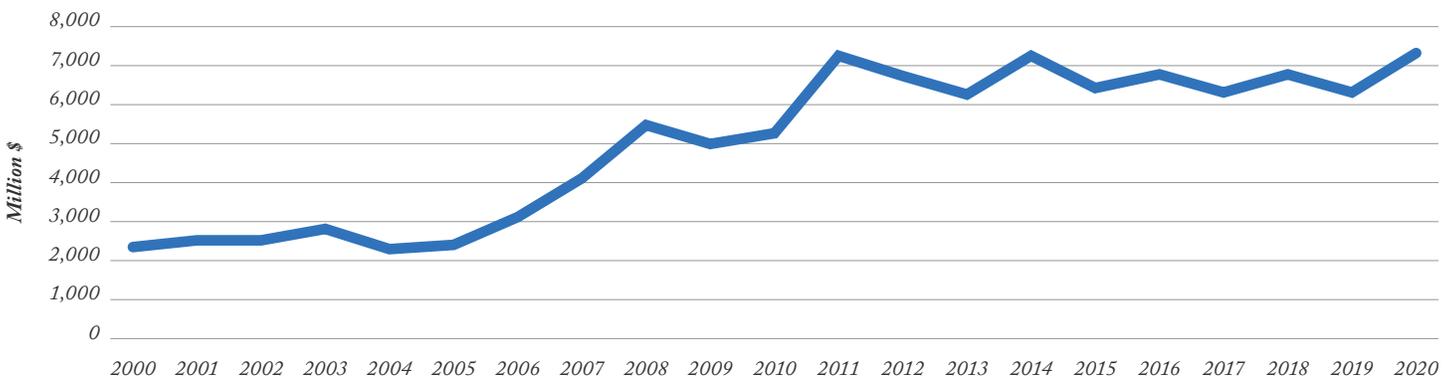


BACKGROUND

Nebraska exported agricultural commodities worth \$7.1 billion in 2020 according to the USDA Economic Research Service, more than \$800 million, or 13.5 percent, greater than 2019. This was only the third time Nebraska exports have exceeded \$7.0 billion, doing so in 2012 and again in 2014 (Figure 1). Nebraska also crept up one spot among states and was the fifth-largest agricultural exporting state in 2020 (Figure 2).

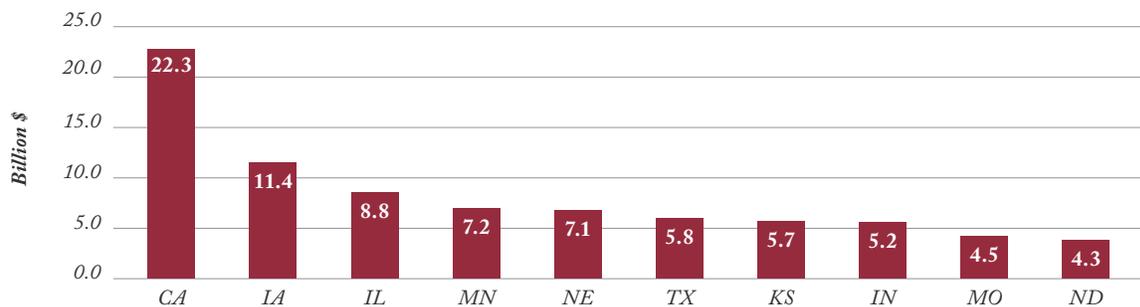
Nebraska topped the nation in exports of beef, was the second-largest exporter of hides and skins, the third-largest exporter of corn, feed, and processed grain products, and the fifth-largest exporter of soybeans, soybean meal, and vegetable oil. Other Nebraska products exported included ethanol, popcorn, wheat, pork, dry edible beans, and a host of other commodities and processed products. Table 1 lists export values of select Nebraska commodities and processed products since 2015. Figure 2 tracks Nebraska export values of several Nebraska commodities from 2000 through 2020. Exports are a growing part of Nebraska’s agricultural sales—exports in 2020 were three times larger than those in 2000 and the value of exports now consistently accounts for approximately 30 percent of the state’s total agricultural receipts.

FIGURE 1. VALUE OF NEBRASKA AGRICULTURAL EXPORTS, 2000-2020



Source: NEFB graphic based on USDA ERS data

FIGURE 2. TOP TEN AGRICULTURAL EXPORT STATES, 2020



Source: USDA Economic Research Service

TABLE 1. NEBRASKA AGRICULTURAL EXPORTS, 2016-2020 (MILLION \$)

	Beef	Pork	Corn	Soybeans	Hides	Soy Meal	Wheat	Vegetable Oils	Total
2020	\$1,167.8	\$304.1	\$1,185.0	\$1,907.3	\$103.3	\$352.9	\$122.4	\$231.3	\$7,141.3
2019	\$1,288.9	\$275.4	\$958.7	\$1,357.3	\$135.5	\$319.3	\$150.5	\$188.9	\$6,293.9
2018	\$1,318.5	\$246.8	\$1,476.6	\$1,218.7	\$188.6	\$364.6	\$134.7	\$186.8	\$6,802.3
2017	\$1,102.0	\$250.9	\$1,036.8	\$1,548.9	\$235.4	\$281.3	\$151.0	\$201.4	\$6,349.0
2016	\$1,096.0	\$228.1	\$1,142.9	\$1,717.8	\$271.7	\$307.2	\$122.0	\$206.9	\$6,671.1

Source: USDA Economic Research Service

The 2020 surge in overseas sales was led by soybean and corn exports. Nebraska soybean exports equaled \$1.91 billion, an increase of \$550 million or 40 percent compared to 2019. Corn exports saw gains of \$226 million, or 24 percent, equaling \$1.18 billion total. This comes after exports of corn were off more than \$500 million in 2019. Exports of Nebraska’s other critical export good, beef, were down more than 9 percent compared to 2019 and amounted to \$1.17 billion. Exports of pork were up 10 percent and shipments of vegetable oils were up 22 percent. Exports of hides and skins fell over \$32 million and wheat was off \$28 million.

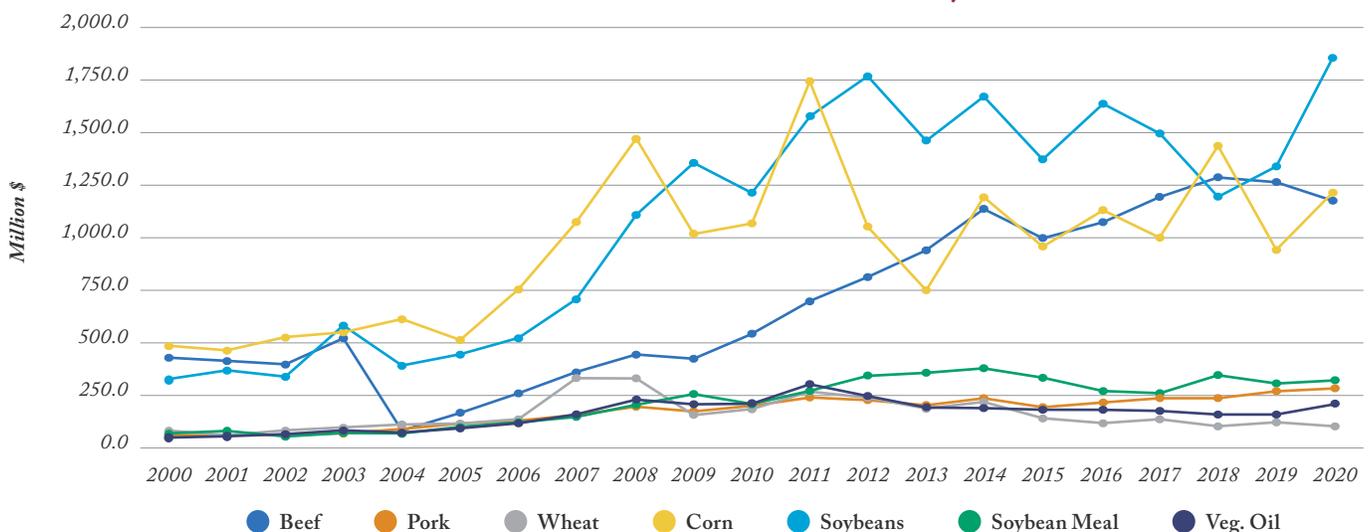
The growth in exports in 2020 came despite the COVID-19 pandemic and was largely due to the buying of one country—China. China and the U.S. entered the Phase One trade agreement early in 2020. Under the agreement, China agreed to acquire \$33.4 billion of U.S. agricultural goods in 2020. While China did not meet the target, it did start a buying spree starting late summer which resulted in overall positive export growth for the year. China’s imports of U.S. agricultural goods in 2020 equaled \$26.1 billion, increasing from less than \$15 billion in 2019. China was the top market for U.S. agricultural goods in 2020. Soybeans were the top U.S. product exported to China with shipments to China accounting for 55 percent of total U.S. soybean exports, levels not seen since prior to China’s imposition of retaliatory tariffs.

U.S. corn exports to China were \$1.1 billion higher in 2020. Greater Chinese feed needs and increased U.S. competitiveness resulting from production shortages in Argentina and Ukraine fueled the increase in corn exports. Chinese purchases of U.S. pork were also up 75 percent due to its continued struggles by its hog industry with African Swine Fever (ASF).

Beef exports were down in 2020 due to supply chain constraints and food service struggles related to COVID-19. However, beef exports were still the third-highest on record. Japan, South Korea, Mexico, Hong Kong, and Canada were major markets for U.S. beef.

Overall, China was the largest market for Nebraska agricultural goods in 2020, followed by Canada and Mexico. Japan, South Korea, and the EU also remained prominent markets for Nebraska agricultural products.

FIGURE 3. NEBRASKA COMMODITY EXPORTS, 2000-2020



Source: USDA Economic Research Service

VALUE OF AGRICULTURAL EXPORTS TO NEBRASKA PRODUCERS

The value of international trade to Nebraska producers can be measured in several ways. One way is to estimate export value on a per-unit basis. A per-unit basis expresses the value of commodity exports in terms similar to prices received by farmers and ranchers. Table 2 shows the estimated per-unit values of Nebraska exports in 2020 for select commodities. The per-unit values were calculated by dividing 2020 export values by 2020 crop production or livestock inventory. The per-unit value for soybeans includes the value of soybean meal and vegetable oil exports; the per-unit value of corn includes the value of ethanol and distillers dried grains exports; and the per-unit value of beef includes the value of exports of hide and skins. These processed goods are included to show the overall value of exports attributable to a commodity. The figures provide a reasonable representation of the value of agricultural exports to Nebraska producers.

TABLE 2. PER-UNIT VALUE OF NEBRASKA EXPORTS, 2016-2020

	Soybeans**	Beef**	Corn**	Pork	Wheat
2020	\$8.47/bu.	\$188.31/hd.	\$1.02/bu.	\$83.31/hd.	\$3.60/bu.
2019	\$6.78/bu.	\$209.47/hd.	\$0.84/bu.	\$71.53/hd.	\$2.58/bu.
2018	\$5.58/bu.	\$221.63/hd.	\$1.22/bu.	\$69.33/hd.	\$2.78/bu.
2017	\$5.66/bu.	\$226.30/hd.	\$0.96/bu.	\$72.72/hd.	\$3.23/bu.
2016	\$6.27/bu.	\$169.22/hd.	\$1.03/bu.	\$68.00/hd.	\$2.04/bu.

**Estimates based on 2020 export data and USDA National Agricultural Statistics Service 2020 commodity production or animal inventory data.*

***Includes value of soybean meal, vegetable oil, ethanol, distillers dried grains, and hides and skins in per-unit value estimates.*

Other ways to measure the value of exports to producers is to apportion values by county or on a per-farm basis in each county. Each county is unique in its commodities produced. Thus, the importance of export markets and the sensitivity of a county's agriculture to these markets will vary. For this analysis, each county's total export value was calculated by apportioning state commodity export values to counties based on each county's share of total state production. These values were then summed across commodities to estimate the total value of exports for a county. Commodities included in the analysis were corn, beef, pork, soybeans, soybean meal, vegetable oil, wheat, hides and skins, ethanol, and distillers' grains. The per-farm export value for each county was calculated by dividing the estimated total county export value by the number of farms in the county reported in the 2017 USDA Census of Agriculture.

Both estimates should be taken with a "grain of salt" and are not meant to denote exact dollar amounts for county exports or per-farm export values. Tracing the value of commodity exports to a county is fraught with difficulty. For example, a commodity could be produced in one county, sold to an elevator in another county, and processed in a third county, dispersing the value of the exports across all three counties. Instead, the estimates in this analysis are meant to provide a limited understanding or hint of the significance of exports to Nebraska counties and producers. The appendix provides a discussion of the approach used and difficulties of tracing export value for those readers interested. Finally, not all counties have estimates for each commodity because data was not available for some counties.

Table 3 lists the estimated 2020 total value of exports for each county. Table 4 lists the estimated per-farm export value. Figure 4 plots the county total export values for 2020 on a map and Figure 5 plots the per-farm values. Platte County retained its top spot in terms of the value received from trade in 2020 with an estimated \$192 million in value. Custer and Cuming Counties followed with estimated values from export sales of \$171 million and \$159 million respectively. Antelope and Boone Counties had estimated export values exceeding \$140 million. Counties least affected by trade include Hooker, Thomas, and Loup Counties with between \$4-\$6.5 million in export value.

The importance of trade looks different when measured on a per-farm basis. As in past years, Phelps County scores as the most reliant on trade with an export value per-farm of \$343,000. Other counties heavily reliant on trade on a per-farm basis were Kearney, Boone, and Platte Counties, each with a per-farm value of trade exceeding \$270,000. The diversity of commodities produced along with the size and productivity of farms in these counties contributes to the high per-farm export values.

TABLE 3. ESTIMATED TOTAL AGRICULTURAL EXPORT VALUE, 2020

County	2020 Total Export Value	County	2020 Total Export Value	County	2020 Total Export Value
Platte	\$191,745,026	Jefferson	\$83,843,929	Brown	\$38,689,879
Custer	\$170,904,231	Cass	\$81,319,883	Dundy	\$37,894,669
Cuming	\$159,108,868	Wayne	\$80,172,889	Johnson	\$35,560,654
Antelope	\$147,368,001	Richardson	\$77,205,598	Sheridan	\$32,575,810
Boone	\$141,734,950	Nuckolls	\$74,821,340	Box Butte	\$31,961,772
Holt	\$139,998,636	Hall	\$72,802,614	Cheyenne	\$31,070,964
Phelps	\$127,202,130	Dixon	\$72,597,669	Scotts Bluff	\$30,095,499
Dawson	\$126,231,696	Merrick	\$70,920,733	Boyd	\$27,471,272
Gage	\$123,690,635	Chase	\$64,751,680	Hayes	\$26,586,764
York	\$123,487,697	Stanton	\$60,634,739	Rock	\$24,710,233
Cedar	\$122,425,146	Perkins	\$59,551,798	Hitchcock	\$21,425,577
Saunders	\$118,041,518	Harlan	\$58,643,916	Sioux	\$21,065,147
Lincoln	\$117,316,369	Webster	\$58,405,572	Sarpy	\$20,691,548
Knox	\$109,969,828	Howard	\$57,234,100	Garden	\$18,004,132
Fillmore	\$108,827,006	Thurston	\$56,985,227	Deuel	\$16,426,142
Madison	\$106,784,968	Nemaha	\$56,152,342	Douglas	\$16,092,409
Buffalo	\$105,290,443	Cherry	\$54,158,864	Keya Paha	\$15,349,745
Hamilton	\$101,716,599	Nance	\$53,021,718	Dawes	\$14,127,008
Polk	\$98,209,930	Furnas	\$52,936,078	Banner	\$13,567,328
Kearney	\$97,968,016	Valley	\$52,153,381	Garfield	\$13,064,951
Butler	\$97,469,871	Washington	\$52,151,827	Kimball	\$10,117,073
Clay	\$96,842,158	Greeley	\$49,606,910	Logan	\$10,029,228
Pierce	\$96,057,059	Franklin	\$48,743,530	Blaine	\$8,097,378
Adams	\$95,482,419	Gosper	\$47,511,463	McPherson	\$7,626,600
Thayer	\$95,296,538	Frontier	\$46,203,816	Arthur	\$6,685,044
Saline	\$94,906,114	Sherman	\$45,708,613	Grant	\$6,685,044
Seward	\$90,893,465	Red Willow	\$42,774,469	Loup	\$6,583,272
Otoe	\$87,555,862	Morrill	\$41,850,611	Thomas	\$5,272,711
Dodge	\$87,490,733	Wheeler	\$41,645,305	Hooker	\$4,331,156
Colfax	\$85,342,007	Keith	\$41,443,816		
Lancaster	\$85,142,683	Dakota	\$40,867,449		
Burt	\$84,809,617	Pawnee	\$40,013,912		

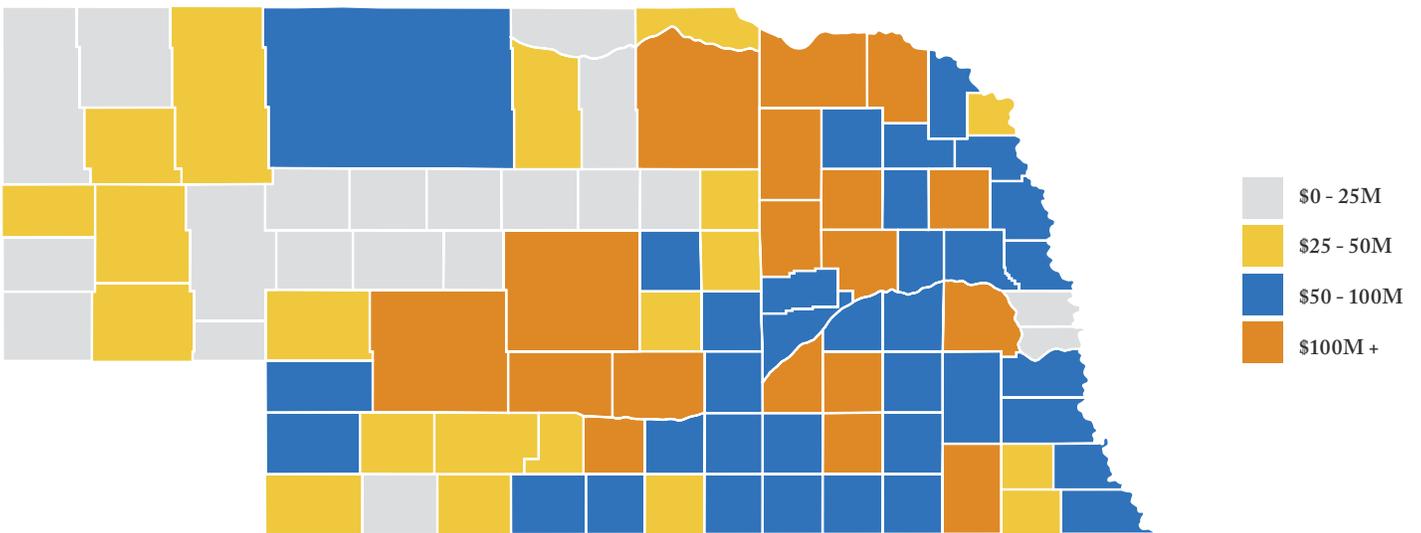
Source: Nebraska Farm Bureau estimates.

TABLE 4. ESTIMATED AGRICULTURAL EXPORT VALUE PER-FARM, 2020

County	2020 Per Farm Export Value	Top Export Commodity	County	2020 Per Farm Export Value	Top Export Commodity	County	2020 Per Farm Export Value	Top Export Commodity
Phelps	\$342,863	Soybeans	Webster	\$143,856	Soybeans	Boyd	\$96,053	Beef
Kearney	\$286,456	Soybeans	Perkins	\$142,468	Corn	Cherry	\$95,518	Beef
Boone	\$270,487	Soybeans	Jefferson	\$142,108	Soybeans	Howard	\$92,762	Soybeans
Fillmore	\$247,898	Soybeans	Dundy	\$141,398	Beef	Pawnee	\$86,987	Soybeans
York	\$237,021	Soybeans	Nance	\$141,391	Soybeans	Logan	\$85,720	Beef
Thayer	\$230,185	Soybeans	Furnas	\$140,414	Corn	Garden	\$81,467	Beef
Platte	\$229,360	Soybeans	Nemaha	\$136,957	Soybeans	Blaine	\$80,172	Beef
Polk	\$227,338	Soybeans	Butler	\$134,813	Soybeans	Hitchcock	\$74,394	Wheat
Clay	\$219,597	Soybeans	Greeley	\$134,436	Soybeans	Box Butte	\$74,157	Corn
Antelope	\$209,330	Soybeans	Saline	\$132,366	Soybeans	Deuel	\$73,005	Wheat
Harlan	\$208,697	Soybeans	Keith	\$130,326	Corn	Johnson	\$70,838	Soybeans
Chase	\$199,236	Corn	Dodge	\$129,424	Soybeans	Arthur	\$70,369	Beef
Cuming	\$197,897	Beef	Red Willow	\$128,452	Corn	McPherson	\$69,969	Beef
Wheeler	\$193,699	Beef	Dixon	\$128,038	Soybeans	Washington	\$69,815	Soybeans
Thurston	\$184,418	Soybeans	Hall	\$125,090	Corn	Sioux	\$68,616	Beef
Dawson	\$184,011	Beef	Frontier	\$124,539	Corn	Keya Paha	\$64,767	Beef
Adams	\$175,197	Soybeans	Holt	\$122,591	Beef	Garfield	\$64,678	Beef
Nuckolls	\$173,599	Soybeans	Hayes	\$120,849	Beef	Sheridan	\$62,049	Beef
Hamilton	\$173,578	Corn	Sherman	\$119,033	Soybeans	Thomas	\$58,586	Beef
Gosper	\$165,545	Soybeans	Knox	\$115,031	Soybeans	Banner	\$56,767	Beef
Colfax	\$165,391	Soybeans	Lincoln	\$112,804	Beef	Cheyenne	\$54,320	Wheat
Wayne	\$165,305	Soybeans	Rock	\$112,319	Beef	Loup	\$50,641	Beef
Burt	\$162,782	Soybeans	Buffalo	\$110,483	Corn	Sarpy	\$49,620	Soybeans
Madison	\$162,041	Soybeans	Richardson	\$109,047	Soybeans	Lancaster	\$47,672	Soybeans
Cedar	\$156,155	Soybeans	Otoe	\$107,431	Soybeans	Hooker	\$44,651	Beef
Custer	\$154,246	Beef	Stanton	\$106,190	Soybeans	Douglas	\$43,849	Soybeans
Franklin	\$153,765	Soybeans	Cass	\$106,162	Soybeans	Scotts Bluff	\$39,599	Beef
Pierce	\$153,691	Soybeans	Saunders	\$105,583	Soybeans	Dawes	\$28,772	Beef
Dakota	\$153,062	Soybeans	Grant	\$104,454	Beef	Kimball	\$22,838	Wheat
Merrick	\$146,834	Soybeans	Gage	\$104,117	Soybeans			
Brown	\$144,365	Beef	Morrill	\$98,241	Beef			
Valley	\$144,070	Beef	Seward	\$96,285	Soybeans			

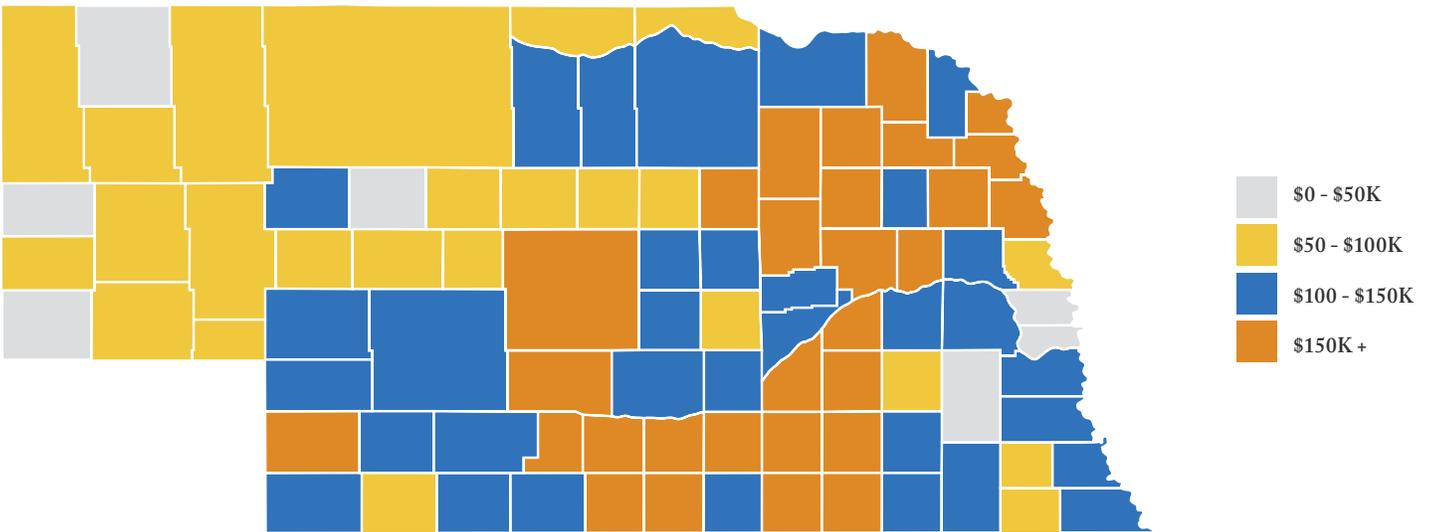
Source: Nebraska Farm Bureau estimates.

FIGURE 4. ESTIMATED TOTAL AGRICULTURAL EXPORT VALUE PER-COUNTY, 2020



Source: Nebraska Farm Bureau estimates

FIGURE 5. ESTIMATED AGRICULTURAL EXPORT VALUE PER-FARM, 2020



Source: Nebraska Farm Bureau estimates

COUNTIES' TOP EXPORT COMMODITIES

Agriculture commodities are not produced uniformly across the state. The importance of a commodity's exports will differ across counties and the sensitivity of a county's agriculture sectors to trade fluctuation vary. Thus, the estimated commodity export values can be used to look at the geographic differences between commodities in terms of export values. Table 5 lists the number of counties a commodity is the top export product. Figure 6 plots the top export commodity for each county.

TABLE 5. NUMBER OF COUNTIES & TOP EXPORT COMMODITY, 2020

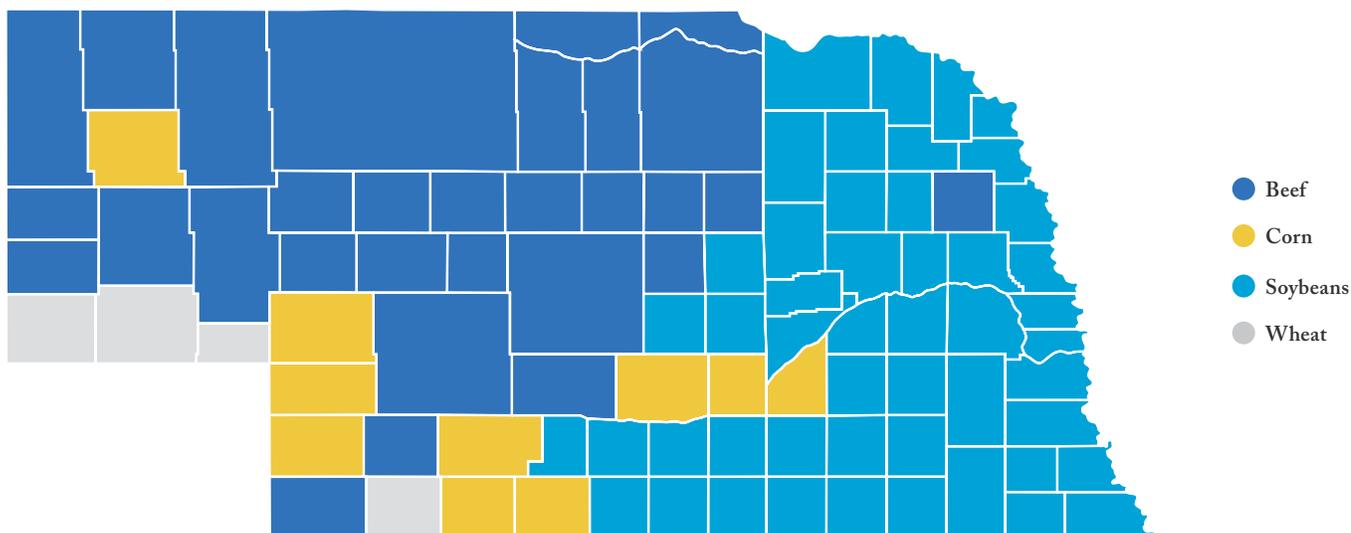
Soybeans	49 counties
Beef	30 counties
Corn	10 counties
Wheat	4 counties

***Includes value of soybean meal, vegetable oil, ethanol, distillers dried grains, and hides and skins.*

Unlike past years, there was little change between 2019 and 2020 in top export commodities for Nebraska counties. Soybeans were again the top export commodity for more than half of Nebraska counties, 49 counties in all, 7 more than 2019. Corn slipped as the top export commodity from 11 counties in 2019 to 10 counties in 2020. Only two years ago, corn was the top export commodity in 31 counties. The number of counties with beef as the top export commodity, 30 counties, slipped as well in 2020 from 34 counties in 2019. Wheat was the top export county in 4 counties.

The geographical distribution of the top export commodities across the state shown in Figure 6 looks similar to 2019 as well. Counties with soybeans as the top export commodity are located in the eastern third of the state. Counties with corn as the top export commodity can be found in the southwest and central parts of the state. Beef continues to dominate as the top export in the Sandhills, northern Panhandle counties, and Cuming County. And wheat dominates counties in the southern Panhandle and Hitchcock County in the southwest.

FIGURE 6. ESTIMATED TOP EXPORT COMMODITY BY COUNTY, 2020



Source: Nebraska Farm Bureau estimates

CONCLUSION

Nebraska was the fifth-largest agricultural exporting state in 2020 exporting \$7.1 billion of agricultural goods. Nebraska topped the nation in exports of beef, was the second-largest exporter of hides and skins, the third-largest exporter of corn, feed, and processed grain products, and the fifth-largest exporter of soybeans, soybean meal, and vegetable oil. Other Nebraska products exported include ethanol, popcorn, wheat, pork, dry edible beans, and a host of other commodities and processed products.

This report uses various means to measure the relative value of agricultural exports to Nebraska farmers and ranchers. Estimates of per-unit values, the total dollar export values by county, and per-farm values of exports were calculated to describe the reliance of different areas of the state to trade. The report also examines the top commodity exports by value to counties. It's no surprise given the prevalence of soybean, beef, and corn production in Nebraska these three commodities are important at the county level in terms of export value. Exports of other commodities, though, like wheat and pork, also play important roles in several counties across the state.

The analysis identifies which Nebraska counties potentially have the most at risk if international trade were disrupted. It is hoped this analysis will help Farm Bureau members, industry stakeholders, and policymakers better understand how much Nebraska agriculture relies on export markets.

APPENDIX: COMMENTARY ON THE ANALYSIS

The production-based approach used in the analysis is patterned after the approach formerly used by the USDA Economic Research Service (USDA-ERS) to allocate export value to states. Each county's share of state production for a commodity is calculated and multiplied by the commodity's total export value for the state. In this way, each county's export value for a commodity can be estimated. USDA-ERS now uses a cash receipts-based methodology for allocating export value. This analysis uses the production-based methodology instead to take advantage of the most recent data available. Commodity cash receipts are only reported at the county level in the Census of Agriculture conducted every five years.

The approach can provide reasonable estimates of the relative importance of exports to the counties, but it does have shortcomings. For example, the value of beef and pork exports includes other costs like processing, transportation, margins, etc. These costs are reflected in the export value attributable to a state and will consequently be reflected in the county value estimates. In addition, the value of beef and pork exports adds value for producers of corn and soybeans, and this value is not reflected in county level values of these commodities. A commodity produced in one county can be sold in another county, and processed in a third county, further dispersing the value of the exports sold. However, even with these shortcomings, the figures can provide a reasonable approximation of the magnitude or importance of various commodity exports.

Nebraska 2020 export data comes from the USDA Economic Research Service. County and state-level production data for 2020 for corn and wheat come from USDA-National Agricultural Statistics Service (NASS). County-level data for wheat production shares came from the 2017 Census of Agriculture. Cattle numbers for 2020, including both cows and calves, also comes from USDA-NASS. County level data for hog numbers was not available, so a receipts-based approach was used using data from 2017 USDA Census of Agriculture.

Production data is not available for all counties across multiple years due to the insufficiency of the data. Thus, some counties may not have production estimates for a specific commodity. To provide for a more complete data set, estimates of a counties proportion of total state production in previous years was used to fill in holes in the 2020 data. The catchall "other counties" category in the USDA data was reduced to adjust county production numbers to fit within the state total.

The analysis also sought to account for the export of products and byproducts which could be traced to a specific commodity, such as ethanol and distillers dried grains. The export value for these processed goods was apportioned to counties based on counties' production share. To estimate the value of exports of beef and veal for each county, the share of each county's cattle inventory of the state's total inventory was calculated. The estimated share serves as a reasonable proxy of the importance of beef cattle in the county. Each county's share was then multiplied by the beef and veal export value for the state to estimate the value of beef exports to the county. Using total cattle inventory blends both the cow/calf and feeding sectors of the industry in the figures, however, given the goal of the analysis is to estimate the relative importance exports to Nebraska counties, the approach taken seemed reasonable.



January 2022