

SURVEY OF CATTLE BACKGROUNDING AND FINISHING FEEDLOTS IN NORTH DAKOTA

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Summary

This survey was conducted to evaluate North Dakota's supply of fed cattle and potential for expansion, and elucidate the management practices and marketing strategies of North Dakota feedlot operators. The results of this survey indicate an interest in expansion of feedlot cattle and feeding cattle for the natural beef market.

Introduction

The North Dakota beef industry primarily consists of cow-calf production and "farmer-feeder" feedlot operations. North Dakota has 11,000 beef cattle producers and ranks 13th in the nation for total beef cow numbers, with 947,000 head. However, North Dakota has only 60,000 head on feed and 183 feedlot operations with a capacity greater than 500 head, ranking 23rd in the nation (USDA National Agricultural Statistics Service, 2005).

The cattle feeding industry in North Dakota differs greatly from that of the southern Plains region. Most North Dakota feedlot operators have fewer than 5,000 head on feed and rely on a local supply for feed inputs. In addition, the region does not have a large-scale slaughter facility (1,000 head per day or greater). As a result, feedlots are at a competitive disadvantage when marketing their cattle.

The objective of this survey was to evaluate the state's supply of fed cattle and potential to supply additional fed cattle. Furthermore, the survey results will provide data regarding the management practices and marketing strategies that North Dakota feedlot operators use.

Methods

The NDSU Institutional Review Board reviewed and approved all procedures and methodology related to the survey instrument before the survey was conducted.

A feedlot operator was defined as any beef cattle backgrounding or finishing operation that had the capacity to feed at least 500 head. A list of feedlot operators was compiled from various existing lists obtained from the North Dakota State University Animal and Range Sciences Department, North Dakota Department of Agriculture, North Dakota Department of Health and North Dakota Stockmen's Association.

Survey

A three-page questionnaire was administered to 148 beef cattle backgrounders and finishers in North Dakota via face-to-face interviews in spring 2005. However, only 130 of these questionnaires were used in the data analysis because some of the feedlots no longer were in the business of feeding cattle.

The date the survey was administered and the county where the feedlot is located were included on all of the surveys, but no names or other identifying information were collected. Feedlot operators were asked various questions to help evaluate the state's supply of fed cattle and potential to supply additional fed cattle. In particular, operators were asked questions pertaining to current and potential capacities, characteristics of the cattle being fed, general management practices, feeding practices and marketing strategies. As well, operators were asked for their interest in a "natural beef" program.

Statistics

All responses were kept confidential and were reported only as aggregated data. Frequency distributions were generated for questions about the main concentrate; main forage; ID system and number of growth implants; and questions that pertained to whether operators custom fed, wanted to expand, were interested in a "natural" beef program or were limited by working capital, and how they obtained their working capital.

All collective county, district and state data were generated by using the SUM equation in Microsoft Excel. Means, minimums and maximums were generated for all remaining questions using the PROC MEANS option in SAS (Cary, N.C.).

Results and Discussion

General description

From the 130 reported feedlots, North Dakota had 99,385 cattle on feed in spring 2005. During this time, the average inventory per feedlot was 771 head. North Dakota feedlot operators indicated they feed 240,420 head annually, with the state's one-time feedlot capacity being 188,693 head. The average feedlot capacity was 1,452 head. The largest capacity reported by one feedlot was 10,000 head, and the greatest number of cattle fed annually was 18,000 head. Sixty-five percent of the cattle inventory was backgrounded, while only 37% of the cattle inventory was finished (Table 1). Forty-one percent of this inventory was steers (Table 1).

Table 1. Description of cattle on feed in North Dakota.

	Percent
Percent of feedlot inventory ^{1/} that are steers	41
Percent of fed cattle that are backgrounded	64
Percent of fed cattle that are finished	36

^{1/} Data reflects spring 2005

County and district distribution

Surveys were completed from 39 counties. To protect confidentiality of participating feedlots, no county data is presented in this paper. Data has been aggregated from the North Dakota Agricultural Statistics Service reporting regions for the purposes of this report. The southeast district had the most surveys completed. According to the surveys, more than 50% of the feedlot capacity, more than 50% of the cattle in the spring 2005 inventory and more than 50% of the number of head fed annually were in the southern portion of the state. The southeast district reported the greatest inventory, with 30% of the spring 2005 total, while the northwest district had the lowest. The southwest district had 24% of the feedlot capacity and 27% of cattle fed annually, which was the greatest of any region in the state. The northwest district had the lowest reported numbers for both feedlot capacity (2,880 head) and cattle fed annually (5,660 head) (Table 2).

Table 2. North Dakota's district and state annual inventory, feedlot capacity and number of cattle fed.

	Current Inventory (head)	Feedlot Capacity (head)	Number of head fed annually
Northwest	2,880	6,000	5,660
Northeast	9,478	13,200	23,100
North Central	4,710	13,200	11,400
Southwest	18,825	45,700	64,300
South Central	5,067	18,980	15,000
Central	10,829	19,079	25,620
Southeast	28,449	36,785	51,390
East Central	4,772	8,150	9,300
West Central	14,375	27,599	34,650
State total	99,385	188,693	240,420

Cattle characteristics

Feedlot operators reported 59% of cattle backgrounded and finished in North Dakota were Angus-based. Other British-based breeds accounted for 17% and Continental-based breeds accounted for 23% of the cattle. Only 2% of cattle backgrounded and finished were dairy or dairy crossbreds. Most cattle were purchased at local auction barns (40%) or were raised by the feedlot operator (36%).

General management

Most feedlot operators (69%) used ear tags as their primary source of identification. Forty-seven percent of operators did not use growth implants. This was surprising since, on a national basis, 89.5% of feedlots with fewer than 8,000 head capacity implanted at least some of the cattle (NAHMS, 1999b).

The estimated death loss for feedlots in North Dakota was 1.3%, which is the same as the national average (NAHMS, 1999a). The reported range for death loss was 0% to 5%. Feedlot operators also indicated 51% of their fed cattle were source-verified.

Marketing methods

Cattle in North Dakota were marketed through various methods. In addition, strong seasonal trends affected when cattle were marketed. Twenty-six percent of the cattle were sold through the local auction barn, while 32% were contracted with a slaughter plant. Cattle primarily were marketed in the first (36%) and second (31%) quarter of the year, which may be expected due to the large numbers of spring-born calves available for backgrounding or finishing in the state.

Sixty-seven percent of the slaughter cattle were sold on a live (cash) basis, while only 24% were marketed on a grid. Producers indicated 64% of their cattle graded Choice.

Feed

Seventy-eight percent of feed inputs for feedlot operations were home-raised and processed, while only 2% was purchased and processed commercially. Forty-seven percent of feedlots reported using corn as the main concentrate feed ingredient. Silage was used predominately as the main forage (40%).

Custom feeding

Feedlot operators reported 54% of cattle were custom-fed. Collectively, North Dakota feedlot operators custom fed 47,741 head that were being backgrounded and 35,775 head that were being finished. On average, feedlots custom fed 880 backgrounded cattle and 688 finished cattle. Of those cattle that were

custom-fed, 92% of them were fed using a daily yardage and feed arrangement. No feedlots reported charging a markup on feed ingredients.

Expansion

Fifty-nine percent of producers indicated an interest in expanding their feedlots, which would add 81,548 head to the state's feedlot capacity. Feedlot operators, on average, wanted to add 1,699 head to their current operations. Of those who answered "yes," the lowest added capacity was 200 and the greatest was 13,000 head.

Natural beef program

Fifty-eight percent of operators responded they would be interested in implementing a "natural beef" program. Of those who were interested, most stated they would need a 14% price increase to raise a "natural beef" product.

Implications

North Dakota feedlots appear to be interested in expanding their feeding capacity. However, the location of North Dakota relative to major slaughter facilities has affected the development of the state's feeding industry negatively. Without a nearby slaughter facility, many feedlot operators in North Dakota primarily background cattle and finish relatively few cattle. By increasing the slaughter facilities in the area, many operators may be willing to increase their capacity. Furthermore, the implementation of a marketing program such as "natural beef" or an increase in the availability of working capital to operators may aid further in the development of the state's backgrounding and finishing industry.

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