# US Market Report

## A mixed bag during a disruptive year

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Looking back at 2020, it is hard to recall much beyond the global health and economic crises caused by the COVID-19 virus. With the entire world focused on the pandemic, it is easy to forget other notable events of last year. On January 31, 2020, the Union Jack was officially lowered at the European Council as the United Kingdom officially left the European Union (EU). Both Australia and California saw unprecedented wildfires, and SpaceX became the first private company to launch astronauts into outer space. The global pandemic caused the Olympics to be postponed for only the fourth time since its inception in 1896. Finally, the United States (US) Pentagon released a video of "unidentified areal phenomena," but no one seemed to care.

The Phase One economic and trade agreement between the United States and the People's Republic of China went into force on February 14, 2020. As part of the agreement, China approved 24 additional US rendering plants that awaited approval. Exports of US nonruminent rendered protein meals reached record levels in 2020.

As early as January 1, 2020, reports from Wuhan, China, suggested discovery of a new emerging virus. On January 12, China shared the genetic sequence of COVID-19 and by January 13, the first case outside of China was reported. By early February, global air travel was restricted and the United States declared a public health emergency. By March, COVID-19 was affirmed as a national US emergency followed by state-imposed lockdowns. Everyone soon learned how to navigate through video meetings as virtual gatherings became the norm.

In November, the North American Renderers Association (NARA) was one of the first agricultural groups to host an in-person meeting. Held in Naples, Florida, NARA's annual convention showed that with proper planning and precautions, in-person meetings can be a success. A special thanks to all companies that sponsored the convention and to everyone who attended.

As the world went into quarantine and demand for goods shifted, the agricultural supply chain faced disruption, but regained its footing and trade continued. The following is a review of the 2020 market for US rendered products.

**Domestic Production Disrupted Due to Pandemic**

The US rendering industry saw major disruptions in the marketplace last year due to COVID-19. Between March and May, US livestock slaughter capacity was briefly limited, causing farms to either hold or euthanize animals. By June, the markets had adapted and monthly slaughter numbers returned to normal. The production of rendered products is directly correlated to livestock slaughter and production. According to the US Department of Agriculture (USDA)

National Agriculture Statistics Service (NASS), total cattle slaughter in 2020 was 32.8 million head, down more than 2 percent from 2019, but up 7 percent from five years prior. The average cattle liveweight was 1,373 pounds, up 2 percent from the previous year. Hog slaughter was 131.5 million head, up slightly more than 1 percent. Annual hog slaughter has risen 11 percent in the past five years and 19 percent in the past 10 years. Average hog liveweight was 289 pounds in 2020, up 1 percent from a year earlier. Chicken slaughter topped 9.3 billion head, a slight bump from 2019, but a 5 percent gain over the past five years. Turkey production was 223 million head, down 18 percent from the previous year due to COVID-19-related disruptions.

US rendered product production statistics in table 2 are compiled using the USDA/NASS *Fats and Oils: Oilseed Crushings, Production, Consumption, and Stocks Annual Summary* report. In 2020, the production of all rendered products was 10.2 million metric tons (mmt), a drop of more than 4 percent from 2019.

Total US fat production last year was 5.6 mmt, down more than 4 percent from the previous year. Of that, total tallow production was 2.6 mmt, a decrease of 6 percent from 2019. Production of inedible tallow was 1.6 mmt, down 8 percent, technical tallow was 573,000 mt, a slight drop, and edible tallow was 426,200 mt, down nearly 6 percent from 2019.

Last year saw record imports of rendered fats into the United States at 351,300 mt, a jump of 13 percent from 2019. These imports are being fueled by demand from the renewable fuel sector, which includes renewable diesel, biodiesel, and co-processed diesel. This increased demand can be attributed to California's Low Carbon Fuel Standard (LCFS) preference for low-carbon feedstocks along with the federal Renewable Fuel Standard. Imports of tallow topped 243,000 mt, up almost 27 percent from 2019. Since 2015, imports of tallow have skyrocketed 280 percent.

A January 2021 article in *Biodiesel Magazine* titled "Renewable Diesel's Rising Tide" reported production and proposed expansion of 14 renewable diesel plants, four of which are already in operation. The proposed production, when fully online during the next few years, would equate to more than 20 mmt of feedstock demand with preference given to low-carbon feedstocks, which consist of rendered fats, used cooking oil (UCO), and distillers corn oil. If demand from the fuel sector continues, the United States is likely to be a net importer of low-carbon feedstocks like rendered fats in the near future.

US rendered protein meal production was 4.6 mmt in 2020, down nearly 5 percent from 2019. Production of meat and bone meal (e.g., porcine, ruminant, and mixed-species meals) totaled nearly 2.5 mmt last year, down 8 percent from the previous year. Production of poultry-based meals was nearly 1.6 mmt in 2020, an increase of 2 percent, and feather meal was at 553,500 mt, down 8 percent from the previous year. Imports of rendered protein meals was approximately 117,700 mt, a bump of almost 8 percent from 2019. The vast majority of the protein meal imports went to the growing US pet food sector. Demand for rendered animal proteins domestically has been negatively affected by the all-vegetarian diet trend by poultry producers. Domestic consumption has been fairly flat over the last five years while exports have more than doubled since 2015.

*Exports Remain Critical*

NARA's export programs have been essential in expanding and maintaining existing markets for rendered protein meals. In 2020, 24 percent of total US rendered product production was exported, a 9 percent increase over the past five years. Of that, 26 percent of rendered protein meals were exported, up 3 percent from 2019 and 9 percent over the past five years. Fat exports accounted for 22 percent of production last year, a jump of 7 percent from the previous year and 9 percent over the past five years. The growth in fat exports was due mostly to increases in UCO and tallow for renewable diesel production overseas.

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**Table 1. Average annual prices of select rendered products, 2015–2020 (per metric ton)**

| Product (Location) | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | % Change 19/20 |
|---|---|---|---|---|---|---|---|
| **Fats** | | | | | | | |
| Beef tallow, packer (Chicago) | $581 | $638 | $682 | $556 | $600 | $678 | 13 |
| Choice white grease (Missouri River) | $498 | $537 | $549 | $463 | $512 | $534 | 4 |
| Edible tallow (Chicago) | $638 | $714 | $762 | $690 | $748 | $828 | 11 |
| Edible tallow (Gulf) | $563 | $746 | $731 | $662 | $740 | $739 | 0 |
| Lard (Chicago) | $670 | $708 | $729 | $718 | $683 | $820 | 20 |
| Poultry fat (Mid-South) | $502 | $546 | $605 | $566 | $564 | $558 | -1 |
| Yellow grease (Missouri River) | $462 | $505 | $524 | $408 | $466 | $461 | -1 |
| **Protein meals** | | | | | | | |
| Blood meal, porcine (Midwest) | $1,086 | $899 | $968 | $822 | $732 | $910 | 24 |
| Blood meal, ruminant (Missouri River) | $1,070 | $857 | $931 | $790 | $714 | $853 | 20 |
| Feather meal (Mid-South) | $521 | $391 | $437 | $497 | $390 | $347 | -11 |
| Meat and bone meal, porcine (Missouri River) | $377 | $314 | $314 | $308 | $234 | $285 | 22 |
| Meat and bone meal, ruminant (Missouri River) | $359 | $294 | $273 | $263 | $215 | $239 | 11 |
| Poultry by-product meal, 57% protein (Mid-South) | $447 | $330 | $306 | $295 | $266 | $277 | 4 |
| Poultry by-product meal, 67% protein (Mid-South) | $602 | $614 | $688 | $721 | $577 | $698 | 21 |

*Source*: The Jacobsen

**Table 2. US rendered product production, imports, consumption, and exports, 2015–2020 (thousand metric tons)**

| Category | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | % Change 19/20 |
|---|---|---|---|---|---|---|---|
| **Production** | | | | | | | |
| Tallow | 2,385.7 | 2,559.5 | 2,594.9 | 2,770.8 | 2,767.4 | 2,601.9 | -6.0 |
| Inedible tallow | 1,502.9 | 1,587.4 | 1,663.8 | 1,757.7 | 1,745.9 | 1,603.0 | -8.2 |
| Technical tallow | 501.1 | 562.5 | 521.5 | 566.5 | 569.4 | 572.7 | 0.6 |
| Edible tallow | 381.7 | 409.6 | 409.6 | 446.5 | 452.1 | 426.2 | -5.7 |
| Poultry fat | 1,088.8 | 1,113.3 | 1,095.3 | 1,025.6 | 1,133.9 | 1,146.5 | 1.1 |
| Yellow grease/used cooking oil | 926.4 | 916.4 | 913.0 | 992.2 | 1,007.7 | 946.7 | -6.1 |
| White grease | 758.7 | 787.6 | 750.5 | 736.8 | 768.9 | 734.2 | -4.5 |
| Lard | 158.9 | 167.3 | 158.2 | 149.4 | 158.0 | 137.6 | -12.9 |
| Choice white grease | 599.8 | 620.3 | 592.3 | 587.4 | 610.9 | 596.6 | -2.3 |
| Other greases | 341.7 | 336.0 | 369.2 | 285.9 | 209.4 | 207.2 | -1.1 |
| Subtotal | 5,501.3 | 5,712.8 | 5,722.9 | 5,811.3 | 5,887.3 | 5,636.5 | -4.3 |
| Meat & bone meal | 2,591.8 | 2,711.5 | 2,790.2 | 2,658.2 | 2,694.4 | 2,475.5 | -8.1 |
| Poultry by-product meal | 1,429.4 | 1,382.1 | 1,438.8 | 1,368.7 | 1,548.6 | 1,580.3 | 2.0 |
| Feather meal | 536.6 | 527.2 | 522.0 | 464.5 | 601.0 | 553.5 | -7.9 |
| Subtotal | 4,557.9 | 4,620.8 | 4,751.0 | 4,491.3 | 4,844.0 | 4,609.2 | -4.8 |
| **Total production** | **10,059.2** | **10,333.6** | **10,473.9** | **10,302.6** | **10,731.3** | **10,245.7** | **-4.5** |
| **Imports** | | | | | | | |
| Tallow | 64.0 | 78.9 | 99.8 | 139.3 | 192.0 | 243.1 | 26.6 |
| Yellow grease/used cooking oil | 22.4 | 23.0 | 38.7 | 62.8 | 87.8 | 83.0 | -5.5 |
| White grease | 34.4 | 28.8 | 27.0 | 35.8 | 27.2 | 23.0 | -15.2 |
| Lard | 6.5 | 4.7 | 5.8 | 6.9 | 6.2 | 5.2 | -16.0 |
| Choice white grease | 28.0 | 24.1 | 21.2 | 28.9 | 20.9 | 17.8 | -15.0 |
| Poultry fat | 0.6 | 0.6 | 1.9 | 0.6 | 3.5 | 2.1 | -38.8 |
| Subtotal | 121.4 | 131.2 | 167.4 | 238.6 | 310.4 | 351.3 | 13.2 |
| Meat & bone/poultry/porcine meal | 69.6 | 64.1 | 82.2 | 83.6 | 108.9 | 117.4 | 7.8 |
| Feather meal | 0.4 | 0.2 | 0.6 | 0.7 | 0.4 | 0.3 | -23.0 |
| Subtotal | 70.0 | 64.3 | 82.8 | 84.3 | 109.3 | 117.7 | 7.7 |
| **Total imports** | **191.3** | **195.6** | **250.2** | **322.8** | **419.7** | **469.0** | **11.7** |
| **Consumption** | | | | | | | |
| Biodiesel | 1,201.1 | 1,142.6 | 1,192.1 | 1,416.8 | 1,105.6 | 1,126.3 | 1.9 |
| Animal fats | 576.5 | 512.6 | 524.9 | 584.0 | 449.9 | 539.8 | 20.0 |
| White grease | 267.2 | 262.2 | 268.1 | 280.2 | 243.2 | 277.6 | 14.2 |
| Tallow | 195.0 | 150.6 | 176.5 | 219.5 | 132.6 | 166.9 | 25.9 |
| Poultry fat | 89.4 | 99.8 | 80.3 | 60.3 | 74.1 | 78.5 | 5.9 |
| Other | 24.9 | n/a | n/a | 23.9 | n/a | 16.8 | |
| Recycled oils | 624.6 | 630.0 | 667.2 | 832.8 | 655.7 | 586.5 | -10.5 |
| Yellow grease/used cooking oil | 569.3 | 630.0 | 667.2 | 756.7 | 655.7 | 477.6 | -27.2 |
| Other | 55.3 | n/a | n/a | 76.1 | n/a | 108.9 | |
| Subtotal | 1,201.1 | 1,142.6 | 1,192.1 | 1,416.8 | 1,105.6 | 1,126.3 | 1.9 |
| Meat & bone/poultry/porcine meal | 3,527.5 | 3,451.1 | 3,496.5 | 3,211.3 | 3,304.8 | 3,064.6 | -7.3 |
| Feather meal | 450.0 | 463.8 | 442.5 | 355.2 | 511.0 | 463.7 | -9.2 |
| Subtotal | 3,977.5 | 3,914.9 | 3,939.0 | 3,566.6 | 3,815.8 | 3,528.3 | -7.5 |
| **Exports** | | | | | | | |
| Inedible/Technical tallow | 343.1 | 283.3 | 324.6 | 326.9 | 301.5 | 299.7 | -0.2 |
| Yellow grease | 253.0 | 286.2 | 300.2 | 360.7 | 439.0 | 766.3 | 74.5 |
| Edible tallow | 64.8 | 120.1 | 77.7 | 117.9 | 121.6 | 102.9 | -15.3 |
| Lard | 19.8 | 19.1 | 17.2 | 16.8 | 22.5 | 18.1 | -19.6 |
| Choice white grease | 0.2 | 0.4 | 0.8 | 0.4 | 0.7 | 5.9 | 793.9 |
| Poultry fat | 16.4 | 14.7 | 16.1 | 14.8 | 12.9 | 19.0 | 47.6 |
| Subtotal | 697.2 | 723.8 | 736.5 | 837.6 | 898.2 | 1,213.3 | 35.1 |
| Meat & bone/poultry/porcine meal | 563.4 | 706.7 | 814.7 | 899.1 | 1,047.1 | 1,108.6 | 5.9 |
| Feather meal | 87.0 | 63.6 | 80.1 | 109.9 | 90.5 | 90.0 | -0.4 |
| Subtotal | 650.4 | 770.2 | 894.8 | 891.8 | 1,137.5 | 1,198.7 | 5.4 |
| **Total exports** | **1,347.5** | **1,494.0** | **1,631.3** | **1,729.4** | **2,035.8** | **2,411.9** | **18.5** |

*Sources*: Trade Data Monitor, EIA for biodiesel inputs, NASS *Fats and Oils: Oilseed Crushings, Production, Consumption, and Stocks Annual Summary*

*Notes*: n/a—not available; consumption is estimated by subtracting exports from production/imports and does not include all users

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*Domestic Outlook Looking Up*

As the United States continues to recover from the COVID-19 pandemic, livestock slaughter will expand. In February 2021, the USDA Economic Research Service (ERS) published its 10-year projection report, titled *USDA Agricultural Projections to 2030.* The agency estimated that both beef and pork meat production will increase 8 percent from 2020 to 2030 and poultry slaughter by 13 percent. This growth will translate to additional production of 756,000 mt of rendered protein meals and 863,000 mt of rendered fats by 2030, a 16 and 15 percent increase, respectively. In addition, it is likely that UCO production is highly understated, so there could be a significant increase in UCO production in the future.

**International Market Conditions**

The global market for rendered products is quite robust and has changed over time. International markets for animal protein meals are driven by demand from poultry feed, aquaculture feed, and pet food producers. Demand for fat is driven by the same producers plus the biofuel and oleochemical industries. Total exports of US rendered products in 2020 was 2.4 mmt, up more than 18 percent from 2019 and up 60 percent over the past five years. The largest importer of US rendered products in 2020 was, for the first time, Singapore at 561,400 mt, followed by Mexico at 418,600 mt, and Indonesia at 375,200 mt. In terms of value, the United States exported $1.7 billion of rendered products in 2020, up 20 percent from 2019 and a 58 percent increase over the past five years.

The global feed sector continues to grow, demanding increasing supplies of raw materials such as animal protein meals and fats. According to the Alltech's annual *Global Feed Survey*, livestock feed production totaled nearly 1.2 billion mt in 2020, up 1 percent from a year earlier. The Asia-Pacific region is the largest market, producing 433.9 mmt, up 2 percent from 2019; followed by Europe at almost 261.9 mmt, down 1 percent; North America at 237.2 mmt, up 1 percent; and Latin America at 176.5 mmt, up 4 percent from 2019.

There is not enough available data to estimate the global oleochemical demand for fats. Global demand from the biodiesel and renewable diesel sector is estimated at 41.6 mmt in 2019, the most recent year complete data exists. This was an 11 percent increase over the prior year and a 151 percent jump in the past 10 years, creating an estimated 6.9 mmt of demand for rendered animal fats and UCO, 18.0 mmt for grain-based oils, and 12.8 MMT for palm oil.

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# Optimism in Beef Industry

Despite COVID-19 pandemic disruptions, consumer demand for beef in the United States (US) and around the globe remained strong in 2020, a trend that will continue in 2021 and beyond, especially as foodservice operations begin to fully reopen. The strong demand, combined with expected higher cattle prices, signal an optimistic future for the beef industry, according to CattleFax.

CattleFax Chief Executive Officer Randy Blach said cattle numbers will continue to contract in 2021. Packing capacity is expected to increase slowly with the addition of more small-scale plants, and US meat exports will continue to grow. In 2020, total retail meat sales were up 10 percent and total dollar sales up 18 percent, with beef's share of the increase in spending accounting for 45 percent, or $5.7 billion.

CattleFax reported that 1.2 million head of cattle were liquidated in 2019–2020 after a 6.3 million head expansion between 2014 and 2018. Even with fewer cattle in the system, beef production still increased. Mild liquidation is anticipated in 2021 due to drought conditions and higher feed costs, with an estimated US beef cow inventory of nearly 31 million head in 2022.

While there was more cattle on feed and heavier weights early in 2021, the second part of the year will transition to tighter calf crops and slaughter. In 2021, total slaughter is expected to be up 700,000 head to 33.5 million head, average carcass weights 4 pounds lighter, and beef production up 500 million pounds from 2020 to 27.6 billion pounds.

Trade continues to be a hot topic, with US beef prices competitive for Asian markets. Exports in 2021 are expected to increase by 5 percent, primarily to Asian markets like Japan, South Korea, and China, with declining imports from Australia and New Zealand. Although only 120 million pounds of beef was exported to China in 2020, that market is expected to grow to more than 300 million pounds annually over the next few years.

Cattlefax estimated there will be 181 million planted acres of corn and soybeans in the United States this year, the largest combined acreage for the two commodities in history. As China rebuilds its pork industry following the battle with African swine fever, it will be looking for higher-quality feed ingredients, including corn and soybeans.

Blach expects beef demand to remain solid, foodservice markets to improve significantly, and beef and cattle prices to trend higher through 2024. He also noted that plant-based protein alternatives will continue to grow market share, but gains will be slow. **R**

**Table 3. US annual livestock and poultry slaughter, 2015–2020 (thousand head)**

| Species | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | % Change 19/20 |
|---|---|---|---|---|---|---|---|
| Broilers/Mature chickens | 8,822,692 | 8,908,986 | 9,050,702 | 9,160,910 | 9,339,249 | 9,346,660 | 0.1 |
| Cattle | 28,843 | 30,578 | 32,189 | 33,005 | 33,555 | 32,757 | -2.4 |
| Hogs | 115,512 | 118,220 | 121,317 | 124,432 | 129,913 | 131,547 | 1.3 |
| Turkeys | 232,389 | 243,255 | 241,680 | 236,860 | 227,660 | 223,003 | -2.0 |

*Source*: USDA/National Agriculture Statistics Service

**Table 4. Top US export markets by product, 2015–2020 (metric tons)**

| Product/Country | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | % Change 19/20 |
|---|---|---|---|---|---|---|---|
| **Inedible tallow** | | | | | | | |
| Mexico | 227,876 | 145,636 | 126,624 | 136,009 | 130,519 | 122,044 | -6.5 |
| Canada | 20,797 | 22,600 | 20,000 | 35,418 | 29,841 | 47,720 | 59.9 |
| Singapore | 14,275 | 46,312 | 119,240 | 88,421 | 100,600 | 46,000 | -54.3 |
| Brazil | 0 | 0 | 0 | 0 | 0 | 31,000 | |
| Morocco | 7,000 | 7,198 | 6,450 | 13,750 | 13,050 | 16,199 | 24.1 |
| Turkey | 20,898 | 19,249 | 7,200 | 11,260 | 10,750 | 15,699 | 46.0 |
| Honduras | 9,000 | 8,240 | 5,641 | 3,370 | 2,300 | 8,160 | 254.8 |
| Guatemala | 20,449 | 20,094 | 15,249 | 13,608 | 6,800 | 5,600 | -17.6 |
| Nigeria | 0 | 0 | 7,500 | 10,400 | 2,000 | 3,500 | 75.0 |
| Colombia | 8,000 | 0 | 1,856 | 9,200 | 4,200 | 2,400 | -42.9 |
| Dominican Republic | 3,500 | 4,550 | 2,750 | 3,750 | 1,450 | 1,250 | -13.8 |
| Venezuela | 0 | 0 | 7,500 | 0 | 0 | 0 | |
| **Total** | **343,115** | **283,280** | **324,586** | **326,945** | **301,543** | **299,686** | **-0.6** |
| **Yellow grease (includes UCO)** | | | | | | | |
| Singapore | 1,755 | 1,541 | 8,110 | 71,747 | 169,584 | 514,885 | 203.6 |
| European Union–28 | 128,032 | 184,832 | 175,588 | 168,531 | 160,725 | 154,267 | -4.0 |
| Mexico | 72,564 | 50,034 | 63,372 | 39,267 | 48,625 | 58,400 | 20.1 |
| Dominican Republic | 9,585 | 10,639 | 9,652 | 7,943 | 7,215 | 9,908 | 37.3 |
| Canada | 11,716 | 9,073 | 7,726 | 7,968 | 8,727 | 7,974 | -8.6 |
| China | 965 | 1,796 | 1,952 | 2,330 | 2,493 | 3,872 | 55.3 |
| Morocco | 0 | 0 | 41 | 0 | 1,510 | 3,680 | 143.7 |
| Jamaica | 1,310 | 1,568 | 1,211 | 3,511 | 3,464 | 2,980 | -14.0 |
| Ecuador | 48 | 301 | 554 | 1,388 | 1,410 | 2,060 | 46.1 |
| Trinidad and Tobago | 2,193 | 353 | 166 | 433 | 1,407 | 1,765 | 25.4 |
| Honduras | 7,057 | 6,939 | 2,167 | 6,497 | 3,145 | 1,590 | -49.4 |
| Colombia | 593 | 1,846 | 743 | 445 | 662 | 1,060 | 60.1 |
| Costa Rica | 165 | 98 | 147 | 132 | 71 | 986 | 1,288.7 |
| Brazil | 252 | 272 | 289 | 309 | 300 | 304 | 1.3 |
| South Africa | 170 | 157 | 127 | 165 | 219 | 300 | 37.0 |
| **Total** | **252,959** | **286,226** | **300,198** | **360,682** | **439,033** | **766,328** | **74.5** |
| **Edible Tallow** | | | | | | | |
| Mexico | 61,076 | 114,154 | 72,120 | 113,525 | 118,951 | 101,562 | -14.6 |
| Canada | 3,657 | 5,706 | 5,552 | 4,338 | 2,547 | 881 | -65.4 |
| **Total** | **64,762** | **120,146** | **77,678** | **117,903** | **121,605** | **102,939** | **-15.3** |
| **Lard** | | | | | | | |
| Mexico | 17,691 | 16,924 | 15,876 | 16,173 | 22,115 | 17,515 | -20.8 |
| Guatemala | 0 | 0 | 29 | 0 | 0 | 209 | |
| Canada | 393 | 988 | 605 | 264 | 259 | 191 | -26.3 |
| **Total** | **19,768** | **19,050** | **17,181** | **16,825** | **22,506** | **18,096** | **-19.6** |
| **Choice white grease** | | | | | | | |
| Honduras | 0 | 0 | 0 | 0 | 0 | 5,700 | |
| Netherlands | 0 | 0 | 17 | 0 | 0 | 121 | |
| Nicaragua | 0 | 0 | 0 | 0 | 0 | 66 | |
| Mexico | 27 | 67 | 659 | 295 | 573 | 22 | -96.2 |
| **Total** | **202** | **374** | **797** | **421** | **661** | **5,909** | **793.9** |
| **Poultry fat** | | | | | | | |
| Canada | 10,943 | 9,320 | 10,125 | 8,815 | 7,075 | 6,538 | -7.6 |
| Peru | 0 | 958 | 1,597 | 2,511 | 2,080 | 3,660 | 76.0 |
| Guatemala | 446 | 516 | 567 | 561 | 1,003 | 2,659 | 165.1 |
| Mexico | 2,418 | 2,139 | 2,545 | 1,955 | 1,780 | 2,153 | 21.0 |
| Chile | 0 | 0 | 0 | 4 | 0 | 1,987 | |
| **Total** | **16,376** | **14,728** | **16,065** | **14,835** | **12,864** | **18,992** | **47.6** |

**Table 4. Top US export markets by product, 2015–2020 (metric tons), *continued***

| Product/Country | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | % Change 19/20 |
|---|---|---|---|---|---|---|---|
| **Animal protein meals** | | | | | | | |
| Indonesia | 199,067 | 277,859 | 303,588 | 321,452 | 385,010 | 333,232 | -13.4 |
| China | 81,400 | 138,088 | 162,346 | 198,991 | 199,670 | 235,911 | 18.2 |
| Vietnam | 8,214 | 28,416 | 39,528 | 65,629 | 115,544 | 190,485 | 64.9 |
| Mexico | 103,789 | 99,618 | 129,371 | 112,375 | 112,106 | 116,548 | 4.0 |
| Philippines | 10,734 | 9,267 | 6,605 | 23,592 | 38,915 | 64,211 | 65.0 |
| Canada | 58,743 | 64,292 | 66,422 | 54,520 | 49,051 | 54,810 | 11.7 |
| Ecuador | 8,563 | 11,549 | 15,795 | 22,087 | 33,845 | 29,432 | -13.0 |
| Thailand | 5,163 | 3,480 | 17,119 | 18,263 | 32,179 | 18,721 | -41.8 |
| Chile | 57,084 | 18,144 | 26,963 | 44,454 | 41,801 | 15,451 | -63.0 |
| Honduras | 3,704 | 10,693 | 4,102 | 8,694 | 7,520 | 12,654 | 68.3 |
| Peru | 1,019 | 2,410 | 5,564 | 5,809 | 3,762 | 9,151 | 143.2 |
| Guatemala | 1,381 | 4,130 | 2,934 | 915 | 3,336 | 8,770 | 162.9 |
| Malaysia | 1,446 | 3,823 | 15,300 | 9,271 | 12,555 | 7,933 | -36.8 |
| Myanmar | 0 | 120 | 1,905 | 4,872 | 5,163 | 2,656 | -48.6 |
| Taiwan | 0 | 0 | 0 | 0 | 300 | 2,051 | 583.7 |
| Colombia | 950 | 459 | 925 | 1,204 | 1,561 | 1,494 | -4.3 |
| Sri Lanka | 0 | 0 | 1,914 | 2,456 | 2,055 | 1,484 | -27.8 |
| Cambodia | 0 | 0 | 5,574 | 2,006 | 1,647 | 673 | -59.1 |
| South Korea | 141 | 15 | 46 | 74 | 387 | 646 | 66.9 |
| **Total** | **563,352** | **706,652** | **814,708** | **899,126** | **1,047,088** | **1,108,613** | **5.9** |
| **Feather meal** | | | | | | | |
| Indonesia | 41,750 | 27,373 | 29,177 | 28,058 | 28,047 | 41,603 | 48.3 |
| Chile | 24,403 | 10,046 | 11,744 | 30,289 | 43,443 | 23,049 | -46.9 |
| Vietnam | 2,637 | 1,440 | 0 | 3,925 | 3,763 | 11,124 | 195.6 |
| Canada | 15,573 | 16,872 | 18,241 | 15,072 | 7,175 | 6,758 | -5.8 |
| Philippines | 100 | 200 | 800 | 859 | 288 | 2,275 | 689.9 |
| Honduras | 0 | 0 | 0 | 0 | 1,525 | 1,945 | 27.5 |
| China | 977 | 7,391 | 18,904 | 30,813 | 4,073 | 1,541 | -62.2 |
| Peru 578 | 0 | 427 | 761 | 1,325 | 1,346 | 1.6 | |
| **Total** | **87,000** | **63,580** | **80,123** | **109,902** | **90,454** | **90,048** | **-0.4** |

*Source*: Trade Data Monitor
*Note*: Totals include all countries, not just top markets listed.

**Market Report** *Continued from page 13*

*Fat Exports Mixed*

To meet the aforementioned demand, the United States exported around 299,700 mt of inedible tallow in 2020, about the same as in 2019 and the second lowest year on record, after 782,000 mt was exported in 2010. The largest importer last year was Mexico at 122,000 mt, followed by Canada at 47,700 mt, and Singapore at 46,000 mt. Yellow grease exports totaled 766,300 mt in 2020, up almost 75 percent from 2019, with the largest importers being Singapore at 514,900 mt, up 204 percent from 2019; the 28 countries in the EU at 154,300 mt, down 4 percent; and Mexico at 58,400 mt, up 20 percent.

*Record Protein Meal Exports*

Exports of US rendered animal protein meals totaled 1.1 mmt in 2020, up 6 percent from 2019 and nearly double 2015 export figures. Last year was the second year on record that exports exceeded 1.0 mmt. Indonesia remains the largest market, importing 333,200 mt in 2020, albeit down 13 percent from 2019; followed by China at 235,900 mt, up 18 percent; and Vietnam at 190,500 mt, an increase of 65 percent from 2019. US feather meal exports totaled 90,000 mt in 2020, nearly the same as a year earlier. The largest importer of feather meal was Indonesia at 41,600 mt, up 48 percent from 2019; followed by Chile at 23,000 mt, down 47 percent; and Vietnam at 11,100 mt, increasing 196 percent from 2019.

**Demand to Rebound**

As mentioned earlier, increased US domestic slaughter translates to a growth in rendered product production of 756,000 mt for protein meals and 863,000 mt for fats by 2030. As the world recovers from COVID-19, demand should increase for both fuel and foodstuffs, hence, increasing demand for rendered products. The expansion of the biofuel sector both domestically and internationally will increase demand and prices for rendered fats. Adding to this is the preference for low-carbon feedstocks created by California's LCFS, the US Renewable Fuel Standard, the Brazilian Renovabio program, and the EU's Renewable Energy Directive. The fast-growing aquaculture and pet food sectors will continue to drive added demand for protein meals.

Although 2020 created a setback in the expansion of global supply and demand for rendered products, the market is already rebounding as the world starts to move out of the pandemic-driven lockdowns. **R**