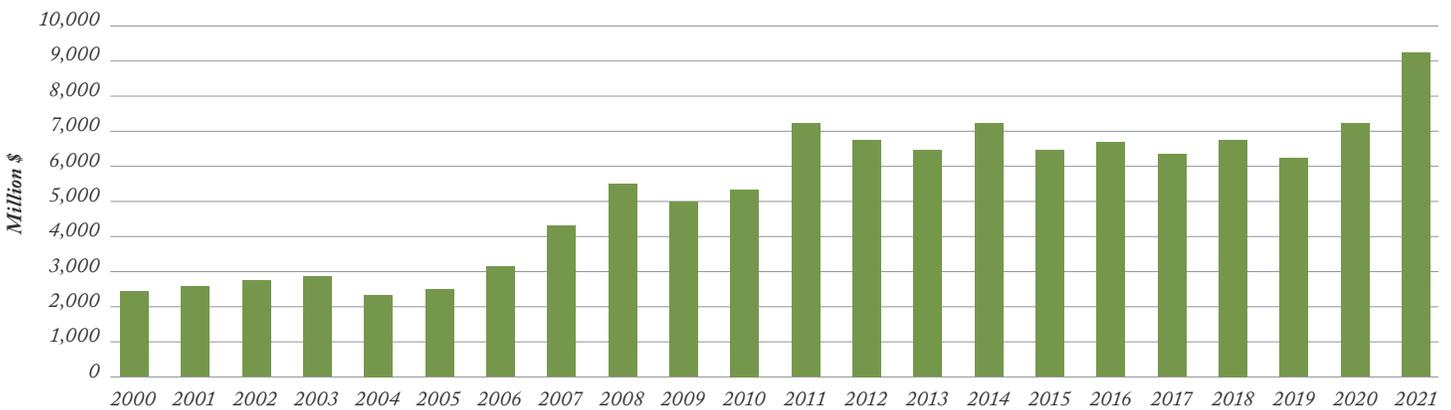


BACKGROUND

Nebraska exported agricultural commodities worth \$9.2 billion in 2021 according to the USDA Economic Research Service (USDA-ERS), surging more than \$2 billion, or 29 percent, compared to 2020. 2021 marks the first time Nebraska exports of commodities exceeded \$9.0 billion and only the fourth time Nebraska exports have exceeded \$7.0 billion (Figure 1). Exports are a growing part of Nebraska’s agricultural sales—exports in 2021 were 3 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. Nebraska repeated as the fifth-largest agricultural exporting state in 2021, falling just more than \$30 million short of Minnesota for fourth largest (Figure 2).

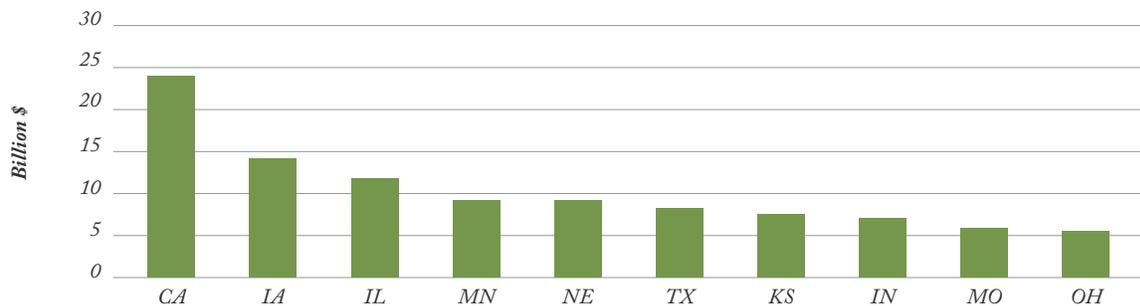
Nebraska topped the nation in exports of beef, was the second-largest exporter of hides and skins, the third-largest exporter of corn, feed, and processed grain products, and the fifth-largest exporter of soybeans, soybean meal, and vegetable oil. Other Nebraska products exported included ethanol, popcorn, 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 2017. Figure 3 tracks Nebraska export values of several Nebraska commodities from 2000 through 2021.

FIGURE 1. VALUE OF NEBRASKA AGRICULTURAL EXPORTS, 2000-2021



Source: NEFB graphic based on USDA Economic Research Service data

FIGURE 2. TOP TEN AGRICULTURAL EXPORT STATES, 2021



Source: NEFB graphic based on USDA Economic Research Service data

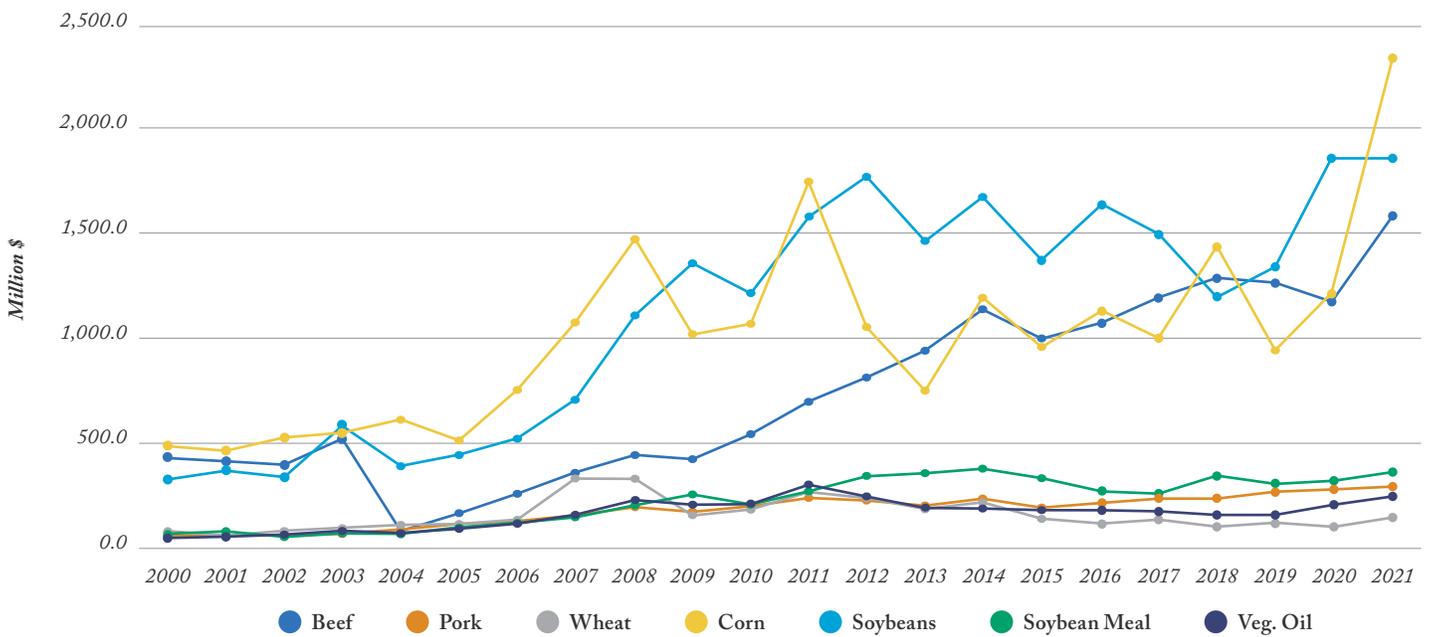
TABLE 1. NEBRASKA AGRICULTURAL EXPORTS, 2017-2021 (MILLION \$)

	Beef	Pork	Corn	Soybeans	Hides	Soy Meal	Wheat	Vegetable Oils	Total
2021	\$1,639.7	\$307.6	\$2,340.5	\$1,906.2	\$143.8	\$390.5	\$156.3	\$252.0	\$9,213.8
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

Source: USDA Economic Research Service

Soybeans, corn, and beef remained solidly entrenched as Nebraska’s top three agricultural exports, accounting for 47 percent of the state’s total exports. Corn exports almost doubled last year, up 98 percent, hurdling soybeans and beef to become Nebraska’s top agricultural export. According to the USDA, U.S. corn was competitive in global markets in 2021 and was supported by tight supplies in competing export countries. Mexico was the largest buyer of Nebraska corn, accounting for 89 percent of the state’s corn exports. The U.S. overall saw growth in soybean exports, however, the value of Nebraska soybean exports were largely unchanged. Mexico was also the top purchaser of Nebraska soybeans. Nebraska beef exports rose 40 percent in 2021 with the growth driven by increased purchases of U.S. beef by South Korea and Japan, up 39 and 22 percent respectively. Purchases of beef by Mexico and China also contributed to the growth.

FIGURE 3. NEBRASKA COMMODITY EXPORTS, 2000-2021



Source: NEFB graphic based on USDA Economic Research Service data

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 2021 for select commodities. The per-unit values were calculated by dividing 2021 export values by 2021 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, 2017-2021

	Soybeans**	Beef**	Corn**	Pork	Wheat
2021	\$7.26/bu.	\$260.36/hd.	\$1.70/bu.	\$85.44/hd.	\$3.80/bu.
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.

**Estimates based on export data and USDA National Agricultural Statistics Service commodity production or animal inventory data for each respective year.*

***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 2021 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 2021 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 2021 with nearly \$230 million in value. Custer and Cuming Counties followed with estimated values from export sales of roughly \$220 million each. Never before in the history of these reports has a county exceeded \$200 million in export value and last year saw three counties exceed the mark. Antelope and Dawson Counties both had estimated export values exceeding \$175 million. Counties least affected by trade include Hooker, Thomas, and Grant Counties with between \$6-9 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 \$444,000. Other counties heavily reliant on trade on a per-farm basis were Kearney, Boone, and Harlan Counties, each with a per-farm value of trade exceeding \$300,000. 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, 2021

County	2021 Total Export Value	County	2021 Total Export Value	County	2021 Total Export Value
Platte	\$229,607,746	Hall	\$99,428,679	Scotts Bluff	\$51,706,200
Custer	\$220,080,967	Chase	\$95,108,904	Pawnee	\$49,931,906
Cuming	\$219,676,716	Perkins	\$94,040,256	Box Butte	\$48,916,637
Antelope	\$180,813,093	Jefferson	\$93,639,280	Sheridan	\$48,299,470
Dawson	\$177,454,322	Wayne	\$92,079,786	Dakota	\$44,994,580
Holt	\$174,676,142	Richardson	\$89,823,889	Cheyenne	\$43,511,802
Lincoln	\$174,363,571	Cass	\$89,538,743	Johnson	\$39,980,132
Phelps	\$164,828,014	Nuckolls	\$89,019,089	Hayes	\$34,801,099
Boone	\$163,174,308	Harlan	\$86,835,499	Rock	\$33,316,852
Cedar	\$153,604,043	Merrick	\$85,671,437	Boyd	\$32,597,912
York	\$152,480,516	Dixon	\$83,509,778	Hitchcock	\$30,959,032
Saunders	\$149,294,711	Thurston	\$80,666,102	Sioux	\$30,449,802
Gage	\$143,056,379	Howard	\$79,991,459	Garden	\$25,682,978
Buffalo	\$134,763,650	Cherry	\$76,131,803	Sarpy	\$24,896,717
Adams	\$134,716,654	Furnas	\$75,076,124	Deuel	\$22,727,446
Hamilton	\$129,701,169	Webster	\$74,457,545	Keya Paha	\$22,490,260
Fillmore	\$127,777,241	Valley	\$72,986,882	Douglas	\$19,867,218
Clay	\$126,157,030	Franklin	\$72,571,807	Dawes	\$19,823,888
Kearney	\$123,288,389	Stanton	72,069,442	Garfield	\$19,687,551
Butler	\$123,221,126	Washington	\$71,975,361	Logan	\$19,016,538
Knox	\$122,708,958	Nemaha	\$69,462,499	Banner	\$18,560,364
Dodge	\$120,150,364	Nance	\$69,356,150	Kimball	\$13,313,331
Seward	\$119,196,143	Greeley	\$68,226,245	Blaine	\$11,456,058
Burt	\$116,735,334	Gosper	\$65,702,821	McPherson	\$10,805,146
Madison	\$116,213,676	Sherman	\$64,790,738	Loup	\$9,528,116
Polk	\$115,758,136	Morrill	\$64,006,578	Arthur	\$9,373,139
Pierce	\$113,489,163	Brown	\$59,231,355	Grant	\$9,373,139
Colfax	\$110,347,332	Red Willow	\$57,431,734	Thomas	\$7,420,401
Thayer	\$109,997,641	Frontier	\$57,105,223	Hooker	\$6,118,577
Otoe	\$108,365,165	Dundy	\$56,197,077		
Saline	\$107,603,438	Wheeler	\$55,774,677		
Lancaster	\$104,174,530	Keith	\$55,710,985		

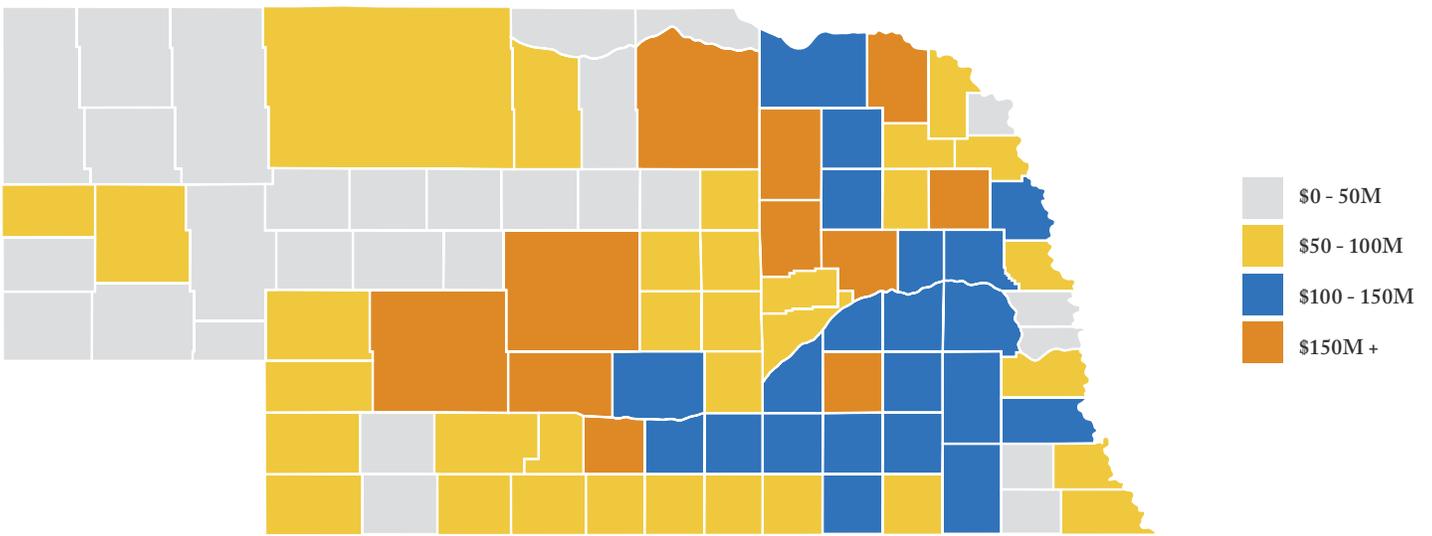
Source: Nebraska Farm Bureau estimates.

TABLE 4. ESTIMATED AGRICULTURAL EXPORT VALUE PER-FARM, 2021

County	2021 Per-Farm Export Value	Top Export Commodity	County	2021 Per-Farm Export Value	Top Export Commodity	County	2021 Per-Farm Export Value	Top Export Commodity
Phelps	\$444,280	Corn	Greeley	\$184,895	Corn	Stanton	\$126,216	Corn
Kearney	\$360,492	Corn	Webster	\$183,393	Corn	Gage	\$120,418	Soybeans
Boone	\$311,401	Corn	Pierce	\$181,583	Corn	Cass	\$116,891	Soybeans
Harlan	\$309,023	Corn	Dodge	\$177,737	Soybeans	Garden	\$116,213	Beef
York	\$292,669	Corn	Merrick	\$177,374	Corn	Boyd	\$113,979	Beef
Chase	\$292,643	Corn	Madison	\$176,349	Soybeans	Box Butte	\$113,496	Corn
Fillmore	\$291,064	Corn	Keith	\$175,192	Corn	Blaine	\$113,426	Beef
Clay	\$286,070	Corn	Red Willow	\$172,468	Corn	Pawnee	\$108,548	Soybeans
Platte	\$274,650	Corn	Hall	\$170,840	Corn	Hitchcock	\$107,497	Corn
Cuming	\$273,230	Beef	Butler	\$170,430	Soybeans	Deuel	\$101,011	Corn
Polk	\$267,959	Corn	Nemaha	\$169,421	Soybeans	Sioux	\$99,185	Beef
Thayer	\$265,695	Corn	Sherman	\$168,726	Corn	McPherson	\$99,130	Beef
Thurston	\$261,055	Soybeans	Dakota	\$168,519	Soybeans	Arthur	\$98,665	Beef
Wheeler	\$259,417	Beef	Lincoln	\$167,657	Beef	Garfield	\$97,463	Beef
Dawson	\$258,680	Corn	Logan	\$162,535	Corn	Washington	\$96,353	Soybeans
Antelope	\$256,837	Corn	Jefferson	\$158,711	Soybeans	Keya Paha	\$94,896	Beef
Adams	\$247,187	Corn	Hayes	\$158,187	Beef	Sheridan	\$91,999	Beef
Franklin	\$228,933	Corn	Frontier	\$153,922	Corn	Thomas	\$82,449	Beef
Gosper	\$228,930	Corn	Holt	\$152,956	Beef	Johnson	\$79,642	Soybeans
Perkins	\$224,977	Corn	Rock	\$151,440	Beef	Banner	\$77,658	Beef
Burt	\$224,060	Soybeans	Morrill	\$150,250	Beef	Cheyenne	\$76,070	Wheat
Hamilton	\$221,333	Corn	Saline	\$150,075	Soybeans	Loup	\$73,293	Beef
Brown	\$221,013	Beef	Dixon	\$147,284	Soybeans	Scotts Bluff	\$68,034	Beef
Colfax	\$213,851	Soybeans	Grant	\$146,455	Beef	Hooker	\$63,078	Beef
Dundy	\$209,691	Beef	Buffalo	\$141,410	Corn	Sarpy	\$59,704	Soybeans
Nuckolls	\$206,541	Corn	Cherry	\$134,271	Beef	Lancaster	\$58,328	Soybeans
Valley	\$201,621	Corn	Saunders	\$133,537	Soybeans	Douglas	\$54,134	Soybeans
Furnas	\$199,141	Corn	Otoe	\$132,963	Soybeans	Dawes	\$40,375	Beef
Custer	\$198,629	Beef	Howard	\$129,646	Corn	Kimball	\$30,053	Wheat
Cedar	\$195,924	Corn	Knox	\$128,357	Corn			
Wayne	\$189,855	Corn	Richardson	\$126,870	Soybeans			
Nance	\$184,950	Corn	Seward	\$126,267	Soybeans			

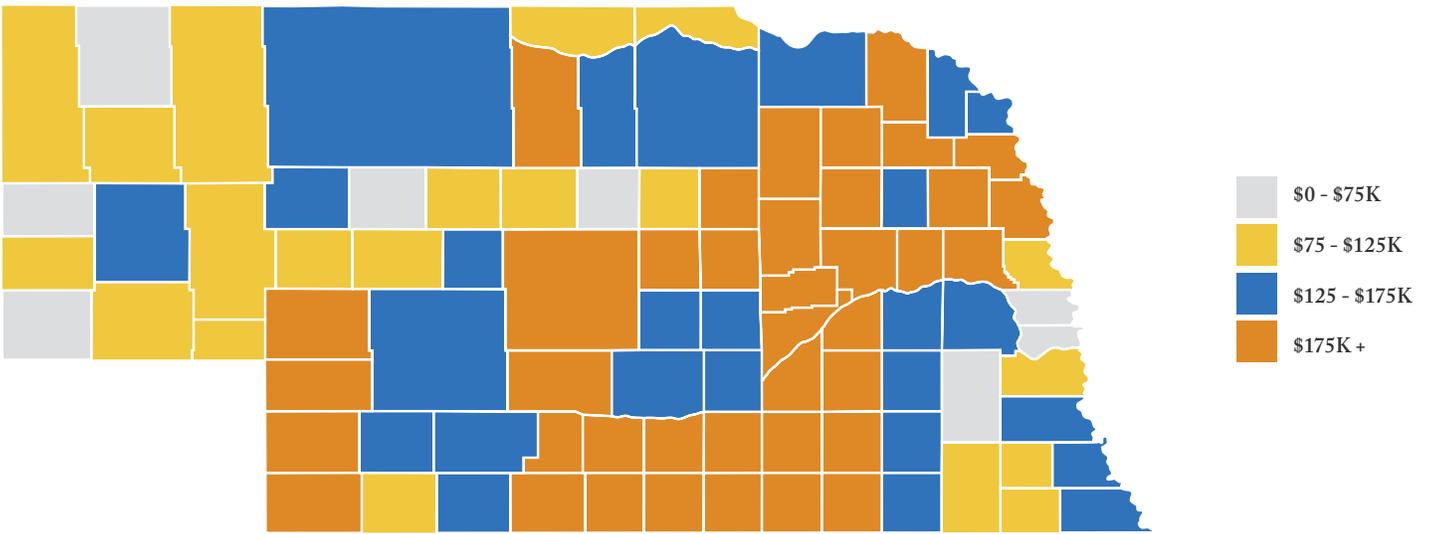
Source: Nebraska Farm Bureau estimates.

FIGURE 4. ESTIMATED TOTAL AGRICULTURAL EXPORT VALUE PER-COUNTY, 2021



Source: Nebraska Farm Bureau estimates

FIGURE 5. ESTIMATED AGRICULTURAL EXPORT VALUE PER-FARM, 2021



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 counties' 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, 2021

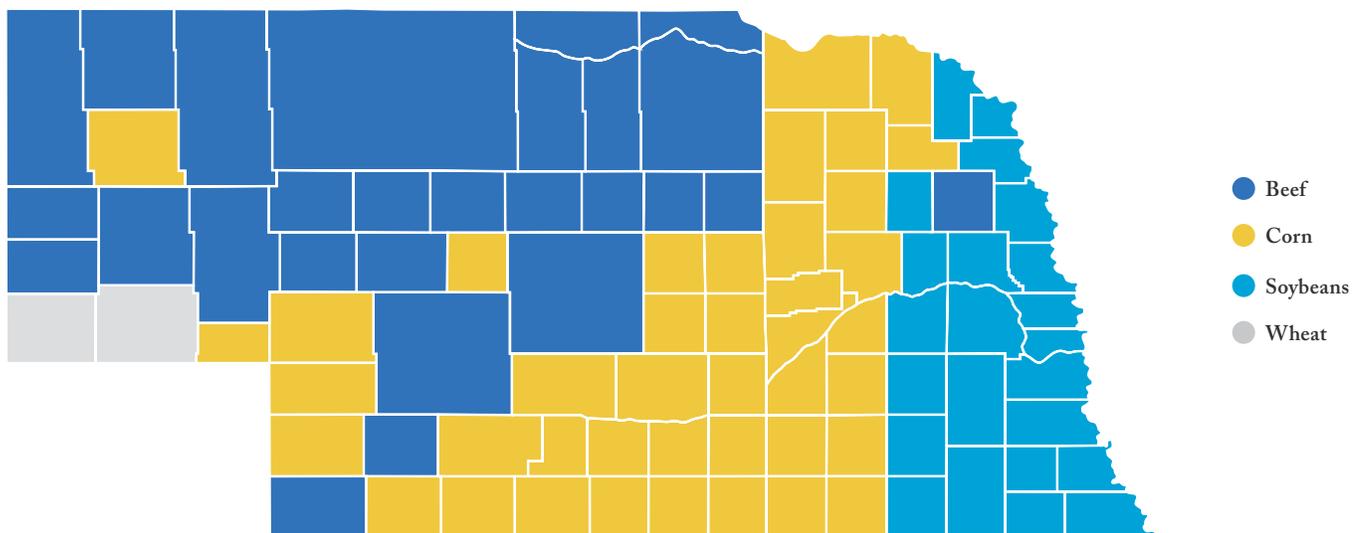
Corn	41 counties
Beef	27 counties
Soybeans	23 counties
Wheat	2 counties

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

The map of top export commodities looks dramatically different for 2021 compared to 2020 for Nebraska counties. Not surprisingly, given the explosion in corn exports in 2021, corn was the top export commodity for 41 counties overtaking soybeans as the top commodity for the most counties. This is a growth of 31 counties from 2020. These counties are primarily located in a block in central Nebraska stretching between the north and south borders of the state. In contrast, the number of counties with soybeans as the top export commodity fell from 49 counties in 2020 to 23 counties in 2021. The number of counties with beef as the top export commodity, 27 counties, slipped as well in 2021 from 30 counties in 2020. Wheat was the top export county in 2 counties.

The spatial distribution of the top export commodities highlights the regional difference in agricultural production in Nebraska. Counties with soybeans as the top export commodity are located in the eastern third of the state where soybean production is most prevalent. As noted above, counties with corn as the top export commodity are found in central and southwestern parts of the state. Beef continues to dominate as the top export in the Sandhills, northern Panhandle, and Cuming County, regions where beef production is significant. And wheat dominates in counties in the southern Panhandle.

FIGURE 6. ESTIMATED TOP EXPORT COMMODITY BY COUNTY, 2021



Source: Nebraska Farm Bureau estimates

CONCLUSION

Nebraska was the fifth-largest agricultural exporting state in 2021 exporting \$9.2 billion of agricultural goods, a record for the state. 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 2021 export data comes from the USDA Economic Research Service. County and state-level production data for 2021 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 2021, 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 county's proportion of total state production in previous years was used to fill in holes in the 2021 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.

This trade report was developed by Jay Rempe of Rolling Prairie Economics on behalf of the Nebraska Farm Bureau.



March 2023