

Nebraska's Cattle Feeding Industry: Size, Structure and Related Industries

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With 6.7 million head of cattle and calves in 2007, Nebraska has the second largest beef cattle herd in the nation. Cash receipts from sales of these cattle and calves totaled \$6.6 billion in 2006. Nebraska's 2.7 million head of cattle on feed in January 2007 also makes the state the second largest in the number of cattle on feed and commercial cattle slaughtered. A number of unique factors and resources contribute to the large and thriving cattle feeding industry in Nebraska. More than half of the state's land area is comprised of pasture and rangeland, which supports a large cow-calf sector and provides a large calf crop to Nebraska feeders. Not only are cattle feeders near an ample supply of feeder cattle, but they also are close to key feed input markets. Nebraska traditionally is known for its corn production and is increasingly growing production of distillers grains and other feed byproducts from bio-energy production plants operating in the state. Finally, Nebraska cattle feeders have close access to a number of cattle slaughtering plants located throughout the state. Lower transportation costs for feeder and slaughter livestock as well as feed inputs creates cost advantages for Nebraska feeders that are not available in other states.

This report provides information on the size, scope and structure of Nebraska's cattle feeding industry. Such information can help Nebraska producers, industry leaders, state and local policy makers, rural communities and consumers understand the impact the cattle feeding sector has on the state's economy. Along with discussing the importance and magnitude of the cattle feeding sector in the state, the report also examines the relationship of the feeding industry with the cow-calf production sector,

beef processing industry, feedstuff production industry and export market.

Overview of Nebraska's Beef Cow Industry

The availability of high quality feeder cattle and calves in Nebraska supports the state's feeding industry. In 2006, Nebraska had about 5.6 percent of the nearly 32.9 million beef cows that calved in the U.S. that year. These 1.9 million head of beef cows are on 20,991 beef cow operations throughout Nebraska for a state average herd size of 90 cows per operation. Cherry, Custer and Holt Counties have the three largest beef cow inventories in the state as well as the nation. Notice that these counties generally are located close to counties with some of the largest cattle on feed numbers in Nebraska (see *Figure 4*). Interestingly, despite Cherry County having 66,000 more head of beef cows than second-ranked Custer County, total cattle inventory numbers (including breeding stock, calves and cattle on feed) for each equals 305,000 head.

Table 1. Top Five Beef Cow Counties in Nebraska

Rank	County	Head
1	Cherry	166,000
2	Custer	100,000
3	Holt	99,000
4	Lincoln	69,000
5	Sheridan	56,000

Source: National Agricultural Statistics Service (NASS)

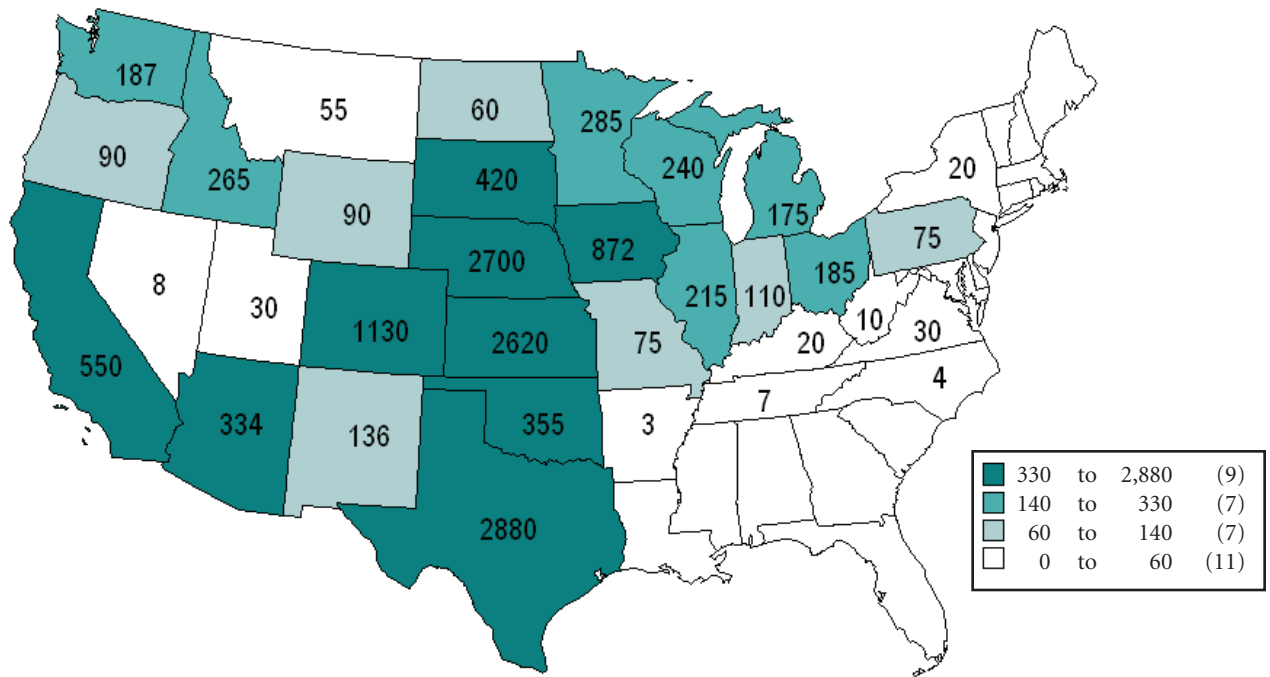


Figure 1. Cattle on Feed in January 1, 2007 (1,000 head). Source: Livestock Marketing Information Center (LMIC)

The Cattle Feeding Sector

In early 2007, Nebraska ranked second nationally in the number of cattle on feed in all feedyards and in feedyards with 1,000+ head capacities. Texas and Kansas have the first and third largest cattle on feed inventory nationally. Much of the rest of the concentration of cattle on feed is in California, Colorado, Iowa, Oklahoma and New Mexico (Figure 1). Because of the increasing challenge of originating feed inputs, particularly corn, and competition for ethanol co-product feeds, there has been some

shift of cattle feeding numbers from the Southern Plains to Northern Plains states like Nebraska (Mark).

In 2006, there were 4,570 cattle feeding operations in Nebraska with approximately 2.7 million head of cattle on feed. The average size of those feeding operations was 590 head, but ranged considerably from smallest to largest. Of the 4,570 operations, 770 of them had capacities of 1,000 head or more (NASS). This means that approximately 83 percent of cattle feeding operations in Nebraska have fewer than 1,000 head capacity feedlots (Figure 2).

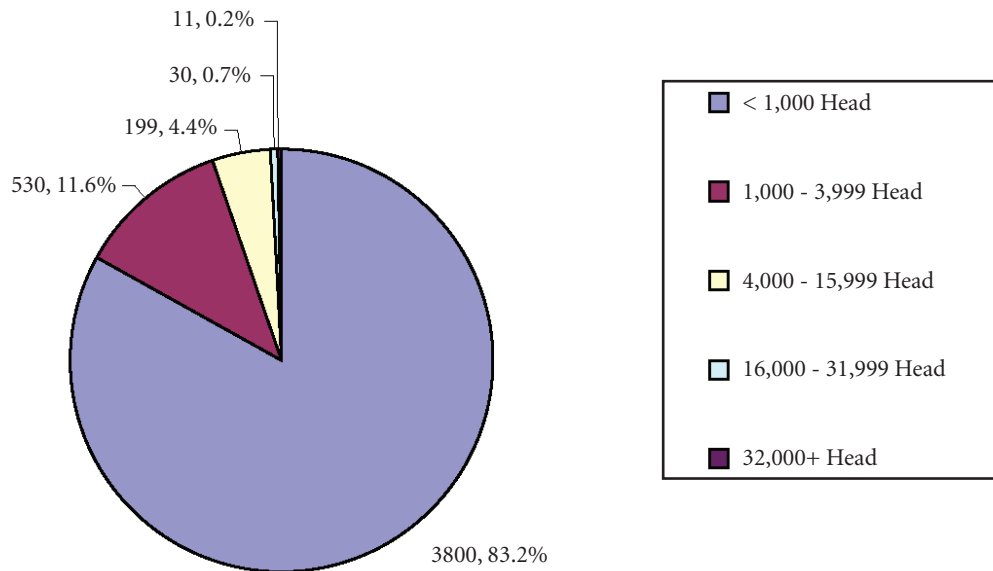


Figure 2. Number of Cattle Feeding Operations in Nebraska, By Size, 2006. Source: National Agricultural Statistics Service (NASS)

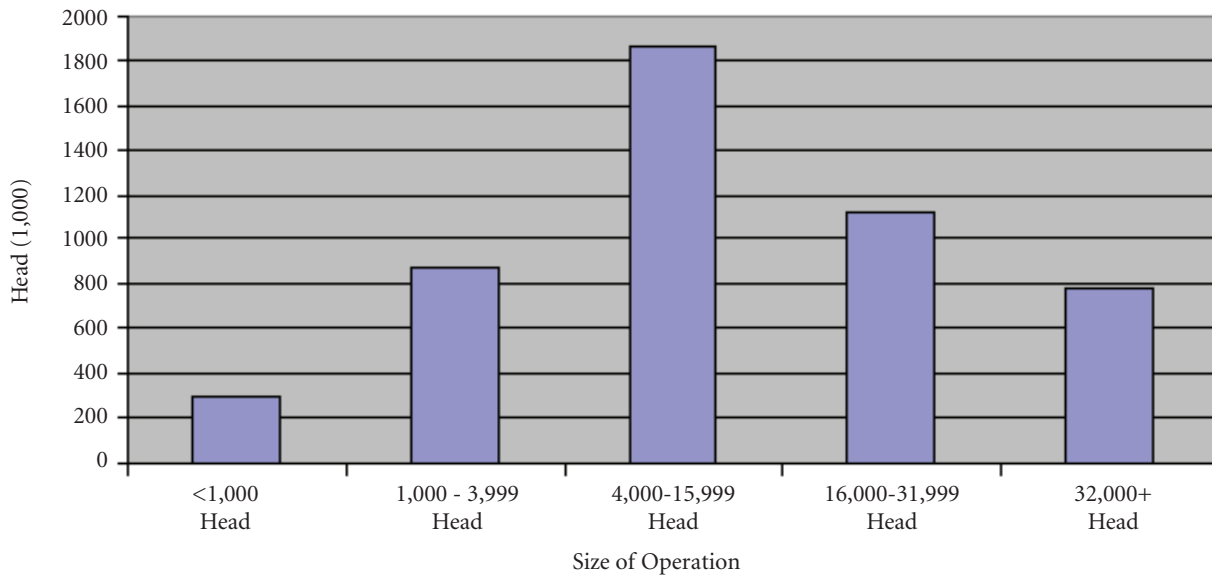


Figure 3. Cattle Marketed, By Operation Size, 2006. Source: National Agricultural Statistics Service (NASS)

While Nebraska’s feeding industry is comprised of a relatively large number of small feedyards, these small feedyards account for a small proportion of cattle marketed in the state. For example, the 83 percent of feedyards with less than 1,000 head capacities supplied about 6 percent of the total cattle marketed in the state in 2006 (Figure 3). Conversely, the 11 feedyards with more than 32,000 head capacities marketed nearly 16 percent of cattle sold by Nebraska feedyards. The majority of cattle marketings, however, are from mid-sized feedyards. Figure 3 shows that more than 1.8 million cattle were marketed from feedyards with 4,000 to 15,999 head, or 38 percent of all cattle marketings in Nebraska. This size structure contrasts with other states. In Kansas and

Texas, the majority of cattle marketed are from feedyards with 32,000+ head capacities, while most of Iowa’s cattle marketings came from 1,000 to 3,999 head size operations in 2006 (NASS).

Cattle are fed throughout the state (Figure 4), but cattle on feed inventories are generally concentrated in the northeast, south central and Panhandle areas of the state. Table 2 shows the five counties in Nebraska with the most cattle on feed (NASS). These top five counties, distributed from the east to west end of the state, account for approximately 23 percent of the cattle on feed inventory in Nebraska. There are 10 counties in Nebraska with more than 50,000 head of cattle on feed.

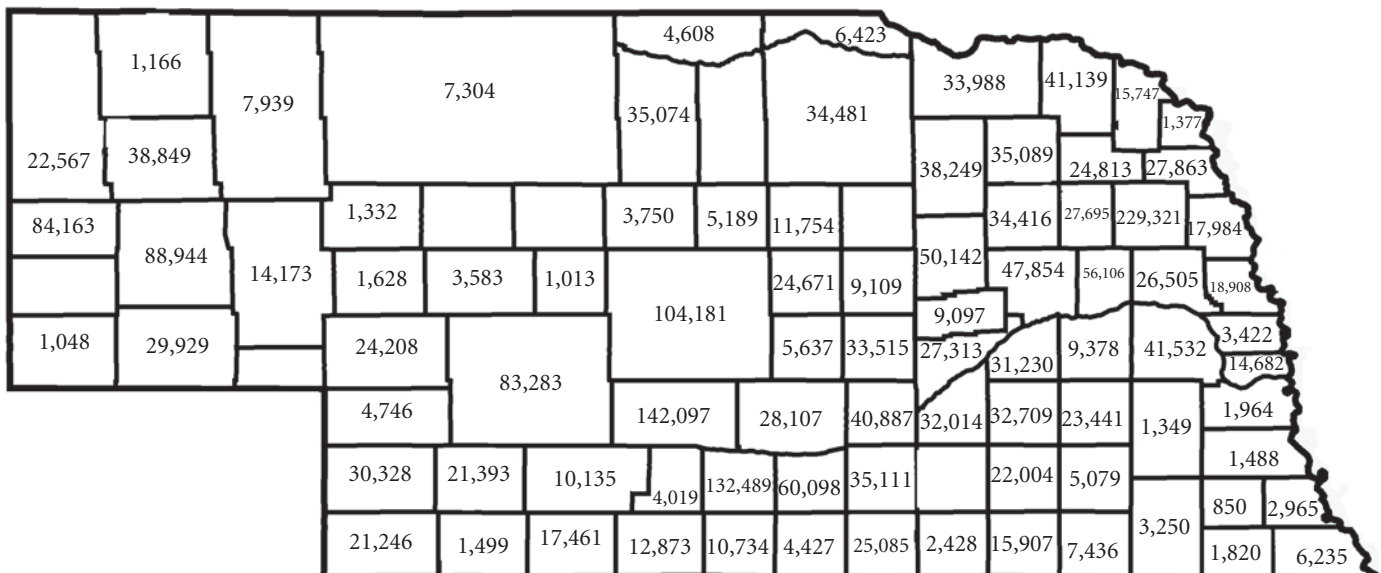


Figure 4. Nebraska Cattle on Feed, By County, 2002. Source: National Agricultural Statistics Service (NASS)

Table 2. Top Five Cattle on Feed Counties in Nebraska, 2002

Rank	County	Head
1	Cuming	229,321
2	Dawson	142,097
3	Phelps	132,489
4	Custer	104,181
5	Morrill	88,944

Source: NASS

Employment and Wages

Cattle feeding operations employ significant labor resources. Typically, efficient feedyards in Nebraska hire approximately one person for every 1,000 head of cattle on feed (Smith and Mark). Based on the cattle on feed inventory, this equates to about 2,700 people working in feedlots across Nebraska in positions ranging from feedlot managers to mill operators to feedtruck drivers to pen riders and cowboys. The number of people employed at a feedlot is dependent on the size of the feedlot. A 2004 survey of Nebraska feedyards indicated average payrolls of about 355,000 in the form of annual salaries, hourly wages, benefits and bonuses. The average wage of a feedlot employee in 2004 was over \$38,000. (Note that this average compensation included both base annual salaries and hourly wages.) In addition, the average benefit packages received by feedlot employees totaled \$6,699. (The size of operations surveyed by Smith and Mark ranged from 1,000 to 65,000 one-time capacities with the following categories: below 4,000 head, 4,000 to 12,000 head, and more than 12,000 head.)

Feed Inputs and Amounts

In addition to a large cow-calf industry and diverse feeding sector, part of Nebraska's success in cattle feeding is attributable to abundant crop production in the state. In 2006, Nebraska harvested approximately 7.8 million acres of corn for grain totaling 1.2 billion bushels with a value of production of \$3.7 billion. In addition, some 280,000 acres of corn went into silage production. The Nebraska cattle industry also supports significant hay production. In 2006, total hay production was approximately 5.7 million tons having a value of nearly \$490 million (NASS). This occurred despite dry conditions reducing the hay crop to its lowest level since 2002 (NASS).

In the last several years, feed resources in the cattle feeding sector have been changing dramatically because of increasing ethanol production, with all indications it will be moving ahead of Illinois into second place by the end of 2007. In 2006, Nebraska ranked third in ethanol production. While ethanol production has increased de-

mand for corn, and consequently corn prices, production of distillers grains and gluten feed have also increased. In Nebraska, wet distillers grains plus solubles (WDGS) is most commonly produced and available to cattle feeders. Regionally, NASS has estimated that 19 percent of feeders are using WDGS in their rations. The percentage is likely higher in Nebraska due to the advantages Nebraska feeders have in using WDGS. First, WDGS and other ethanol co-products often are cheaper than corn (when compared on a pound-for-pound dry matter basis). This may not be the case for feedyards located further from ethanol plants (i.e., those away from the Corn Belt and current ethanol plants) as transportation costs limit shipment of this bulky, high-moisture commodity. Secondly, significant improvements in feeding performance (i.e., higher average daily gain and lower feed conversion) result from feeding rations containing 20 percent to 40 percent distillers grains or gluten feed (on a dry matter basis). These performance responses are greatest for cattle fed WDGS as compared to dry distillers grains with solubles (DDGS), which Nebraska specializes in feeding. Feed performance improvements, along with competitive co-product prices for Nebraska feedyards near ethanol plants, provide significant advantages in feeding cost of gain for Nebraska feeders over other major cattle feeding states (Buckner, et al.).

The 2.7 million head of cattle fed in Nebraska provide a large market for the corn, hay and ethanol co-product produced in the state. For example, assume that all feeder cattle in Nebraska are on feed from approximately 575 pounds to 1,200 pounds and are fed a ration of corn (59 percent), WDGS (30 percent), hay (7 percent), and supplement (4 percent) for 168 days. Implied usage with these assumptions, applied to all cattle on feed in Nebraska (2.7 million head), equals approximately 133 million bushels of corn, 4.9 million tons of WDGS, and more than 430,000 tons of hay. Note that with varying rations and other assumptions used, these amounts would be different. In fact, because not all cattle on feed in Nebraska are currently fed WDGS or other co-products at these levels, corn use is actually much higher (around 250 million bushels) and WDGS use is lower (less than 2 million tons).

Ranking
All Cattle on Feed: 2nd (Jan. 07)
All cattle and Calves: 2nd (Jan. 07)
Commercial Cattle Slaughter: 2nd (2006)
Ethanol Production Capacity: 3rd (2006)

Source: NASS

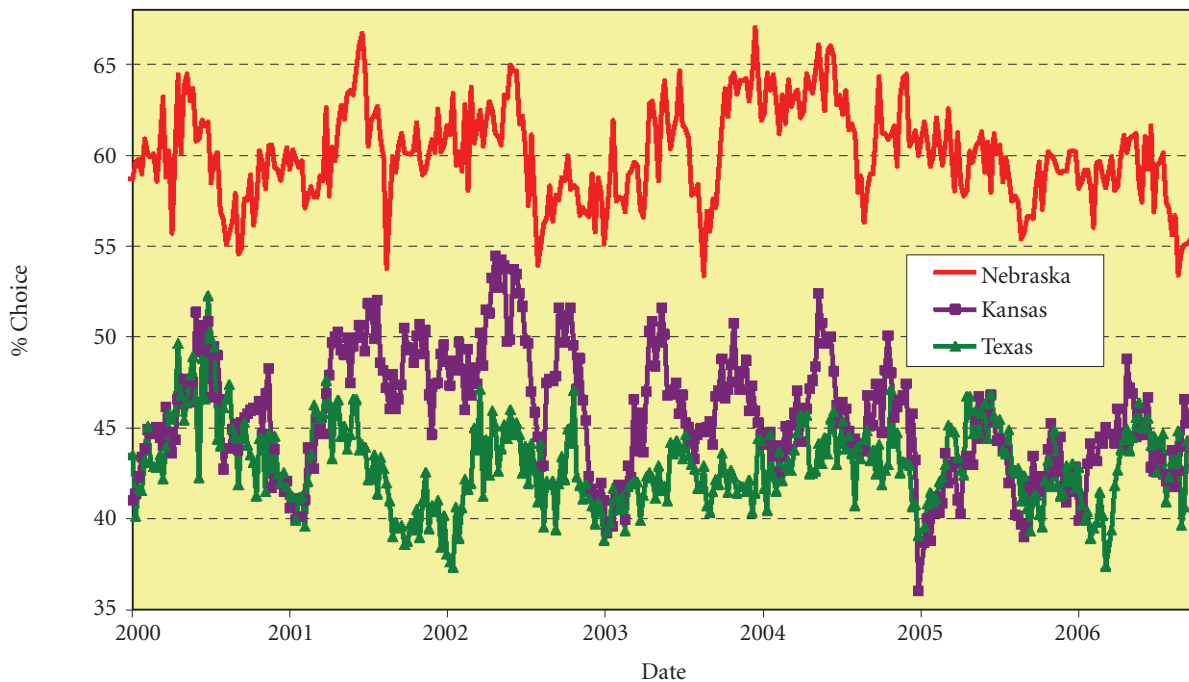


Figure 5. Percentage of Beef Grading Choice, Nebraska, Kansas, Texas, 2000-2007. Source: Livestock Marketing Information Center (LMIC).

Quality Grade

Another unique advantage Nebraska cattle feeders have is their ability to produce high quality cattle and beef. The quality of the feeder cattle purchased and fed in Nebraska, along with the feedstuffs used to finish the cattle, results in Nebraska having a higher relative percentage of cattle grading USDA choice. *Figure 5* shows the percent of cattle grading choice in Nebraska, Kansas and Texas. Of the three largest cattle feeding and slaughter states, Nebraska produces the highest quality beef. This is significant because choice carcasses can earn premiums of \$5 to \$25/cwt relative to lower grading select carcasses.

Export Data

The high quality cattle grown in Nebraska, along with the large slaughter industry in the state, provide excellent opportunities for international export of Nebraska beef products. Nebraska was second, only behind Iowa, in live animals and meat exports with \$665.8 million estimated exports in fiscal year 2006 (this includes swine and sheep live animal and meat exports because USDA does not disaggregate the livestock classes). It is important to note that Iowa is more prominent in swine production, suggesting that Nebraska leads the nation in beef exports. Moreover, the \$665.8 million of live animals and meat exports comprised over 20 percent of Nebraska's \$3,261 million dollars of total agricultural exports in 2006. Furthermore, with the re-opening of Asian markets to U.S. beef imports in 2006, this percentage most likely will increase in 2007 and beyond. The animal byproducts export market also is important for the state. In 2006 Nebraska was the second largest exporter of hides and skins and first in animal fats exports by value (ERS). Because of its large value of live animals and meat exports, Nebraska ranks fifth in the nation for agricultural exports.

Farm and Inventory Numbers

Cattle and Calves:

- Number of Operations in Nebraska: 20,991
- Number of Beef Cows: 1.9 million
 - Cherry County has the largest amount of beef cattle in 2007 (as compared to all other Nebraska counties) with 166,000 head of beef cattle

Cattle Feeding:

- Number of Operations in Nebraska: 4,570
- Number of Operations 1,000 + head: 770

(Source: 2002 Census of Ag and Nebraska Beef Council)

Slaughter Data

In 2006, Nebraska ranked second in commercial cattle slaughter, just behind Kansas, slaughtering nearly 7.07 million head of cattle. This number includes the nearly 7.04 million head of cattle slaughtered in the 32 federally

inspected cattle slaughter plants located in Nebraska (NASS). Nebraska commercial beef production was approximately 5.5 billion pounds in 2006.

Slaughter plants throughout Nebraska vary in size, location and type of cattle slaughtered. *Table 3* lists the six largest fed cattle slaughter plants by daily capacity, according to Cattle Buyers Weekly. Combined daily capacity of these six plants is 25,700 head. Assuming 255 slaughter days per year, these six largest plants have the capacity to slaughter approximately 6.6 million head of fed cattle, from Nebraska and other states.

Table 3. Largest Fed Cattle Slaughter Plants in Nebraska by Daily Capacity

<i>Company</i>	<i>Plant Location</i>	<i>Daily Capacity</i>
Swift and Company	Grand Island	5600
Tyson Foods	Dakota City	5000
Cargill Meat Solutions	Schuyler	5000
Tyson Foods	Lexington	4800
Greater Omaha Packing	Omaha	2700
Nebraska Beef	Omaha	2600

Source: Cattle Buyers Weekly

Summary

The beef industry plays a vital role in Nebraska's economy. The cattle feeding industry not only generates significant value of production through finishing cattle, but it also plays a key role in supporting related industries such as the cow-calf sector in Nebraska and other states, the crop production sector and the meat packing and processing industry. All indications show that this industry will not only remain economically prominent but likely increase in the coming years.

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