

Managing for Today's Cattle Market and Beyond

Structural Changes in Cattle Feeding and Meat Packing

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Cattle feedlots and meatpacking plants have both declined in number and increased in size. However, in comparison, beefpacker concentration has increased at a much larger pace. As a result, concentration in meatpacking has been a major concern to many cattlemen the past couple years but has concerned many people for more than 25 years.

Market structure typically refers to the number, size, and location of firms in an industry. Major changes have occurred in the structure of the cattle feeding and meatpacking industries in the past 2-3 decades. This fact sheet reviews many of those changes and discusses implications for marketing and pricing feeder and fed cattle.

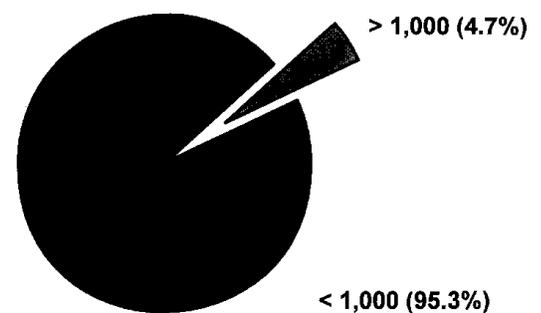
Changes in Cattle Feeding

Cattle feeding has become more highly concentrated in larger feedlots, firms, and in a few states. Cattle feeding firms which have exited the industry have been the smaller feedlots primarily.

In 1972, 104,340 feedlots in 13 states marketed 23.869 million cattle (National Agricultural Statistics Service). That differs significantly from 1995, when for the same 13 states, 41,365 feedlots marketed 23.365 million cattle. Fed cattle marketings are at about the same level but number of feedlots has declined by 60.4 percent. Average marketings per feedlot were 2,287 head in 1972, but increased sharply to 5,648 head by 1995.

The above suggests that feedlots today are larger on average than feedlots 25 years ago. Most feedlots that exited the industry over the last 20 years were smaller feedlots. In 1972, 98.2 percent of the feedlots had a one-time capacity of 1,000 head or less, while the comparable percentage for 1995 was 95.3 (Figure 1). That alone suggests average marketing per feedlot increased.

Figure 1. Number of Feedlots by Size Group (one-time capacity), 1995

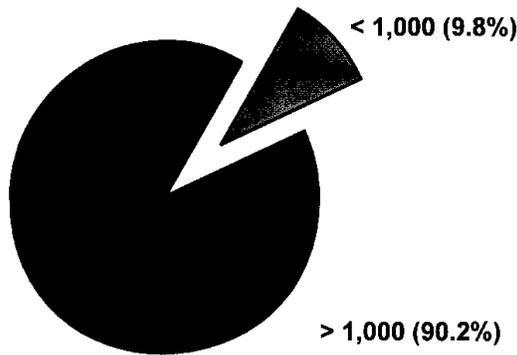


Total = 41,365

Remaining feedlots have also increased in size. In 1972, 1.8 percent of the feedlots (with a one-time capacity greater than 1,000 head) marketed 65.2 percent of the cattle. Those larger feedlots in 1995 marketed 90.2 percent of the cattle (Figure 2). Average marketings for the 1,936 larger feedlots in 1995 were 10,897 cattle per feedlot; while for the

39,429 smaller feedlots, average marketings were 58 cattle per feedlot.

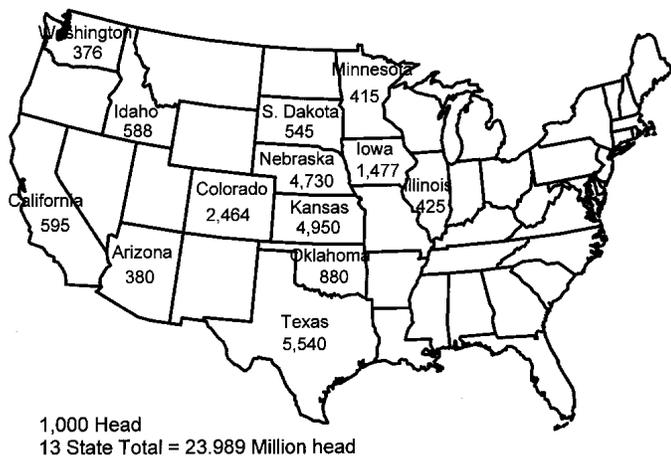
Figure 2. Fed Cattle Marketings by Feedlot Size (one-time capacity), 1995



Total = 23.365 Million head

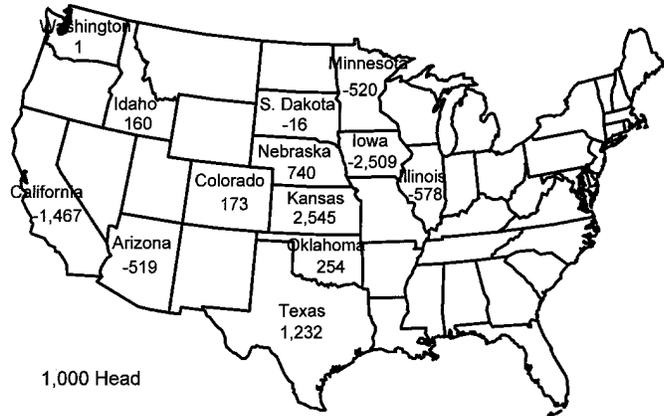
Cattle feeding is more geographically concentrated today than 25 years ago. In 1972, Texas was the leading cattle feeding state, followed by (in order): Iowa, Nebraska, Kansas, and Colorado. In 1995, the largest cattle feeding states were: Texas, Kansas, Nebraska, Colorado, and Iowa (Figure 3). The leading states remained the same but the ranking differed as did the distribution of cattle feeding within the five states. The five states combined accounted for 71.1 percent of fed cattle marketings in the 13 major states in 1972 and 82.0 percent in 1995. Adding two other Great Plains states, Oklahoma and South Dakota, increases the percentage of marketings to 88.1 percent for 1995. Figure 4 shows the sharp decline in cattle feeding among some of the 13 leading states from 1972 to 1995 (e.g. Iowa and California) and the rapid increase in other states (e.g. Kansas and Texas).

Figure 3. Leading Cattle Feeding States, 1995



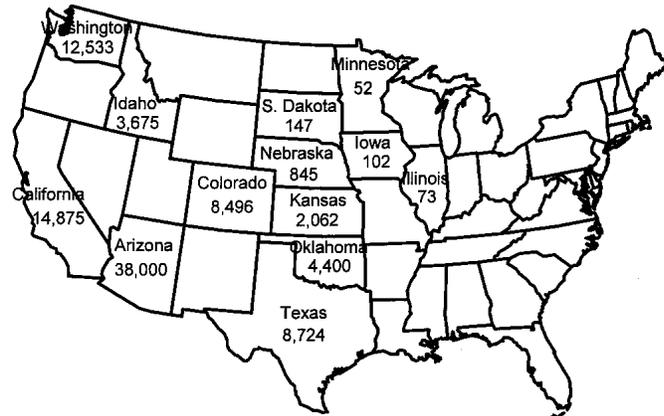
Average marketings per feedlot for each state illustrates where the larger cattle feedlots are located

Figure 4. Changes in Fed Cattle Marketings, 1972 - 1995



and the differences in feedlot size from state to state (Figure 5). Arizona had only 10 cattle feedlots in 1995, but each is quite large, marketing an average of 38,000 cattle per feedlot. Iowa is on the opposite end of the spectrum. Iowa had the most feedlots of any state in 1995, 14,500, but each was relatively small, marketing only 102 cattle per feedlot on average.

Figure 5. Average Fed Cattle Marketings (number of head) per Feedlot, 1995



Cattle feeding has become more concentrated in larger feedlots and in a smaller geographic region. It also has become more concentrated in larger cattle feeding firms. Thirty-two cattle feeding firms, believed to be the largest in the U.S. in 1994, each had a one-time feedlot capacity of 50,000 cattle or more and the largest had a total capacity of 375,000 head in seven feedlots (Kay). The four largest firms had an estimated one-time capacity of 1.250 million cattle in 23 feedlots. Estimated marketings were 2.7 million cattle in 1994, an average of 117,391 cattle per feedlot and 675,000 cattle per firm.

Concentration is an often-mentioned concept, especially applied to meatpacking. Concentration is defined as a measure of the market dominance by a few large firms. Cumulative market shares by the

four, eight, or twenty largest firms are frequently reported measures of market concentration. Concentration alone is not necessarily bad or does not necessarily lead to market power abuses and noncompetitive behavior.

Often concentration in cattle feeding is not mentioned and is not necessarily an issue. As a point for comparison, the four largest cattle feeding firms in 1994 accounted for about 11.7 percent of the 13-state total fed cattle marketings. By many standards, that is not large and is not large in comparison to meatpacking. However, some cattle feeders question the desirability of increasing concentration in cattle feeding, given the rapid exodus from the industry by smaller, often family farm feedlots.

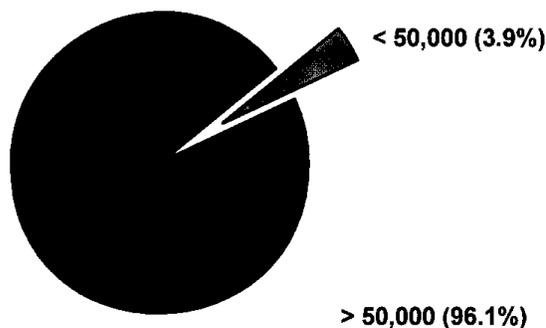
Changes in Meatpacking

Meatpacking plants and firms have also become fewer in number but larger in size. Steer and heifer slaughtering plants have also become more geographically concentrated, moving to or expanding closer to where cattle are fed.

In 1972, 807 steer and heifer slaughtering plants (called fed cattle slaughtering plants here) slaughtered 26.133 million cattle (Packers and Stockyards Administration). In 1990 (the last year for which plant data are available), 310 plants slaughtered 25.760 million fed cattle. Average slaughter per plant increased from 32,383 head in 1972 to 83,097 head in 1990.

Smaller plants have exited the industry but remaining plants have increased in size. Plants which slaughtered less than 50,000 fed cattle represented nearly identical shares of total plants for 1972 and 1990, 82.5 and 82.9 percent, respectively. However, the importance of these plants changed greatly. In 1972, the smaller plants accounted for 20.7 percent of total fed cattle slaughter. By 1990, the percentage declined to just 3.9 percent (Figure 6).

Figure 6. Fed Cattle Slaughter by Plant Size (annual slaughter), 1990.



The same trend can be shown in another manner, by focusing on the largest plants. In 1972, no plants slaughtered more than one-half million fed cattle per year. In 1990, 18 plants each slaughtered more than 500,000 cattle. Combined, the 18 plants accounted for 66.0 percent of fed cattle slaughter. Since 1990, the percentage accounted for by the largest plants has likely increased further. Average slaughter in those 18 largest plants in 1990 was 945,278 cattle.

Fed cattle slaughtering has also become more concentrated in a few states. The leading fed cattle slaughtering states in 1972 were (in order): Nebraska, Iowa, Texas, California, and Kansas. In 1994, the leading states were (in order): Kansas, Nebraska, Texas, Colorado, and Iowa (Figure 7). In some states, there is essentially only one large plant (Figure 8). Therefore, the “state” market share of slaughter by one or a small number of plants in some states is very high. However, the state market share can be misleading. Fed cattle are purchased from surrounding states as well. Recent research indicated 64 percent of fed cattle purchases were from within 75 miles of the plant; 82 percent from within 150 miles; and 92 percent from within 250 miles. Research also found that procurement prices among plants were closely linked. Therefore, competition among plants keeps prices from deviating far from the cost differential to transport cattle longer distances (Grain Inspection Packers and Stockyards Administration).

Figure 9 shows the sharp decline in fed cattle slaughter in some states (e.g. Iowa and California) from 1972 to 1994, and the very rapid increase in other states (e.g. Kansas and Texas). Fed cattle slaughter over that period nearly doubled in Kansas.

Figure 7. Leading Fed Cattle Slaughtering States, 1994



Increasing concentration among meatpacking firms has been an issue for the past two decades. The extent of the concern is affected by market price levels

and overall supply and demand conditions (see Price Determination versus Price Discovery in this fact sheet series).

Figure 8. Major U.S. Fed Cattle Slaughtering Plants, Four Largest Firms, 1996

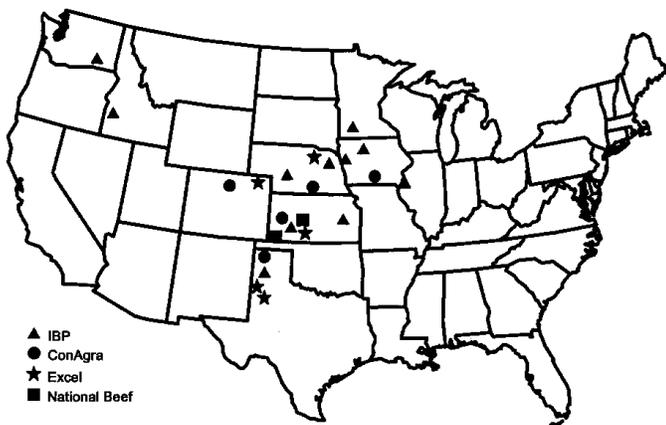


Figure 9. Change in Fed Cattle Slaughter, 1972 - 1994



However, by nearly any standard, concentration in fed cattle slaughtering has increased sharply. The four largest meatpackers slaughtering steers and heifers accounted for 26.0 percent of U.S. fed cattle slaughter in 1972 and an estimated 87.0 percent in 1994 (Packers and Stockyards Administration; Kay). Adding the fifth largest firm means the five largest firms in 1994 were estimated to slaughter nearly 90 percent of all fed cattle in the U.S. (see also Packer Concentration and Captive Supplies in this fact sheet series).

Conclusion

Cattle feedlots and meatpacking plants have both declined in number and increased in size. However, in comparison, beefpacker concentration has increased at a much larger pace. Larger plants

have become more important, accounting for a larger share of total fed cattle slaughter. Meatpacking has also become more concentrated geographically, in the states which are experiencing increased cattle feeding.

Concentration in meatpacking has been a major concern to many cattlemen the past couple years but has concerned many people for more than 25 years. Current levels of concentration are high by nearly any standard. The question is how detrimental that is for such things as market access, fed cattle prices, boxed beef prices, and retail beef prices.

References

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