# **Agricultural Products**

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### Change from 2017 to 2018:

- U.S. total exports: Increased by \$2.0 billion (1.3 percent) to \$154.9 billion
- U.S. general imports: Increased by \$9.3 billion (6.3 percent) to \$156.6 billion

The value of total U.S. agricultural exports rose by \$2.0 billion (1.3 percent) to \$154.9 billion in 2018, increasing for the third consecutive year after falling sharply in 2015.<sup>1</sup> However, the increase in agricultural exports in 2018 was at half the rate of the prior year. By country, U.S. agricultural exports to South Korea increased by \$1.6 billion (21.1 percent) in 2018, the most for any country (table AG.1). The largest decrease in U.S. agricultural exports by country in 2018 involved exports to China, which declined by \$10.6 billion (50.5 percent). Gains in U.S. agricultural exports to all countries were led by increased exports of cereals, animal feed, and cattle and beef, which accounted for nearly 70 percent of the increase in U.S. exports in 2018. This increase was partially offset by decreases in exports of oilseeds, hides and skins, and prepared and preserved vegetables (table AG.2).

U.S. agricultural imports rose by \$9.3 billion (6.3 percent) to \$156.6 billion. By country, U.S. imports of agricultural products from Mexico increased the most in 2018, with a \$1.6 billion (6.1 percent) rise (table AG.1). Increases in U.S. agricultural imports from all countries were led by infant formulas, malt extracts, and other edible food preparations; distilled spirits; fresh and frozen fish; and fresh vegetables, which together accounted for over half of the increase in U.S. imports in 2018. Decreases in U.S. agricultural imports were led by declines in coffee and tea, swine and pork, and cocoa, chocolate, and confectionery (table AG.2).

<sup>&</sup>lt;sup>1</sup> Unless otherwise noted, the export data used in this investigation are for domestic exports. For more information on trade terminology, please refer to USITC, "Special Topic: Trade Metrics," *Shifts in U.S. Merchandise Trade, 2014*, 2015, <u>https://www.usitc.gov/research\_and\_analysis/trade\_shifts\_2014/trade\_metrics.htm</u>.

**Table AG.1** Agricultural products: U.S. exports and general imports, by selected trading partners, 2014–18

|                                 | Million \$ |         |         |         |         |  |                                 |  |
|---------------------------------|------------|---------|---------|---------|---------|--|---------------------------------|--|
| Country/item                    | 2014       | 2015    | 2016    | 2017    | 2018    | Absolute<br>change,<br>2017 to<br>2018 | %<br>change,<br>2017 to<br>2018 |  |
| U.S. exports of domestic mercha | ndise:     |         |         |         |         |  |                                 |  |
| Canada                          | 23,785     | 22,513  | 21,882  | 22,127  | 22,190  | 62                                     | 0.3                             |  |
| Mexico                          | 19,495     | 17,835  | 17,966  | 18,682  | 19,175  | 493                                    | 2.6                             |  |
| China                           | 25,676     | 21,567  | 22,831  | 20,940  | 10,370  | -10,569                                | -50.5                           |  |
| Japan                           | 14,232     | 12,303  | 12,017  | 12,844  | 13,799  | 955                                    | 7.4                             |  |
| South Korea                     | 7,458      | 6,708   | 6,802   | 7,425   | 8,992   | 1,567                                  | 21.1                            |  |
| Vietnam                         | 2,541      | 2,505   | 2,923   | 2,785   | 4,249   | 1,464                                  | 52.6                            |  |
| Indonesia                       | 2,913      | 2,185   | 2,670   | 2,893   | 3,116   | 223                                    | 7.7                             |  |
| France                          | 826        | 761     | 785     | 745     | 847     | 102                                    | 13.6                            |  |
| Italy                           | 1,419      | 1,293   | 1,201   | 1,170   | 1,467   | 297                                    | 25.4                            |  |
| India                           | 1,094      | 1,251   | 1,422   | 1,898   | 1,759   | -139                                   | -7.3                            |  |
| All other                       | 59,260     | 52,166  | 52,073  | 55,090  | 62,290  | 7,200                                  | 13.1                            |  |
| Total domestic exports          | 158,700    | 141,087 | 142,572 | 146,600 | 148,255 | 1,655                                  | 1.1                             |  |
| Foreign exports                 | 5,729      | 5,543   | 6,054   | 6,365   | 6,689   | 324                                    | 5.1                             |  |
| Total U.S. exports (domestic    |            |         |         |         |         |  |                                 |  |
| and foreign)                    | 164,429    | 146,630 | 148,626 | 152,965 | 154,944 | 1,979                                  | 1.3                             |  |
| U.S. general imports:           |            |         |         |         |         |  |                                 |  |
| Canada                          | 26,437     | 25,287  | 25,243  | 26,079  | 26,890  | 811                                    | 3.1                             |  |
| Mexico                          | 21,218     | 23,008  | 24,888  | 26,700  | 28,316  | 1,616                                  | 6.1                             |  |
| China                           | 7,008      | 6,801   | 6,721   | 7,068   | 7,724   | 656                                    | 9.3                             |  |
| Japan                           | 782        | 828     | 916     | 915     | 988     | 72                                     | 7.9                             |  |
| South Korea                     | 673        | 739     | 810     | 843     | 864     | 20                                     | 2.4                             |  |
| Vietnam                         | 3,365      | 3,132   | 3,518   | 3,743   | 3,854   | 112                                    | 3.0                             |  |
| Indonesia                       | 3,561      | 3,512   | 3,621   | 4,319   | 4,208   | -112                                   | -2.6                            |  |
| France                          | 4,690      | 4,826   | 5,216   | 5,585   | 6,225   | 639                                    | 11.4                            |  |
| Italy                           | 4,513      | 4,620   | 4,823   | 5,043   | 5,400   | 357                                    | 7.1                             |  |
| India                           | 4,446      | 3,841   | 3,512   | 4,652   | 4,795   | 143                                    | 3.1                             |  |
| All other                       | 59,648     | 60,366  | 59,865  | 62,411  | 67,352  | 4,941                                  | 7.9                             |  |
| Total general imports           | 136,341    | 136,958 | 139,132 | 147,359 | 156,615 | 9,256                                  | 6.3                             |  |

Source: Compiled from official statistics of the U.S. Department of Commerce.

Note: Import values are based on U.S. customs value; export values are based on free alongside ship value, U.S. port of export. Calculations are based on unrounded data. The countries are sorted by those with the largest total U.S. trade (U.S. general imports plus U.S. domestic exports) in these products in the most recent year.

## **U.S. Exports**

U.S. agricultural exports experienced limited gains in 2017–18, as the ongoing recovery to 2014 export levels slowed to the lowest annual rate of increase in the last two years. Sources indicate that U.S. tariffs and foreign trade actions in response to these tariffs played a substantial role in driving the changes in U.S. agricultural exports.<sup>2</sup> On a product basis, U.S. cereals experienced the largest increase in exports, followed by animal feeds and by cattle and beef. Oilseeds experienced the largest decrease in exports, followed by hides, skins, and leather, prepared and preserved vegetables, and swine and pork (table AG.2).

<sup>&</sup>lt;sup>2</sup> Regmi, *Retaliatory Tariffs and U.S. Agriculture*, September 13, 2019; Bloomberg News, "U.S. Farm Sales to China," October 24, 2019; Tobias, "Retaliatory Tariffs Take Heavy Toll," August 9, 2018.

#### Table AG.2 Agricultural products: Leading changes in U.S. exports and imports, 2014-18

| Industry/commodity group<br>(USITC code)                            | 2014    | 2015                                    | 2016           | 2017    | 2018    | Absolute<br>change, 2017 to<br>2018 | %<br>change,<br>2017 to<br>2018 |
|---|---------|---|----------------|---------|---------|-------------------------------------|---------------------------------|
| U.S. domestic exports:  |         |   |                |         |         |                                     |                                 |
| Increases:  | 22.274  | 10 505                                  | 10 504         | 10 224  | 20 (12  | 2 200                               | 12.1                            |
| Cereals (AG030)   | 22,274  | 18,505                                  | 18,594         | 18,224  | 20,613  | 2,389                               | 13.1                            |
| Animal feeds (AG013)  | 14,456  | 13,510                                  | 12,075         | 11,812  | 13,780  | 1,968                               | 16.7                            |
| Cattle and beef   | C 0 47  | F 0C0                                   | C 074          | 7 4 2 4 | 0.246   | 4 005                               | 45.2                            |
| (AG002)   | 6,847   | 5,968                                   | 6,071          | 7,131   | 8,216   | 1,085                               | 15.2                            |
| Decreases:  | 24.240  | 10 152                                  | 22 4 40        | 24 757  | 47 404  | 4.220                               | 10.0                            |
| Oilseeds (AG032)  | 24,219  | 19,153                                  | 23,140         | 21,757  | 17,421  | -4,336                              | -19.9                           |
| Hides, skins, and   | 2 74 0  | 2 054                                   | 2 6 2 6        | 2 504   | 2 4 0 4 | 407                                 | 10.0                            |
| leather (AG046)<br>Prepared or preserved<br>vegetables,             | 3,718   | 3,051                                   | 2,626          | 2,591   | 2,104   | -487                                | -18.8                           |
| mushrooms, and  |         |   |                |         |         |                                     |                                 |
| olives (AG019)  | 3,614   | 3,529                                   | 3 <i>,</i> 655 | 3,699   | 3,341   | -358                                | -9.7                            |
| Swine and pork  |         |   |                |         |         |                                     |                                 |
| (AG003)   | 5,671   | 4,608                                   | 4,972          | 5,423   | 5,226   | -197                                | -3.6                            |
| All other   | 77,901  | 72,763                                  | 71,439         | 75,963  | 77,554  | 1,591                               | 2.1                             |
| Total   | 158,700 | 141,087                                 | 142,572        | 146,600 | 148,255 | 1,655                               | 1.1                             |
| U.S. general imports:   |         |   |                |         |         |                                     |                                 |
| Increases:  |         |   |                |         |         |                                     |                                 |
| Infant formulas, malt<br>extracts, and other<br>edible preparations |         |   |                |         |         |                                     |                                 |
| (AG036)<br>Distilled spirits  | 2,537   | 2,629                                   | 2,806          | 2,922   | 6,020   | 3,099                               | 106.1                           |
| (AG042)<br>Fresh or frozen fish                                     | 7,122   | 7,276                                   | 7,682          | 7,872   | 8,624   | 752                                 | 9.6                             |
| (AG006)<br>Fresh, chilled, or<br>frozen vegetables                  | 7,256   | 7,096                                   | 7,599          | 8,222   | 8,962   | 740                                 | 9.0                             |
| (AG018)   | 7,462   | 7,783                                   | 8,735          | 8,706   | 9,154   | 447                                 | 5.1                             |
| Decreases:  | 7,102   | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 0,700          | 0,700   | 5,151   |                                     | 5.1                             |
| Coffee and tea  |         |   |                |         |         |                                     |                                 |
| (AG028)   | 6,954   | 6,927                                   | 6,621          | 7,215   | 6,619   | -596                                | -8.3                            |
| Swine and pork  | 0,554   | 0,527                                   | 0,021          | 7,215   | 0,015   | 550                                 | 0.5                             |
| (AG003)   | 1,916   | 1,692                                   | 1,643          | 1,777   | 1,591   | -186                                | -10.5                           |
| Cocoa, chocolate, and   | 1,510   | 1,002                                   | 1,045          | ±,///   | 1,331   | 100                                 | 10.5                            |
| confectionery (AG037)   | 6,410   | 6,513                                   | 6,864          | 6,814   | 6,650   | -165                                | -2.4                            |
| All other   | 96,684  | 97,042                                  | 97,181         | 103,830 | 108,995 | 5,164                               | -2.4<br>5.0                     |
| Total   | 136,341 | 136,958                                 | 139,132        | 103,830 | 156,615 | 9,256                               | 6.3                             |

Source: Compiled from official statistics of the U.S. Department of Commerce.

Note: Import values are based on U.S. customs value; export values are based on free alongside ship value, U.S. port of export. Calculations are based on unrounded data.

U.S. exports of cereals increased by \$2.4 billion (13.1 percent) to reach \$20.6 billion (table AG.2). Exports of U.S. corn increased by over \$650 million each to Japan (up 31 percent) and South Korea (up

92 percent) in 2018.<sup>3</sup> In Japan, there is strong demand for corn from the poultry sector, especially because feed producers are substituting corn for rice in their feed formulas as rice production is increasingly diverted to table consumption.<sup>4</sup> In South Korea, growing demand for U.S. corn is coming from two sources: from the poultry and swine sectors for feed, and from food manufacturers for human consumption.<sup>5</sup> U.S. corn exports to Vietnam increased by \$353 million in 2018 from just over \$2.0 million in 2017 after Vietnam eased fumigation requirements for U.S. corn shipments, while Vietnamese demand for animal feeds continued to grow steadily.<sup>6</sup> U.S. corn exports to Mexico increased by \$430 million (16 percent) in 2018 as demand for corn for use in feeding animals, particularly poultry, continued to expand.<sup>7</sup>

The increase in U.S. corn exports was offset by decreases in U.S. exports of other cereal products, especially wheat, which fell by \$685 million (11 percent) in 2018.<sup>8</sup> Additional duties on U.S. cereals, including wheat, were reportedly one of the main causes of the decrease.<sup>9</sup> (For more information, see the Special Topic: Section 232 and 301 Trade Actions in 2018.)<sup>10</sup> Wheat exports to China alone decreased by \$246 million (70 percent).<sup>11</sup> While Mexico did not impose tariffs on U.S. wheat, exports to Mexico decreased by \$198 million (23 percent).<sup>12</sup> This decline was reportedly due to concerns that the Mexican government might impose additional duties on U.S. wheat. These concerns drove Mexican processors to seek alternative sources of supply, in particular cheaper wheat from Russia.<sup>13</sup>

Exports of U.S. oilseeds declined by \$4.3 billion (19.9 percent) overall in 2018 (table AG.2). All of the decrease in U.S. exports of oilseeds was due to lower soybean exports, with exports to China decreasing by \$9.1 billion (4 percent) following China's imposition of additional duties on imports of U.S. soybeans.

<sup>&</sup>lt;sup>3</sup> USITC DataWeb/USDOC, Schedule B 1005.90 (accessed May 22, 2019).

<sup>&</sup>lt;sup>4</sup> USDA, FAS, *Japan: Grain and Feed Annual*, March 15, 2019.

<sup>&</sup>lt;sup>5</sup> USDA, FAS, *South Korea: Grain and Feed Annual*, April 1, 2019.

<sup>&</sup>lt;sup>6</sup> In December 2016, Vietnam required methyl bromide fumigation instead of phosphine fumigation on all corn shipments to the country due to warehouse beetles, a quarantined pest, found in a shipment of a processed grain product. However, the United States does not use methyl bromide anymore due to safety and environmental concerns. Therefore, the U.S. government and U.S. industry worked with Vietnamese authorities to update phosphine fumigation requirements that modified the use of this fumigant on certain U.S. cereals, addressing the trade issue. USITC DataWeb/USDOC, Schedule B 1005.90 (accessed May 22, 2019); U.S. Grains Council, "USDA and USGC Representative Welcome Historic U.S. Corn Shipment," May 10, 2018; Voegele, "Vietnam to Lift Suspension of DDGS Imports," September 5, 2017.

 <sup>&</sup>lt;sup>7</sup> USITC DataWeb/USDOC, Schedule B 1005.90 (accessed May 22, 2019); USDA, FAS, *Mexico: Grain and Feed Annual*, March 12, 2019; National Corn Growers Association, "Mexican Market Is Growing," December 7, 2017.
<sup>8</sup> USITC DataWeb/USDOC, digest AG030, Schedule B 1001.99 (accessed May 15, 2019).

<sup>&</sup>lt;sup>9</sup> Multiple countries applied tariffs on U.S. cereals, including wheat, corn, and sorghum. Good, "In Retaliation for U.S. Tariffs," June 17, 2018; Nickel and Hirtzer, "Canada Feeds European Corn Appetite," July 24, 2018.

<sup>&</sup>lt;sup>10</sup> Multiple countries applied tariffs on U.S. cereals, including wheat, corn, and sorghum. Good, "In Retaliation for U.S. Tariffs," June 17, 2018; Nickel and Hirtzer, "Canada Feeds European Corn Appetite," July 24, 2018.

<sup>&</sup>lt;sup>11</sup> U.S. wheat exports to China fluctuate from year to year. In 2017, the United States exported 1.5 million metric tons of wheat to China, a 68 percent increase from 2016. The 394,423 metric tons of wheat the United States exported to China in 2018 represents a 74 percent decrease from 2017 and a 56 percent decrease from 2016. USITC DataWeb/USDOC, Schedule B 1001.99 (accessed May 22, 2019).

<sup>&</sup>lt;sup>12</sup> USITC DataWeb/USDOC, Schedule B 1001.99 (accessed May 22, 2019).

<sup>&</sup>lt;sup>13</sup> Plume and Garcia, "Trade Spat with Mexico Speeds U.S. Decline," July 26, 2018; USDA, FAS, *Mexico: Grain and Feed Annual*, March 12, 2019.

(For more information, see the Special Topic chapter.)<sup>14</sup> These decreases were partially offset by increased purchases of U.S. soybeans by other countries due to (1) low U.S. prices resulting from a large U.S. harvest and the decline in shipments to China, and (2) the diversion of the Brazilian supply to China, as a result of which the United States became a supplier for markets traditionally supplied by Brazil.<sup>15</sup>

For instance, Argentina went from importing a minimal amount of U.S. soybeans in 2017 (\$380,524) to importing \$719 million in 2018.<sup>16</sup> While this was due in large part to a drought that reduced the Argentine soybean harvest by a third, another important factor was the reduced availability of Brazilian soybeans.<sup>17</sup> Another notable shift involved Iran, which bought 12 times more soybeans from the United States in 2018 than in 2017, for a total of \$309 million. This is reportedly because of the 20 percent decline in U.S. soybean prices after China imposed additional duties on certain U.S. products in July 2018. This price decline coincided with Iranians' stockpiling of basic food goods, including soybeans, before U.S. sanctions resumed in November.<sup>18</sup> For Iran, U.S. soybeans were nearly \$60 per ton cheaper than South American soybeans.<sup>19</sup>

China's imposition of additional duties on U.S. soybeans also reportedly affected the value of U.S. exports of processed agricultural goods like animal feeds,<sup>20</sup> which increased by \$2 billion (16.7 percent) to \$13.8 billion in 2018. Among the animal feeds exported, processed soybean products (oilcake and flour) saw increases of \$1.3 billion (34 percent).<sup>21</sup> This was driven by the wide margin between the lower cost of raw soybeans (following China's imposition of additional duties on U.S. soybeans) and the higher value of the processed products.<sup>22</sup> This created an incentive to process record amounts of soybeans in the United States, which in turn led to an increase in U.S. exports of processed U.S. soybeans.<sup>23</sup> U.S. exports of processed soybean products were further supported by the drought impacting production in Argentina, the world's largest exporter of soybean meal.<sup>24</sup> This led to several countries markedly increasing their imports from the United States. For example, the value of U.S. soybean oilcake exports

<sup>&</sup>lt;sup>14</sup> USITC DataWeb/USDOC, Schedule B 1201.90 (accessed May 15, 2019); Good, "In Retaliation for U.S. Tariffs," June 17, 2018.

<sup>&</sup>lt;sup>15</sup> Chase, "USDA: Record Soybean, Near-Record Corn Crops in 2018," February 2, 2018; Hirtzer, "Soybeans Slump to Lowest in a Decade," May 13, 2019; Braun, "Column: China Still Dominates U.S. Soybean Exports," April 18, 2019; Thukral and Gu, "Crop Chop: China Shuns U.S. Soybeans," September 26, 2018.

<sup>&</sup>lt;sup>16</sup> USITC DataWeb/USDOC, digest AG032 (accessed May 15, 2019).

<sup>&</sup>lt;sup>17</sup> Hirtzer, "Argentina Buys Most U.S. Soy in 20 Years," April 10, 2018; USDA, FAS, *Argentina: Oilseeds and Products Update*, August 24, 2018.

<sup>&</sup>lt;sup>18</sup> Meyer and Khalaj, "U.S. Farmers Turn to Iran," October 26, 2018.

<sup>&</sup>lt;sup>19</sup> Meyer and Khalaj, "U.S. Farmers Turn to Iran," October 26, 2018.

<sup>&</sup>lt;sup>20</sup> Gu and Hirtzer, "As Trade War Crushes China's Soybean Mills," July 27, 2018; Vogel, "Crushing it! Promising Outlook for US Soy Crush," July 2018.

<sup>&</sup>lt;sup>21</sup> USITC DataWeb/USDOC, digest AG013 (accessed May 15, 2019).

<sup>&</sup>lt;sup>22</sup> Hubbs, "U.S. Soybean Crush Rate Stays Strong," February 26, 2019; Karlin, "U.S. Soybean Crush Margins," July 23, 2018.

<sup>&</sup>lt;sup>23</sup> U.S. crush capacity was an estimated 1.9 billion bushels at the end of 2017; the United States crushed a record 2.1 billion bushels in 2018. Feedstuffs, "New Plants, More Capacity," December 12, 2018; Hirtzer, "U.S. Soy Processors Build New Capacity," December 11, 2017; USDA, World Agricultural Supply and Demand Estimates, December 11, 2018.

<sup>&</sup>lt;sup>24</sup> Grabanski, "Recovery after Bearing Report," August 19, 2018.

to Vietnam surged from just over \$3 million in 2017 to \$194 million in 2018.<sup>25</sup> Italy went from importing \$11,167 of soybean oilcake in 2017 to \$48 million in 2018.<sup>26</sup>

The value of exports of hides, skins, and leather fell by \$487 million (18.8 percent) in 2018 (table AG.2). Over 50 percent of this decrease was due to a \$274 million (34 percent) drop in the value of exports of whole bovine hides and skins weighing over 16 kg to China.<sup>27</sup> Both quantity and prices decreased: quantity fell by 2 million hides (19 percent), and the average unit value fell by \$12.16 (19 percent). Observers noted as reasons for the decline that U.S. cattle slaughter was up 2.7 percent since 2017, and that demand in China, the main global and U.S. export market for skins, hides, and leather products, had cooled.<sup>28</sup> Additionally, China applied an additional 5 percent duty on these unfinished bovine hides at the end of September 2018 (for more information, see the Special Topic chapter).<sup>29</sup>

Exports of prepared or preserved vegetables decreased by \$358 million (9.7 percent) in 2018 (table AG.2). This decline was led by pulses (dried leguminous vegetables including chickpeas and lentils), exports of which decreased by \$304 million (36 percent) in value and 384 million kg (37 percent) in quantity.<sup>30</sup> Newly imposed Indian tariffs ranging from 50 to 66 percent on certain pulses contributed to the decline in U.S. exports of pulses. These tariffs were reportedly intended to close India's valuable market to imports in order to support domestic producers, who faced low prices after two years of high output.<sup>31</sup> U.S. pulses were also subject to an additional 10 percent duty in the Indian market in response to U.S. tariffs on steel, as well as additional duties from China and the EU.<sup>32</sup> In addition, producers in the United States had a bumper crop in 2018. Since 60 percent of output is usually exported, this left little room for the domestic market to absorb both a large crop and the loss of exports.<sup>33</sup> Unlike the situation with soybeans, there was little diversion and increased purchases from other countries, because other pulse- and legume-producing countries, such as Canada, were also impacted by the Indian tariffs and had strong harvests as well.<sup>34</sup> This global oversupply drove down purchases of U.S. pulses and legumes across nearly all export markets.<sup>35</sup>

<sup>&</sup>lt;sup>25</sup> USITC DataWeb/USDOC, Schedule B 2304.00 (accessed May 21, 2019).

<sup>&</sup>lt;sup>26</sup> USITC DataWeb/USDOC, Schedule B 2304.00 (accessed May 21, 2019).

<sup>&</sup>lt;sup>27</sup> USITC DataWeb/USDOC, Schedule B 4101.50 (accessed August 19, 2019).

<sup>&</sup>lt;sup>28</sup> Approximately half of U.S. hides and skin exports in 2017 went to China, where the United States was the main supplier. USDA, FAS, *Chinese Demand for Imported Hides Beginning to Weaken*, September 13, 2018; USITC DataWeb/USDOC, Schedule B 4101.50 (accessed August 19, 2019); Kay, "U.S. Cattle Hides Take a Tariff Hit," November 13, 2018.

<sup>&</sup>lt;sup>29</sup> Kay, "U.S. Cattle Hides Take a Tariff Hit," November 13, 2018.

<sup>&</sup>lt;sup>30</sup> USITC DataWeb/USDOC, Schedule B 0713 (accessed May 21, 2019).

<sup>&</sup>lt;sup>31</sup> India has large "binding overhangs" (gaps) between its bound tariff rates (its obligatory tariff ceilings as a WTO member) and its most-favored-nation applied rates. As a result, it can raise (or lower) its applied rates as long as they stay under the bound rate. World Bank, "WITS Online Help: Types of Tariffs," 2010; USDA, FAS, *India: Import Tariff Rate Increases for Lentils and Chickpeas*, December 22, 2017; USDA, FAS, *India: Pulses Market and Policy Changes*, September 28, 2018; Sokol, "India Tariffs Squeeze Out U.S. Pulse Imports," June 24, 2018.

<sup>&</sup>lt;sup>32</sup> Griffin, "American Chickpea Farmers Had a Bumper Crop," December 31, 2018; Johnson, "Latest Indian Tariff Hike Should Not Affect Canada," June 22, 2018.

<sup>&</sup>lt;sup>33</sup> Griffin, "American Chickpea Farmers Had a Bumper Crop," December 31, 2018; King, "Chickpeas Sit in Silos," December 31, 2018; Goerge, "The Pulse Boom," September 21, 2018.

<sup>&</sup>lt;sup>34</sup> Parr, Bond, and Minor, *Vegetables and Pulses Outlook*, May 6, 2019.

<sup>&</sup>lt;sup>35</sup> For instance, Colombia, one of the main export markets for U.S. pulses and legumes, imported \$28 million less of these products by value in 2018 than in 2017, a quantity decrease of 29 million kg. The value decrease was

Exports of U.S. swine and pork products, which were on track for a record-breaking export year in the first half of 2018, decreased by \$197 million (3.6 percent) in 2018 (table AG.2). Frozen swine offal and frozen bone-in pork cuts had the largest declines, with decreases of \$212 million (26 percent) and \$59 million (32 percent), respectively.<sup>36</sup> These decreases followed the imposition of additional duties by China and Mexico on U.S. pork products (for more information, see the Special Topic chapter).<sup>37</sup> Pork and swine exports to China decreased by \$158 million (32 percent), with offal comprising 76 percent of that decrease.<sup>38</sup> The value of exports of pork and swine products to Mexico declined by \$186 million (14 percent), with offal decreasing by \$32 million (24 percent) in value and 12 million kg (14 percent) in volume.<sup>39</sup> Some of this decline was driven by lower prices: for example, fresh bone-in pork cuts decreased by 12 percent in value, despite increasing 4 percent in volume.<sup>40</sup> The decline in prices was largely due to two factors: increased U.S. pork production resulted in higher levels of supply, and the fact that reportedly the U.S. pork industry largely refrained from passing the costs of the additional duties on to Mexican consumers in order to maintain their share of the valuable Mexican market.<sup>41</sup>

Cattle and beef exports rose by \$1.1 billion (15.2 percent) in 2018 (table AG.2). Nearly half of this increase is attributable to expanded exports to South Korea, with cattle and beef exports to that country increasing by \$524 million (43 percent) in 2018.<sup>42</sup> Beef production in the United States has not only been increasing but has also been outpacing growth in domestic consumption, leading to competitive pricing of U.S. beef in export markets.<sup>43</sup> At the same time, South Korean beef production has been declining, while domestic consumption, driven by rising incomes, has been growing.<sup>44</sup> Sixty percent of the beef consumed in South Korea is imported, with the United States and Australia being the main suppliers.<sup>45</sup> The United States enjoyed a 5.3 percent tariff advantage over Australia in the South Korean market in 2018.<sup>46</sup>

DataWeb/USDOC, digest AG003, Schedule B 0203.12 (accessed May 15, 2019).

<sup>41</sup> USMEF, "Solid Year for U.S. Pork Exports," March 7, 2019.

<sup>76</sup> percent; the quantity decrease, 69 percent. USITC DataWeb/USDOC, Schedule B 0713 (accessed May 21, 2019); Parr, Bond, and Minor, *Vegetables and Pulses Outlook*, May 6, 2019.

<sup>&</sup>lt;sup>36</sup> USITC DataWeb/USDOC, digest AG003 (accessed May 15, 2019).

<sup>&</sup>lt;sup>37</sup> USITC DataWeb/USDOC, digest AG003 (accessed May 15, 2019); Daniels, "We Are the Casualty," July 4, 2018.

<sup>&</sup>lt;sup>38</sup> USITC DataWeb/USDOC, digest AG003, Schedule B 0206.49 (accessed May 15, 2019).

<sup>&</sup>lt;sup>39</sup> USITC DataWeb/USDOC, digest AG003, Schedule B 0206.49 (accessed May 15, 2019).

<sup>&</sup>lt;sup>40</sup> The average unit value for fresh bone-in pork cuts was 16 percent lower than the year before. USITC

<sup>&</sup>lt;sup>42</sup> USITC DataWeb/USDOC, digest AG002 (accessed May 15, 2019).

<sup>&</sup>lt;sup>43</sup> USDA, PSD Online database (accessed June 24, 2019); Unglesbee, "Another Record Year for Meat Production Forecast," February 25, 2019.

 <sup>&</sup>lt;sup>44</sup> USDA, PSD Online database (accessed June 24, 2019); Welshans, "Japan, South Korea Equally Hungry for U.S.
Beef," January 3, 2019; Chalise et al., "U.S. Exports for Most Major Meat Commodities Grew," May 1, 2019.
<sup>45</sup> Chung, "U.S. Regains Status as Top Beef Exporter," January 15, 2018.

<sup>&</sup>lt;sup>46</sup> U.S. products faced an 18.7 percent tariff rate in 2018 that will go to zero by 2026 under the U.S.-Korea FTA, while the tariff rate for Australia, which was 24 percent in 2018, will go to zero in 2028 under the Korea-Australia Free Trade Agreement. Chung, "U.S. Regains Status as Top Beef Exporter," January 15, 2018; USMEF, "2018 Beef Exports Record-Large," March 7, 2019.

# **U.S. Imports**

U.S. imports of agricultural products in 2018 increased at the same rate as in 2017. Increases in U.S. agricultural imports were led by imports of infant formulas, malt extracts, and other edible food preparations; distilled spirits; fresh and frozen fish; and fresh vegetables. Decreases in U.S. agricultural imports were led by declines in coffee and tea, swine and pork, and cocoa, chocolate, and confectionery (table AG.2).

From 2017 to 2018, U.S. imports in the broad product group encompassing infant formulas, malt extracts, and other edible food preparations increased by \$3.1 billion (106.1 percent). Much of the increase within this group is attributable to imports of miscellaneous preparations for beverage manufacturing from Singapore. These imports jumped by \$2.6 billion (376,119 percent) from \$3 million in 2017 in terms of value, and by 16 million kg (9,816 percent) from 800,000 kg in 2017 in terms of volume. The sharp increase followed beverage manufacturers' investments in Singapore production facilities.<sup>47</sup>

Imports of distilled spirits increased by \$752 million (9.6 percent) in 2018 (table AG 02). U.S. imports of tequila from Mexico increased by \$291 million (29 percent) in value and 12 million liters (15 percent) in volume.<sup>48</sup> Imports of Irish and Scotch whiskies from Ireland and the United Kingdom grew by \$55 million (14 percent) and \$113 million (8 percent) in value, respectively.<sup>49</sup> The quantity of whiskey imported from Ireland increased by 2 million liters (9 percent), while imports of whiskies from the United Kingdom increased by over 1 million liters (2 percent).<sup>50</sup> These increases were primarily driven by booming U.S. demand for these spirits, which can only be produced in their respective geographic locations.<sup>51</sup> Much of this increase in demand, especially for tequila, was in the top-end, premium-priced segment of the market.<sup>52</sup>

U.S. imports of fresh and frozen fish increased by \$740 million (9.0 percent; table AG.2) in 2018, \$522 million of the increase was attributed to salmon, frozen catfish and similar species, and trout.<sup>53</sup> Imports of frozen fillets of various catfish and similar species from Vietnam, which supplied 94 percent (\$514 million) of U.S. imports of these products in 2018, increased by \$173 million (51 percent).<sup>54</sup> Much of that rise in value is due to a 37 percent increase in price, as the cost of production in Vietnam, which had been relatively low, went up in 2018. (Vietnamese production costs rose as a result of higher input prices caused by expanding producer demand for inputs.)<sup>55</sup> However, the quantity of Vietnamese

<sup>&</sup>lt;sup>47</sup> USITC DataWeb/USDOC, HTS 2106.90.9873 (accessed June 4, 2019); *Asian Food Journal*, "PepsiCo Opens New Concentrate Plant in Singapore," April 28, 2017; Coca-Cola Journey, "Coca-Cola Opens \$79 Million Storage and Distribution Center," July 19, 2017.

<sup>&</sup>lt;sup>48</sup> USITC DataWeb/USDOC, HTS 2208.90.50 (accessed August 19, 2019).

<sup>&</sup>lt;sup>49</sup> USITC DataWeb/USDOC, HTS 2208.30.30 (accessed August 19, 2019).

<sup>&</sup>lt;sup>50</sup> USITC DataWeb/USDOC, HTS 2208.30.30 (accessed August 19, 2019).

USITC DataWeb/USDOC, HTS 2208.30.30 (accessed August 19, 2019).

Kiely, "Can Irish Whisky Keep Up with Demand?" November 2, 2018; WhiskyCast, "2018 A Record Year for Scotch Whisky Exports," February 12, 2019.

<sup>&</sup>lt;sup>52</sup> Robertiello, "What's Next for Tequila in 2018," March 20, 2018.

<sup>&</sup>lt;sup>53</sup> USITC DataWeb/USDOC, digest AG006, HTS 0304.41, 0304.62, 0302.14, 0304.42 (accessed May 15, 2019).

<sup>&</sup>lt;sup>54</sup> USITC DataWeb/USDOC, HTS 0304.62 (accessed May 15, 2019).

<sup>&</sup>lt;sup>55</sup> USITC DataWeb/USDOC, HTS 0304.62 (accessed May 21, 2019); *Vietnam News*, "Vietnamese Catfish Exports Dominate US Market," June 4, 2018.

#### Shifts in U.S. Merchandise Trade, 2018

exports of catfish and similar species to the United States also increased—by 10 percent or 11 million kg—since U.S. production in 2018 yielded low amounts of fish of marketable size.<sup>56</sup> Imports of salmon and trout from Chile and Norway were up as well; they grew \$329 million (21 percent), an increase of 30 million kg (21 percent), as U.S. demand for these fish continued to rise.<sup>57</sup> Of this increase, \$204 million (62 percent) involved fresh salmon fillets from Chile, stemming from an increase in production and a \$1.64 per kg price advantage over Norway.<sup>58</sup>

The value of U.S. imports of fresh, chilled, or frozen vegetables increased by \$447 million (5.1 percent) in 2018 (table AG.2).<sup>59</sup> U.S. imports of peppers and of fall, winter, and spring tomatoes from Mexico increased in value by \$340 million (14 percent).<sup>60</sup> This increase in value was driven by a rise in average unit prices for these products of \$0.11 (9 percent), though volume also increased, rising by 94 million kg (5 percent).<sup>61</sup> This growth in volume stemmed from strong U.S. demand for tomatoes and peppers, coupled with a reduction in U.S. and Mexican supplies.<sup>62</sup> Florida and Georgia, two of the main domestic suppliers of fall, winter, and spring tomatoes, suffered crop damage because of Hurricane Michael in October 2018.<sup>63</sup> Producers in Florida reportedly also limited plantings in response to soft markets in recent years.<sup>64</sup> At the same time, production of peppers in Mexico was reduced by poor weather conditions.<sup>65</sup>

Coffee and tea imports decreased by \$596 million (8.3 percent) in 2018 (table AG.2). Imports of unroasted coffee alone decreased by \$492 million (10 percent) in value and by 40 million kg (3 percent) in volume.<sup>66</sup> Oversupply in the global coffee market caused coffee prices to fall 18 percent in 2018 to their lowest levels since 2006.<sup>67</sup> Much of this oversupply came from two years of record production in Brazil, which accounts for 30 percent of global production and is regarded as the international price

<sup>&</sup>lt;sup>56</sup> Medium and small catfish fillets weighing 3–7 ounces are sold at a premium in the market, while processors pay less for large fish weighing over two pounds because there is less market demand for larger fillets. A new hybrid of large catfish that grows rapidly was recently introduced, resulting in an abundance of large fish. According to USDA data, there was a 36 percent increase in U.S. production of large food size fish in 2018 compared with 2017, and 12 and 11 percent decreases in production of medium and small food size fish, respectively, over the same time period. USITC DataWeb/USDOC, HTS 0304.62 (accessed May 21, 2019); USDA, NASS, *Catfish Production*, April 2, 2019; Robb, "Catfish Industry Struggles despite Research Advancements," June 7, 2018.

 <sup>&</sup>lt;sup>57</sup> USITC DataWeb/USDOC, HTS 0304.41, 0302.14, 0304.42 (accessed May 21, 2019); White, "US, China Are Drivers of Push," January 17, 2019; AquaBounty, "Atlantic Salmon Demand Still Outstripping Supply," January 19, 2019.
<sup>58</sup> USITC DataWeb/USDOC, HTS 0304.41 (accessed May 21, 2019); White, "US, China Are Drivers of Push," January 17, 2019.

<sup>&</sup>lt;sup>59</sup> USITC DataWeb/USDOC, digest AG018 (accessed May 15, 2019).

<sup>&</sup>lt;sup>60</sup> USITC DataWeb/USDOC, HTS 0702.00.20, 0702.00.60, 0709.60.40 (accessed May 21, 2019).

<sup>&</sup>lt;sup>61</sup> USITC DataWeb/USDOC, HTS 0702.00.20, 0702.00.60, 0709.60.40 (accessed May 21, 2019).

<sup>&</sup>lt;sup>62</sup> Produce Blue Book, "Pepper Prices to Remain High," December 19, 2018; Van Den Broek, "US: Demand for Bell Peppers on the Rise," October 15, 2018; Rettke, "Shortage of Tomatoes in US Market," November 20, 2018.

<sup>&</sup>lt;sup>63</sup> Rettke, "Corn and Tomato Crops Flattened by Hurricane," October 12, 2018; Parr, Bond, and Minor, *Vegetables and Pulses Outlook*, October 26, 2018.

<sup>&</sup>lt;sup>64</sup> Parr, Bond, and Minor, *Vegetables and Pulses Outlook*, May 6, 2019; Rettke, "Shortage of Tomatoes in US Market," November 20, 2018.

<sup>&</sup>lt;sup>65</sup> Produce Blue Book, "Pepper Prices to Remain High," December 19, 2018.

<sup>&</sup>lt;sup>66</sup> USITC DataWeb/USDOC, digest AG028, HTS 0901.11 (accessed May 15, 2019).

<sup>&</sup>lt;sup>67</sup> Economist Intelligence Unit, "Coffee Growers Hit by Low International Prices," April 24, 2019; Townley,

Blatrushes, and Anunu, "Coffee's Price Collapse: How Did We Get Here?" September 4, 2018; Markets Insider, "Coffee Price" (accessed June 2, 2019).

setter.<sup>68</sup> This situation particularly affected other Latin American countries, where small farms, already impacted by crop disease, increasingly found themselves no longer profitable. U.S. imports from Brazil in 2018 declined by \$113 million (11 percent) by value even as they increased by 8.8 million kg (3 percent) in volume, while imports from Colombia, Honduras, and Nicaragua saw a combined decrease of \$235 million (13 percent) in value and 29 million kg (6 percent) in volume.<sup>69</sup> With prices so low, Latin American producers have been putting off making productivity improvements, a choice that will likely impact production and the market for the next few years.<sup>70</sup>

Imports of swine and pork decreased by \$186 million (10.5 percent) in 2018 (table AG.2). Imports from Canada alone decreased by \$185 million (15 percent), representing 84,000 fewer live animals (10 percent) and a 41 million kg (17 percent) decrease in meat cuts.<sup>71</sup> Canadian pork production decreased by 29,000 metric tons (1 percent) in 2018 due to productivity impacts from a 2017 outbreak of porcine epidemic diarrhea virus (PEDv).<sup>72</sup> Canadian pork prices, which are tied to U.S. pork prices, fell by 30 percent in 2018.<sup>73</sup> Meanwhile, U.S. pork production increased by 331,000 metric tons (3 percent), nearly 1 percent more than U.S. domestic consumption, at a time when other major U.S. export markets put tariffs in place for pork.<sup>74</sup>

Imports of cocoa, chocolate, and confectionery decreased by \$165 million (2.4 percent, table AG.2), driven by declines in imports of cocoa beans that affected both quantity and pricing.<sup>75</sup> In 2018, the United States imported \$138.6 million (19 percent) fewer beans from Côte d'Ivoire than in 2017 and \$71 million (38 percent) fewer beans from Ghana, a combined 41 million kg (11 percent) decline in quantity.<sup>76</sup> At the same time, average unit prices for cocoa imports from Côte d'Ivoire and Ghana fell 11 percent and 28 percent, respectively.<sup>77</sup> Harvests in these two countries, together responsible for 60 percent of global production, were depressed by low precipitation in 2018.<sup>78</sup> This decrease in production followed two years of oversupply.<sup>79</sup>

<sup>&</sup>lt;sup>68</sup> Economist Intelligence Unit, "Coffee Growers Hit by Low International Prices," April 24, 2019.

<sup>&</sup>lt;sup>69</sup> USITC DataWeb/USDOC, HTS 0901.11 (accessed May 21, 2019).

<sup>&</sup>lt;sup>70</sup> Economist Intelligence Unit, "Coffee Growers Hit by Low International Prices," April 24, 2019.

<sup>&</sup>lt;sup>71</sup> USITC DataWeb/USDOC, digest AG003, HTS 0203.19.40, 0203.12.90, 0103.92.00, 0203.11.00 (accessed May 15, 2019).

<sup>&</sup>lt;sup>72</sup> USDA, PSD Online database (accessed June 24, 2019); USDA, FAS, *Canada: Livestock and Products Annual*, September 7, 2018.

<sup>&</sup>lt;sup>73</sup> McMillan, "Canadian Pork Is Collateral Damage," September 13, 2018.

<sup>&</sup>lt;sup>74</sup> USDA, PSD Online database (accessed June 24, 2019); Daniels, "'We Are the Casualty," July 4, 2018.

<sup>&</sup>lt;sup>75</sup> USITC DataWeb/USDOC, digest AG037, HTS 1801 (accessed May 15, 2019).

<sup>&</sup>lt;sup>76</sup> USITC DataWeb/USDOC, HTS 1801 (accessed May 22, 2019).

<sup>&</sup>lt;sup>77</sup> USITC DataWeb/USDOC, HTS 1801 (accessed May 22, 2019).

<sup>&</sup>lt;sup>78</sup> Divanach, "Possible Deficit for Cocoa Production in 2018/19," February 1, 2019; *Economist*, "Cocoa Processing Is Not a Golden Ticket," November 17, 2018.

<sup>&</sup>lt;sup>79</sup> *Economist*, "Cocoa Processing Is Not a Golden Ticket," November 17, 2018.

### **Bibliography – Agricultural Products**

- AquaBounty. "Atlantic Salmon Demand Still Outstripping Supply, despite Likely 2019 Production Increase," January 19, 2019. <u>https://aquabounty.com/atlantic-salmon-demand-still-outstripping-supply-despite-likely-2019-production-increase/</u>.
- Asian Food Journal. "PepsiCo Opens New Concentrate Plant in Singapore," April 28, 2017. <u>https://www.asiafoodjournal.com/2017/04/pepsico-opens-new-concentrate-plant-singapore/2/</u>.
- Bloomberg News. "U.S. Farm Sales to China May Hit Pre-trade War Level by Election," October 25, 2019. <u>https://www.bloomberg.com/news/articles/2019-10-24/china-willing-to-buy-20-billion-of-u-s-farm-goods-in-year-one</u>.
- Braun, Karen. "Column: China Still Dominates U.S. Soybean Exports despite Trade War." Reuters, April 18, 2019. <u>https://uk.reuters.com/article/us-usa-soybeans-braun/column-china-still-dominatesus-soybean-exports-despite-trade-war-idUKKCN1RU0R8</u>.
- Chalise, Lekhnath, Kim A. Ha, Mildred Haley, Russell Knight, and Alex Melton. "U.S. Exports for Most Major Meat Commodities Grew in 2018." United States Department of Agriculture (USDA). Economic Research Service (ERS). *Amber Waves Magazine*, May 1, 2019. <u>https://www.ers.usda.gov/amber-waves/2019/may/us-exports-for-most-major-meat-</u> commodities-grew-in-2018/.
- Chase, Spencer. "USDA: Record Soybean, Near-Record Corn Crops in 2018." Agri-Pulse, February 2, 2019. <u>https://www.agri-pulse.com/articles/11886-usda-record-soybean-near-record-corn-crops-in-2018</u>.
- Chung, Jane. "U.S. Regains Status as Top Beef Exporter to South Korea." Reuters, January 15, 2018. <u>https://www.reuters.com/article/us-southkorea-usa-beef/u-s-regains-status-as-top-beef-exporter-to-south-korea-idUSKBN1F40OW</u>.
- Coca-Cola Journey. "Coca-Cola Opens \$79 Million Storage and Distribution Center in Singapore." Press release, July 19, 2017. <u>https://www.coca-cola.com.sg/press-center/press-releases/coca-cola-opens-79-million-sgd-storage-and-distribution-center-in-singapore</u>.
- Daniels, Jeff. "We Are the Casualty': US Pig Farmers Brace for Second Round of Pork Tariffs from China, Mexico." CNBC, July 4, 2018. <u>https://www.cnbc.com/2018/07/04/us-pork-producers-brace-for-new-pork-tariffs-from-china-mexico.html</u>.
- Divanach, Anais. "Possible Deficit for Cocoa Production in 2018/19." Mintec, February 1, 2019. <u>https://www.mintecglobal.com/top-stories-2018/possible-deficit-for-cocoa-production-in-2018/19</u>.
- *Economist.* "Cocoa Processing Is Not a Golden Ticket for West Africa," November 17, 2018. <u>https://www.economist.com/middle-east-and-africa/2018/11/17/cocoa-processing-is-not-a-golden-ticket-for-west-africa</u>.

- Economist Intelligence Unit. "Coffee Growers Hit by Low International Prices," April 24, 2019. <u>https://country.eiu.com/article.aspx?articleid=1637925947&Country=Honduras&topic=Econom</u> <u>y</u>.
- Feedstuffs. "New Plants, More Capacity May Threaten Soybean Processor Profitability," December 12, 2018. <u>https://www.feedstuffs.com/news/new-plants-more-capacity-may-threaten-soybean-processor-profitability</u>.
- Goerge, Dee. "The Pulse Boom." Successful Farming, September 21, 2018. https://www.agriculture.com/the-pulse-boom.
- Good, Keith. "In Retaliation for U.S. Tariffs, China Targets Soybeans, Corn." *Farm Policy News*, June 17, 2018. <u>https://farmpolicynews.illinois.edu/2018/06/in-retaliation-for-u-s-tariffs-china-targets-soybeans-corn/</u>.
- Grabanski, Ray. "Recovery after Bearing Report." Agweek, August 19, 2018. https://www.agweek.com/opinion/columns/4487123-recovery-after-bearing-report.
- Griffin, Annaliese. "American Chickpea Farmers Had a Bumper Crop This Year, and They Can't Sell It." Quartz, December 31, 2018. <u>https://qz.com/1512162/us-chickpea-farmers-are-the-latest-trade-war-victims/</u>.
- Gu, Hallie, and Michael Hirtzer. "As Trade War Crushes China's Soybean Mills, U.S. Rivals Make Hay." Reuters, July 27, 2018. <u>https://www.reuters.com/article/us-usa-trade-china-soybean-focus/as-trade-war-crushes-chinas-soybean-mills-u-s-rivals-make-hay-idUSKBN1KH0SX</u>.
- Hirtzer, Michael. "Argentina Buys Most U.S. Soy in 20 Years After Drought Cuts Crop." Reuters, April 10, 2018. <u>https://www.reuters.com/article/us-usa-soybeans-argentina/argentina-buys-most-u-s-soy-in-20-years-after-drought-cuts-crop-idUSKBN1HH3CP</u>.
- Hirtzer, Michael. "U.S. Soy Processors Build New Capacity at Fastest Rate in 20 Years." Reuters, December 11, 2017. <u>https://www.reuters.com/article/us-usa-soy-crush-expansion/u-s-soy-processors-build-new-capacity-at-fastest-rate-in-20-years-idUSKBN1E50E1</u>.
- Hirtzer, Michael. "Soybeans Slump to Lowest in a Decade as Trade War Intensifies." Bloomburg, May 13, 2019. <u>https://www.bloomberg.com/news/articles/2019-05-13/grain-soy-soybeans-at-decade-low-amid-trade-war-pig-fever-woes</u>.
- Hubbs, Todd. "U.S. Soybean Crush Rate Stays Strong." Successful Farming, February 26, 2019. https://www.agriculture.com/markets/analysis/us-soybean-crush-rate-continues.
- Johnson, Kelsey. "Latest Indian Tariff Hike Should Not Affect Canada: Industry." iPolitics, June 22, 2018. https://ipolitics.ca/2018/06/22/latest-indian-tariff-hike-should-not-affect-canada-industry/.
- Karlin, Joel. "U.S. Soybean Crush Margins at 2nd Highest Levels Ever." Fundamentally Speaking blog. Progressive Farmer, July 23, 2018. <u>https://www.dtnpf.com/agriculture/web/ag/blogs/fundamentally-speaking/blog-post/2018/07/23/u-s-soybean-crush-margins-2nd-levels</u>.

- Kay, Steve. "U.S. Cattle Hides Take a Tariff Hit." *Canadian Cattleman*, November 13, 2018. <u>https://www.canadiancattlemen.ca/2018/11/13/prime-cuts-with-steve-kay-u-s-cattle-hides-take-a-tariff-hit/</u>.
- Kiely, Melita. "Can Irish Whiskey Keep Up with Demand?" *Spirits Business*, November 2, 2018. <u>https://www.thespiritsbusiness.com/2018/11/irish-whiskey-smaller-brands-face-the-biggest-challenges/</u>.
- King, Anna. "Chickpeas Sit in Silos as Trump's Trade Wars Wage On." NPR, December 31, 2018. <u>https://www.npr.org/2018/12/31/678416352/chickpeas-sit-in-silos-as-trumps-trade-wars-wage-on</u>.
- Markets Insider. "Coffee Price" (accessed June 2, 2019.) https://markets.businessinsider.com/commodities/coffee-price.
- McMillan, D'Arce. "Canadian Pork Is Collateral Damage in Trade Battles." Western Producer, September 13, 2018. <u>https://www.producer.com/2018/09/canadian-pork-is-collateral-damage-in-trade-battles/</u>.
- Meyer, Gregory, and Monavar Khalaj. "U.S. Farmers Turn to Iran to Plug Hole in Soyabean Sales." *Financial Times,* October 26, 2018. <u>https://www.ft.com/content/2213d3fc-d89b-11e8-a854-33d6f82e62f8</u>.
- National Corn Growers Association. "Mexican Market Is Growing but Will the U.S. Capture That Demand?" December 7, 2017. <u>https://ncga.com/news-and-resources/news-stories/article/2017/12/mexican-market-is-growing-but-will-the-us-capture-that-demand</u>.
- Nickel, Rod, and Michael Hirtzer. "Canada Feeds European Corn Appetite as Tariff War Shrinks U.S. Sales." Reuters, July 14, 2018. <u>https://www.reuters.com/article/us-usa-trade-canada-</u> <u>corn/canada-feeds-european-corn-appetite-as-tariff-war-shrinks-u-s-sales-idUSKBN1KE2GZ</u>.
- Parr, Broderick, Jennifer K. Bond, and Travis Minor. *Vegetables and Pulses Outlook*, U.S. Department of Agriculture (USDA). Economic Research Service (ERS). VGS-361, October 26, 2018. <u>https://www.ers.usda.gov/webdocs/publications/90454/vgs-361.pdf?v=4285.1</u>.
- Parr, Broderick, Jennifer K. Bond, and Travis Minor. *Vegetables and Pulses Outlook*. U.S. Department of Agriculture (USDA). Economic Research Service (ERS). VGS-362, May 6, 2019. <u>https://www.ers.usda.gov/webdocs/publications/93033/vgs-362.pdf?v=1958.8</u>.
- Produce Blue Book. "Pepper Prices to Remain High until New Year," December 19, 2018. <u>https://www.producebluebook.com/2018/12/19/pepper-prices-to-remain-high-until-new-year/</u>.
- Plume, Karl, and David A. Garcia. "Trade Spat with Mexico Speeds U.S. Decline as Global Wheat Supplier." Reuters, July 26, 2018. <u>https://www.reuters.com/article/us-usa-wheat-mexico-insight/trade-spat-with-mexico-speeds-u-s-decline-as-global-wheat-supplier-idUSKBN1KG1F0</u>.
- Regmi, Anita. *Retaliatory Tariffs and U.S. Agriculture*. Congressional Research Service R45903 Version 3, September 13, 2019. <u>https://crsreports.congress.gov/product/pdf/R/R45903</u>.

- Rettke, Dennis. "Corn and Tomato Crops Flattened by Hurricane Michael." Fresh Plaza, October 12, 2018. <u>https://www.freshplaza.com/article/9031642/corn-and-tomato-crops-flattened-by-hurricane-michael/</u>.
- Rettke, Dennis. "Shortage of Tomatoes in US Market." Fresh Plaza, November 20, 2018. https://www.freshplaza.com/article/9045449/shortage-of-tomatoes-in-us-market/.
- Robb, Brad. "Catfish Industry Struggles despite Research Advancements." Farm Futures, June 7, 2018. <u>https://www.farmprogress.com/livestock/catfish-industry-struggles-despite-research-</u> advancements.
- Robertiello, Jack. "What's Next for Tequila in 2018." Beverage Dynamics, March 20, 2018. https://beveragedynamics.com/2018/03/20/tequila-trends-2018-retail/.
- Sokol, Chad. "India Tariffs Squeeze Out U.S. Pulse Imports." *Spokesman-Review* (Spokane, WA), June 24, 2018. <u>http://www.spokesman.com/stories/2018/jun/24/india-tariffs-squeeze-out-us-pulse-imports/.</u>
- Thukral, Naveen, and Hallie Gu. "Crop Chop: China Shuns U.S. Soybeans amid Trade War, Turns to Brazil." Reuters, September 26, 2018. <u>https://www.reuters.com/article/us-usa-trade-china-soybeans/crop-chop-china-shuns-u-s-soybeans-amid-trade-war-turns-to-brazil-idUSKCN1M60UT</u>.
- Tobias, Manuela. "Retaliatory Tariffs Take a Heavy Toll on U.S. Farmers." PolitiFact, August 9, 2018. <u>https://www.politifact.com/truth-o-meter/statements/2018/aug/09/sonny-perdue/retaliatory-tariffs-take-heavy-toll-farmers/</u>.
- Townley, Parker, Ben Z. Baltrushes, and Colleen Anunu. "Coffee's Price Collapse: How Did We Get Here and What Can We Do?" *Daily Coffee News*, September 4, 2018. <u>https://dailycoffeenews.com/2018/09/04/coffees-price-collapse-how-did-we-get-here-and-what-can-we-do/</u>.
- Unglesbee, Emily. "Another Record Year for Meat Production Forecast for 2019." *Progressive Farmer,* February 25, 2019. <u>https://www.dtnpf.com/agriculture/web/ag/livestock/article/2019/02/25/another-record-year-meat-production</u>.
- U.S. Department of Agriculture (USDA). Foreign Agricultural Service (FAS). Argentina: Oilseeds and Products Update, by Lazaro Sandoval. GAIN Report no. August 24, 2018. <u>https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Oilseeds%20and%20Products%20Up</u> <u>date\_Buenos%20Aires\_Argentina\_8-24-2018.pdf</u>.
- U.S. Department of Agriculture (USDA). Foreign Agricultural Service (FAS). *Canada: Livestock and Products Annual*, by FAS/Ottawa. GAIN Report no. CA18053, September 7, 2018. <u>https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Livestock%20and%20Products%20A</u> <u>nnual\_Ottawa\_Canada\_9-7-2018.pdf</u>.
- U.S. Department of Agriculture (USDA). Foreign Agricultural Service (FAS). *China—Peoples Republic of: Chinese Demand for Imported Hides Beginning to Weaken*. GAIN Report no. CH186027,

September 13, 2018. <u>https://www.fas.usda.gov/data/china-chinese-demand-imported-hides-beginning-weaken</u>.

- U.S. Department of Agriculture (USDA). Foreign Agricultural Service (FAS). *India: Import Tariff Rate Increases for Lentils and Chickpeas,* by Adam Branson. GAIN Report no. IN7159, December 22, 2017. <u>https://www.fas.usda.gov/data/india-import-tariff-rate-increases-lentils-and-chickpeas</u>.
- U.S. Department of Agriculture (USDA). Foreign Agricultural Service (FAS). *India: Pulses Market and Policy Changes—A Review of the Last 5 Years*, by Adam Klein. GAIN Report no. IN8110, September 28, 2018. <u>https://www.fas.usda.gov/data/india-pulses-market-and-policy-changes-review-last-5-years</u>.
- U.S. Department of Agriculture (USDA). Foreign Agricultural Service (FAS). *Japan: Grain and Feed Annual*, by Keiko Fujibayashi. GAIN Report no. JA9028, March 15, 2019. <u>https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Grain%20and%20Feed%20Annual\_Tokyo\_Japan\_3-15-2019.pdf</u>.
- U.S. Department of Agriculture (USDA). Foreign Agricultural Service (FAS). *Mexico: Grain and Feed Annual*, by Benjamin Juarez and Tim Harrison. GAIN Report no. MX9012, March 12, 2019. <u>https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Grain%20and%20Feed%20Annual</u> <u>Mexico%20City Mexico 3-12-2019.pdf</u>.
- U.S. Department of Agriculture (USDA). Foreign Agricultural Service (FAS). South Korea: Grain and Feed Annual, by Sunchul Choi. GAIN Report no. KS913, April 1, 2019. <u>https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Grain%20and%20Feed%20Annual\_S</u> <u>eoul\_Korea%20-%20Republic%20of\_4-1-2019.pdf</u>.
- U.S. Department of Agriculture (USDA). Foreign Agricultural Service (FAS). Production, Supply and Distribution (PSD) Online database. <u>https://apps.fas.usda.gov/psdonline/</u> (accessed multiple dates).
- U.S. Department of Agriculture (USDA). National Agricultural Statistics Service (NASS). *Catfish Production*, April 2, 2019. https://usda.library.cornell.edu/concern/publications/bg257f046?locale=en.
- U.S. Department of Agriculture (USDA). *World Agricultural Supply and Demand Estimates (WASDE)*. WASDE-584, December 11, 2018. <u>https://downloads.usda.library.cornell.edu/usda-</u><u>esmis/files/3t945q76s/0r967743q/g445cj002/latest.pdf</u>.
- U.S. Grains Council. "USDA and USGC Representatives Welcome Historic U.S. Corn Shipment to Vietnam," May 10, 2018. <u>https://grains.org/usda-and-usgc-representatives-welcome-historic-u-s-corn-shipment-to-vietnam/</u>.
- U.S. International Trade Commission Interactive Tariff and Trade DataWeb (USITC DataWeb)/U.S. Department of Commerce (USDOC) (accessed various dates).
- U.S. Meat Export Federation (USMEF). "2018 Beef Exports Record-Large; Up 7% from 2017." *Drovers*, March 7, 2019. <u>https://www.drovers.com/article/2018-beef-exports-record-large-7-2017</u>.

- U.S. Meat Export Federation (USMEF). "Solid Year for U.S. Pork Exports; Second-Half Pressured By Tariffs." *Drovers*, March 7, 2019. <u>https://www.drovers.com/article/solid-year-us-pork-exports-second-half-pressured-tariffs</u>.
- Van Den Broek, Astrid. "US: Demand for Bell Peppers on the Rise." Fresh Plaza, October 15, 2018. <u>https://www.freshplaza.com/article/9031640/us-demand-for-bell-peppers-on-the-rise/</u>.
- Vietnam News. "Vietnamese Catfish Exports Dominate US Market," June 4, 2018. <u>https://vietnamnews.vn/economy/449115/vietnamese-catfish-exports-dominate-us-</u>market.html#kB2eSc4Mc9igGC74.97.
- Voegele, Erin. "Vietnam to Lift Suspension of US DDGS Imports." *Ethanol Producer Magazine*, September 5, 2017. <u>http://ethanolproducer.com/articles/14625/vietnam-to-lift-suspension-of-us-ddgs-imports</u>.
- Vogel, Stefan. "Crushing it! Promising Outlook for US Soy Crush despite Trade War." Rabobank, July 2018. <u>https://research.rabobank.com/far/en/sectors/grains-oilseeds/crushing-it.html</u>.
- Welshans, Karen. "Japan, South Korea Equally Hungry for U.S. Beef." Feedstuffs, January 3, 2019. <u>https://www.feedstuffs.com/news/japan-south-korea-equally-hungry-us-beef</u>.
- WhiskyCast. "2018 A Record Year for Scotch Whisky Exports," February 12, 2019. https://whiskycast.com/2018-a-record-year-for-scotch-whisky-exports/.
- White, Cliff. "US, China Are Drivers of Push for More Salmon Production." Seafood Source, January 17, 2019. <u>https://www.seafoodsource.com/news/supply-trade/us-china-are-drivers-of-push-for-more-salmon-production</u>.
- World Bank. World Integrated Trade Solution (WITS). "WITS Online Help: Types of Tariffs," 2010. <u>https://wits.worldbank.org/wits/wits/witshelp/Content/Data\_Retrieval/P/Intro/C2.Types\_of\_Ta</u> <u>riffs.htm</u>.