mainstreet Economy Report, Kansas City Federal Reserve District, Chicago Federal Reserve District, September 2018.
- ⁶ Ag Quarterly Newsletter, Winter 2018.
- ⁷ World Agricultural Supply and Demand Estimates, USDA, September 2018.
- ⁸ World Agricultural Supply and Demand Estimates, USDA, September 2018.
- ⁹ USDA ERS, Wheat Data, August 10, 2018
- ¹⁰ World Agricultural Supply and Demand Estimates, USDA, September 2018.
- ¹¹ 2018 Apple, Grape, and Peach Production Forecast, USDA, August 2018.
- ¹² USDA Foreign Agricultural Service Global Agricultural Trade System, includes China and Hong Kong, September 2018.
- ¹³ USDA Foreign Agricultural Service Global Agricultural Trade System, September 2018.
- ¹⁴ Fruit and Tree Nuts Outlook, USDA ERS, September 27, 2018.
- ¹⁵ USDA Foreign Agricultural Service Global Agricultural Trade System, Haver Analytics, September 2018.
- ¹⁶ USDA Foreign Agricultural Service Global Agricultural Trade System, September 2018.
- $^{17}\,$ USDA Foreign Agricultural Service Global Agricultural Trade System, September 2018.
- ¹⁸ Financial Tribune, Shokrollah Hajivand Iran Agriculture Ministry, May 2018.
- ¹⁹ Livestock, Dairy, and Poultry Outlook, USDA ERS, August 16, 2018
- ²⁰ Haver, USDA, U.S. Hog and Price, Market Inventory, August 20, 2018
- ²¹ Cattle Industry Outlook, MetLife, 2018.
- ²² USDA Foreign Agricultural Service Global Agricultural Trade System, October 2018.
- ²³ Multiple Outbreaks of African Swine Fever Reported in China, USDA, August 27, 2018.
- ²⁴ Before-tax operating profits as a percentage of sales
- 25 "Private Labels Rising: How Retailer's Own Products Are Taking Off And Transforming The CPG Industry", CBInsights Research Brief, September 17, 2018.
- ²⁶ China Announces Supplemental Tariffs in Response to U.S. 301 Tariffs, USDA GAIN Report, August 6, 2018.
- ²⁷ U.S. Bureau of the Census, Federal Reserve Bank of St. Louis, September 10, 2018.
- ²⁸ Millenials, Housing and the Timber Demand Revovery, MetLife, 2016.
- ²⁹ U.S. Census Bureau, USA Trade Online, October 2018.
- ³⁰ U.S. Census Bureau, USA Trade Online, October 2018.
- ³¹ Random Lengths Monthly Composite Data, September 18, 2018.
- 32 RISI Log Lines, August 2018.
- ³³ Forisk Research Quarterly Third Quarter, August 2018.

Agricultural Market Research



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